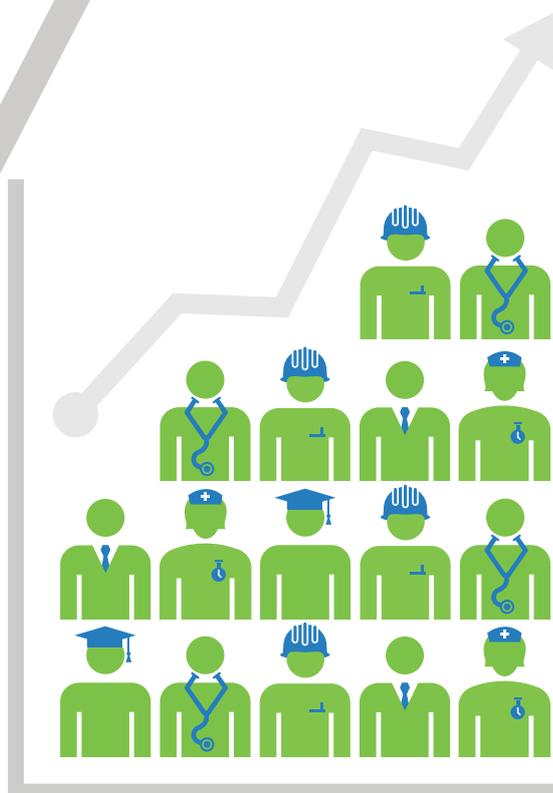
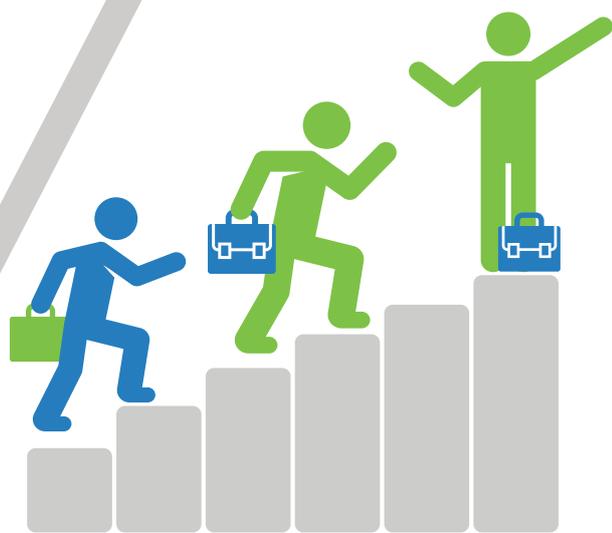


OECD Skills Strategy Policy Note

Mexico

2017



Building the right skills can help countries improve economic prosperity and social cohesion



In what way?

By contributing to social outcomes such as health, civil and social engagement.

By supporting improvement in productivity and growth.

By supporting high levels of employment in good quality jobs.



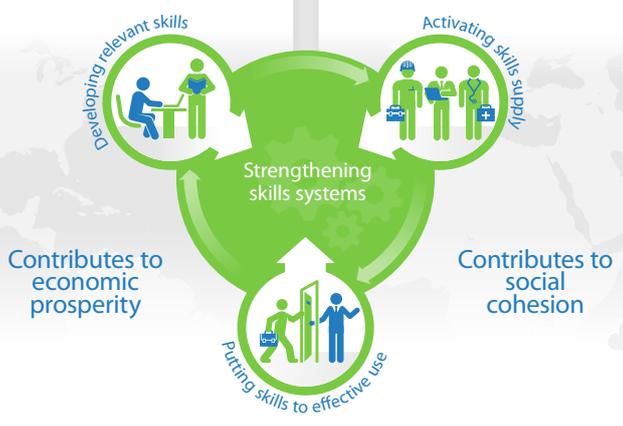
How is this achieved?

By strengthening skills systems

Designing and implementing an evidence-based national skills strategy.

Funding skills through public and private sources and designing effective incentives for employers and individuals.

Providing good information for the public, businesses and policy makers.



**OECD SKILLS STRATEGY
POLICY NOTE:
MEXICO**

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INTRODUCTION

Skills have become the key driver of individual well-being and economic success in the 21st century. Without proper investment in skills, people languish on the margins of society, technological progress does not translate into growth, and countries are unable to compete in increasingly knowledge-based global economies.

The OECD Skills Strategy provides countries with a framework to analyse their strengths and weaknesses as a basis for taking concrete actions relating to the three pillars that comprise a national skills system: 1) developing relevant skills from childhood to adulthood; 2) activating these skills in the labour market; and 3) using these skills effectively in the economy and society. In addition to these three inter-related policy levers, the OECD Skills Strategy framework advocates for an overarching theme of strengthening the skills system to build the right skills that can lead to better jobs and better lives.

The first stage of the joint project between the OECD and the National Productivity Committee (NPC) on Building an Effective Skills Strategy for Mexico resulted in the *OECD Skills Strategy Diagnostic Report: Mexico*, which was launched in Mexico City in January 2017 by the OECD Secretary-General, the OECD Chief of Staff, and members of the NPC at secretarial level. The report describes eight major skills challenges facing Mexico, identified through discussions with government officials and stakeholders in a series of interactive workshops held in Mexico City in 2016 as well as through analysis of the best available internationally comparative evidence on the country's skills outcomes.

Moving from diagnosis to action: a whole-of-government approach

Following the launch of the Diagnostic Report, the Mexican National Project Team led by the Economic Productivity Unit (UPE) of the Secretariat of Finance (the technical secretariat of the NPC) asked the OECD to recommend areas for action in 11 thematic areas that the NPC identified through its review of the *OECD Skills Strategy Diagnostic Report: Mexico*.

In formulating these recommendations, the OECD reviewed international experience and practice in the 11 thematic areas to arrive at a series of general recommendations. These recommendations were then compiled in a workbook, which members of the NPC were asked to reflect on and to assess their applicability to Mexico. During a series of interactive working sessions held in Mexico City in April 2017 with the OECD team, NPC members were asked to provide structured input on how best to adapt the draft recommendations to Mexico's context and needs.

The results of this highly interactive process are presented in this *OECD Skills Strategy Policy Note: Mexico*. This document provides a set of recommended areas for action and guidance on the steps that need to be taken by NPC members when designing concrete reforms.

The National Productivity Committee (NPC) was the main partner of the OECD, defining the scope and strategic direction for this project. The NPC includes representatives from the Secretariat of Finance, the Secretariat of Economy, the Secretariat

of Education, the Secretariat of Labour, and the National Council of Science and Technology (CONACYT), as well as from trade unions, employers and educational institutions. The NPC is itself a concrete expression of Mexico's commitment to promoting a whole-of-government and whole-of-society approach to skills.

Following through on these recommendations will require that all relevant secretariats, agencies and stakeholders work together to align their effort to achieve positive results for Mexicans. The OECD stands ready to continue to provide support to Mexico in facing its skills challenges and delivering better skills for all Mexicans.

The structure of this policy note: a reader's guide

This *policy note* is organised around the 11 themes identified by the NPC. For each of the 11 themes, the OECD has identified: 1) the key policy issues, and 2) recommended areas for action.

The *key policy issues* section explains why each individual theme has been identified as a challenge that requires action. The information presented is drawn primarily from the *OECD Skills Strategy Diagnostic Report: Mexico*, but has been supplemented by additional analysis where necessary.

The *recommendations* section identifies potential actions that Mexico could take to build on the existing strengths and overcome weaknesses in Mexico's skills system, as well as concrete steps the NPC and its partners will need to take to move from diagnosis to action.

1. REINFORCE MECHANISMS TO FACILITATE EFFECTIVE COLLABORATION AMONG SECRETARIATS AND PUBLIC AGENCIES IN THE AREA OF SKILLS

Key issues

Improving the institutional framework for collaboration across and within secretariats to build better skills policies

Collaboration across and within secretariats is necessary to build effective policies for developing, activating and effectively using skills. Given the large number of secretariats with responsibilities for skills policies in Mexico, strong co-ordination is needed to secure coherence in policy design and implementation. At the same time since within secretariats a number of different skills-related policies could be undertaken, each individual secretariat should also make sure that these efforts are well co-ordinated internally. Finally, different type of skills (cognitive, non-cognitive, technical or sector specific) may need different types of agents involved (e.g. if talking about high level skills universities should be essential; if talking about technical skills, VET schools are critical) but in all cases strong collaboration is needed, and this process will be briefly described in each of the recommendations covered by this policy note.

The pervasiveness of informality reinforces the importance of collaboration

Informal activities, and the jobs associated to them, are often unreachable by public policy mechanisms (e.g., tax, health, labour regulations, etc.). According to the National Institute of Statistics and Geography (INEGI), 57.2% of the employed population works in the informal economy (INEGI, 2016). Mexico's comparatively low-skilled workforce and relatively high concentration in low value-added activities are major contributors to the prevalence of informal employment arrangements. To reach those working in the informal economy, government policies need to be co-ordinated to ensure that they effectively reach the micro and small enterprises where these workers are typically found. Furthermore, making progress on reducing informality requires that policies are co-ordinated across secretariats to ensure that individuals who have developed higher levels of skills have access to jobs (preferably in the formal economy) that demand these skills and provide opportunities to further develop them. In this sense, reducing informality should also have a positive effect on improving labour productivity as workers in formal jobs are more likely to receive training and perform their jobs in higher value-added activities.

Collaboration across and within secretariats could be strengthened to improve policy coherence

Improved collaboration across and within secretariats would reinforce policy coherence and effectiveness. In Mexico, significant efforts have been made to improve collaboration arrangements for the design, implementation and monitoring of skills policies across secretariats. However, effective collaboration (this refers to formal institutional mechanisms among secretariats and agencies to facilitate collaboration) is undermined in

Mexico by laws and administrative and financial policies that do not clearly specify the responsibilities of each secretariat in the area of skills. For example, the law governing the public sector in Mexico (*Ley Orgánica de la Administración Pública Federal*) is not sufficiently clear about the specific responsibilities that each secretariat has for skills-related policies¹ (OECD, 2017). As a result, the functional responsibilities of secretariats are unclear, which creates gaps and overlaps. The creation of the National Productivity Committee (NPC) is a strong step towards improving co-ordination, but its work can be reinforced by providing greater clarity about how to co-operate across secretariats and collaborate with other relevant institutions responsible for skills policies, such as the National Institute of Statistics and Geography (INEGI). In addition, there is still no a strategic plan for developing, activating and effectively using skills in Mexico. Such a strategic document could guide and facilitate the co-ordination efforts in Mexico.

Fragmentation of multiple efforts – even inside secretariats – is the main challenge

In specific, tackling the fragmentation of multiple efforts appears to be the main challenge for the Mexican skills system. The public administration in Mexico needs to reform its architecture to create stronger incentives for inter- and intra- secretarial collaboration and, in particular, to empower secretariats with mechanisms that facilitate collaboration on policy making and implementation across political cycles. This document will point out briefly to relevant international experiences². As discussed with government officials and stakeholders in Mexico City during workshops and discussion sessions, effective skills policies require strong co-ordination between education, employment, fiscal and industrial policy and the support of good information systems. Without this co-ordination, even when people develop the right skills, they may have difficulty finding a suitable job or find a job that is a poor match for their skills.

A very hierarchical approach to decision making also inhibits effective collaboration. In Mexico, the decision-making responsibilities of secretaries are very broad, and may even encompass mid-level operational matters. This means that the co-ordination of policies occurs at the highest level, Secretaries, in cross-secretariat committees. But given the busy schedules of Secretaries, in practice this means that there are relatively few opportunities to coordinate policies at operative levels within secretariats. To tackle this challenge, Mexico should consider delegating more responsibilities to undersecretaries to reinforce their participation in skills policies and improve efficiency (e.g. Undersecretary of Industry and Commerce, Undersecretary of Employment and Labour Productivity and Undersecretary of Secondary Education).

¹ In some cases even the law gives the same mandate to different secretariats, which leads to duplication of efforts and confusion (NPT, 2017)

² Given the scope of this document it is not possible to offer a much more comprehensive explanation of each international experience mentioned. Still, a reference to the corresponding OECD document is made so the reader can consult more details.

Mexico can learn from what other countries are doing

Government officials and stakeholders in Mexico agreed that the country needs to develop a much more specific vision for leveraging skills investments to achieve greater economic and social progress. Mexico can learn from the efforts of other countries in this area.

In **Korea**, the government plays a central role in the development of workers' skills. Korea long ago adopted a government-led skills development system to ensure that industry has the skilled workforce it needs and to protect vulnerable population groups. Korea adopted its skills development strategy in 1967 when it enacted the Vocational Training Act to ensure that Korea had the skilled workforce it needed to support industrialization. In Korea, all the ministries with responsibility for skills policies are involved in the updating of the technical curricula and ensuring its alignment with the national development plan (OECD, 2017a).

In **Singapore**, the Ministry of Manpower, together with Workforce Singapore, the Ministry of Education and other economic agencies in government, has developed an integrated system of education and training to provide all Singaporeans with enhanced opportunities to acquire greater skills, knowledge and expertise. The success of the Singaporean Skills Development Model is closely related to its co-ordination mechanisms. An Economic Development Board (EDB) works as a link between economic development and skills formation, exercising responsibilities in both areas and co-ordinating efforts across different institutions. The EDB is, in fact, the leading government agency for planning and executing strategies to enhance the position of Singapore in the global value chain and to sustain Singapore's economic growth. This agency operates a network of collaboration and policy implementation with secretariats and private businesses (Álvarez-Galván, 2015).

Perspectives of government officials and stakeholders

Discussions with government officials and stakeholders in Mexico City confirmed the need to reinforce mechanisms to facilitate effective collaboration among secretariats (outside and inside) and public agencies in the area of skills. In specific, there was consensus about the need to assess how secretariats and agencies currently coordinate their efforts to achieve shared objectives. In order to undertake such an assessment, there is consensus that a strategic plan is needed to assess whether current instruments for inter-secretarial collaboration are effective in achieving the skills priorities of the country (and which responsibilities each secretariat and actor have in this process). Government officials and stakeholders noted that even when agreements are achieved at the inter-secretarial level, there are often barriers to achieving co-ordination and alignment within secretariats.

Recommendations

1.1. *Improve inter-secretariat collaboration*

It is recommended that:

- The National Productivity Committee (NPC) establishes a working group to produce a Strategic Policy Plan identifying the main skills priorities in Mexico. The work the NPC has undertaken to identify priority sectors to boost productivity can serve as a useful model. This plan should guide skills-related inputs to the National Development Plan and corresponding public expenditure plans. Please note that the OECD team was told that a similar exercise has been done in the “New Education Model” so this document can be used as reference.
- The working group of the NPC ensures alignment between the *Strategic Policy Plan*, the National Development Plan (of the current or the next administration, depending of the final calendar or work) and corresponding public expenditures. Also in this case, Mexico can start with what has been already done in the documents of the “New Education Model” (as reference).
- The working group established by the NPC prepares a report assessing the extent of alignment between existing inter-secretariat mechanisms or bodies (such as the NPC itself) and those recommended in the strategic document, the National Development Plan and public expenditure (once again, based on examples like the document of the “New Education Model”, but this is mainly a reference for the Secretary of Education, other secretariats and agencies would need their own reference document at sectoral level and include those in a national strategic plan for skills in Mexico).
- The working group established by the NPC invites all secretariats or agencies with an impact on skills outcomes to have representation in the NPC. For example, it is strongly recommended that INEGI be invited to join the NPC as a guest/close collaborator³.
- The NPC creates two, formal inter-secretariat committees: one an inter-secretariat liaison committee and the other as an inter-secretariat operations committee. The aim of the second one is to speed up the decision making processes by facilitating the delegation of authority at Undersecretary level when needed (e.g. Undersecretary of Industry and Commerce, Undersecretary of Employment and Labour Productivity and Undersecretary of Secondary Education). The aim of the operations committee is to ensure that there are regular opportunities to discuss common priorities and coordinate work to achieve shared objectives while the liaison committee will focus on keeping good communication with the heads of each Secretariat. In other words, NPC’s sub-committees should be leveraged to improve their impact.

³ For the moment, the OECD team believes that the most important institution missing at the NPC is INEGI as data collection and dissemination is one of the most pressing challenges to be tackled to improve the skills system in Mexico.

Proposed performance/progress indicators:

- Establishment of a working group to create the *Strategic Policy Plan*.
- Establishment of formal inter-secretariat committees at both the undersecretary and operational levels.
- Launch of the *Strategic Policy Plan*.
- Completed plan for aligning the *Strategic Policy Plan* with corresponding public expenditures.

1.2. Improve intra-secretariat collaboration

It is recommended that:

- The Secretariat of Economy, the Secretariat of Education, the Secretariat of Finance, the Secretariat of Labour and CONACYT jointly create an inventory of all skills-related programmes managed by each secretariat. This inventory should identify for each programme the policy objectives, target population, strategic indicators, operational rules and resources⁴. To undertake this task, all the secretariats involved should agree on the methodology to be followed to build this inventory. Each secretariat should additionally identify any duplication of efforts or synergies, building on any previous efforts to do so. If possible, other relevant secretariats should be invited like the Secretariat of Agriculture and Tourism.
- The NPC creates a working group with members from five institutions (Economy, Education, Finance, Labour and CONACYT) to assess the level of alignment between the objectives of these programmes and those of the responsible secretariat (at the level of the National Sectoral Plan) as well as with broader national government priorities (in the National Development Plan).
- The working group created by the NPC prepares a report identifying duplications and gaps in skills policy guided by the Strategic Policy Plan or priorities identified by the NPC.
- The working group created by the NPC identifies collectively (i.e., all four Secretariats plus CONACYT) how to consolidate and align programmes to eliminate duplication and fill gaps.

⁴ For example, the Secretariat of Economy can prepare a document with the objectives, description of support and subsidies, as well as a brief evaluation of like PROSOFT, PPCI, PRONAFIM and FONDO EMPRENDEDOR all of them currently in operation and of relevance for skills development and use (NPT, 2017).

Proposed performance/progress indicators:

- Completed inventory of all skills-related programmes undertaken by the Secretariats of Economy, Education, Finance and Labour, and the National Council for Science and Technology.
- Completed assessment of the degree of alignment between skills programmes and secretariat as well as broader government priorities.
- Final report submitted to the next administration to inform its design of skills policies⁵.

⁵ As a general principle, the OECD team discussions with Mexican officials indicate the need to reinforce current mechanisms of inter and intra-secretariat collaboration rather than create new ones in an already dispersed and fragmented universe of policy efforts for skills.

2. SUPPORT PARTNERSHIPS WITH STAKEHOLDERS TO IMPROVE SKILLS FOR TODAY AND TOMORROW

Key issues

Improving collaboration with stakeholders to build better skills policies

The responsiveness of the skills system to the needs of the economy depends in part on the extent of collaboration with stakeholders. Stakeholders are understood in this document to be non-governmental actors with an influence on, or interest in, skills outcomes (mainly, but not only, firms and trade unions). Stakeholder input to the design and delivery of what is taught in educational and training institutions helps to ensure a good match between the supply of and demand for skills. For example, by providing information about the skills needed in the labour market, stakeholders (employers and unions, mainly) can help government to design relevant educational and training programmes. Employers and unions can also be involved in the delivery of education and training. Collaboration is in the interest of employers, who benefit from a supply of labour that is well aligned with their needs as well of unions, whose members are more likely to find employment in good quality jobs.

Current partnerships are insufficient

Currently, partnerships between government and stakeholders in Mexico are insufficient for ensuring that sufficient numbers of individuals acquire the skills that will be needed both now and in the future. Stakeholders have important information about current and anticipated skills needs. However, they are rarely involved in the assessment of skills needs in Mexico. Several countries have developed mechanisms to facilitate stakeholder input in these exercises. These mechanisms include having stakeholders participate on the advisory boards of responsible agencies (e.g. Denmark, Finland, Norway, Wallonia/Belgium) and consulting with stakeholders in thematic workshops (e.g. Canada, Norway). Some countries have used the development of national skills strategies as a means to facilitate dialogue on skills needs across the country (e.g. Austria, Germany, Korea, Ireland, Switzerland, and the United States). Many countries choose to engage employers in skills policies at the local and regional levels, as this helps to identify the specific needs of employers and the context in which they operate (OECD, 2006).

Stakeholders could be more involved in skills assessment and anticipation exercises

Effective and co-ordinated information systems to identify current and future skills needs are critical for a successful skills system. Many countries have systems in place to identify current or future skills needs in the form of vacancy surveys, skills mismatch studies, occupational forecasts, and foresight exercises, etc. While a range of information on skills needs is available in Mexico, there are significant information asymmetries and shortcomings in the dissemination and tailoring of information to the needs of specific user groups. For example, many educational institutions, labour authorities, unions, employers

and sub-national governments collect skills-related information (e.g. student's degrees and qualifications, job vacancies), but this information is not used on a systematic basis to inform policy design, implementation and evaluation.

Mexico can learn from what other countries are doing⁶

In **Spain**, the University-Enterprise Foundations Network (*Red Española de Fundaciones Universidad Empresa, REDFUE*), a private non-profit organisation created in 1997, promotes better relations between universities and enterprises. The network includes about 45 Spanish universities and over 15 000 other organisations ranging from companies, entrepreneurial associations, financial institutions, chambers of commerce, and several local or regional governments. They have organised around 41 000 internships in companies for university students since 2011 and have on average about 2 500 technology transfer projects (REDFUE, 2015).

In **Finland**, the Telkkä programme was based on close co-operation between teachers and workplace trainers. It aims to improve the ability of vocational education and training (VET) to respond to the needs of working life. The programme included a two-month on-the-job period for teachers, during which teacher-worker pairs were formed. This offered an opportunity for teachers to update their professional skills and for workers who also work as workplace trainers to improve their pedagogical skills. The training period was preceded by a seminar (to clarify goals and expectations) and followed by feedback from teachers and workers and dissemination to the broader community. Teachers reported a wide range of benefits, such as increased familiarity with recent work practices and requirements and the equipment used, easy access to firms for study visits, the contacts necessary to invite people from industry to give lectures at their VET institutions, increased confidence, respect from students, and self-motivation. The training period also allowed teachers and workers to discuss issues related to workplace training for students and improve training plans and assessment methods. Participants improve their skills and self-esteem, and disseminate knowledge to other colleagues. This exercise has been evaluated by the Economic Information Office in Finland as one of the best ways of developing teachers' professionalism (Cort, Härkönen and Volmari 2004).

Perspectives of government officials and stakeholders

Discussions with government officials and stakeholders in Mexico confirmed the need to support partnerships with stakeholders to improve skills outcomes. In specific, there was consensus on the need to assess how partnerships with stakeholders in skills policies could be improved to support the development of more effective skills policies and better skills outcomes.

⁶ For more detailed information and more international examples about partnerships with the private sector in the provision of education please check OECD (2012c), *Public and Private Schools: How Management and Funding Relate to their Socio-economic Profile*, OECD Publishing. <http://dx.doi.org/10.1787/9789264175006-en>

Recommendations

2.1. Establish a formal mechanism for engaging stakeholders in skills policies

It is recommended that:

- The National Productivity Committee (NPC) creates a working group to prepare and discuss a proposal to establish a formal mechanism for facilitating ongoing dialogue with stakeholders on skills policy development and implementation. Consideration could be given to establishing a Workforce Development Board with representation from all sectors of the economy to advise the government on the development and implementation of skills policy. This board could be located within any of the bodies already operating in the skills area (such as the NPC). All the Secretaries in the NPC should participate in this working group (Economy, Education, Finance and Labour) plus representatives of the employers' and trade unions' associations that are also members of the NPC.
- The Secretariat of Economy can take the lead to create a proposal for collecting information more effectively from employers and small and medium enterprises (SMEs) in particular. Different options that could be explored, like sector skills councils. Mexico should leverage its existing information on firms in the country, such as the Mexican Business Information System and SIEM and INADEM's database on SMEs. Other institutions, such as INEGI, also have other useful tools for helping out in the collection of skills information (like the National Survey of Employment and Occupation, as suggested below).
- The Secretariat of Economy can take the lead to design and implement with the National Institute of Statistics and Geography (INEGI) a data collection mechanism for collecting information from firms on their skills needs. Already, there are many different mechanisms in place (some of them administered by the Secretariat of Economy and others by INEGI) but they need to be expanded and improved. Produce an annual or bi-annual report that estimates the skills outlook for Mexico by sector, region and occupation (it could also be produced less frequently, such as once every, 5 years, depending on the needs of the economy and its sectors).
- This information should be made available on an information portal accessible to all. The Secretariat of Education will distribute to the educational and training institutions recommending its use for the design of their programmes and the Secretariat of Labour will be responsible of the distribution of the document to the general public.

Proposed performance/progress indicators:

- Completed proposal for establishing a formal mechanism for facilitating ongoing dialogue with stakeholders on skills policy development and implementation.
- Completed proposal for improved mechanisms (with a corresponding institutional framework) to collect information more effectively from employers.
- Identification of specific stakeholders to carry out this process.

- A decision about the implementation of either proposal is made.

2.2. *Improve and expand work-based training*

It is recommended that:

- The Secretariat of Education leads the creation of an inventory of all government programmes with a strong work-based component in order to identify good practices that can be replicated. This may draw upon a range of different experiences in Mexico (for example, the experiences of *CapacitaT*, *Bécate*, *Modelo de Formación Dual*, CONALEP, or *Modelo en Alternancia*, can be a valuable reference). An effort should be made to include current practices not just in the technical subsystem or at upper secondary level but also in standard academic education and at higher levels of education.
- The Secretariat of Education takes the lead to ensure that new technical degree programmes have a substantial work-based learning component. This could involve withholding certification of new technical degree programmes that cannot provide evidence that they include a substantial work-based learning component. To this end, new incentives and regulations should be considered not just for the participation of education and training entities but also relevant employers' associations and trade unions, as they need to take substantial responsibilities in this process. The creation of the regulations will be responsibility of the Secretariat of Education and the Secretariat of Labour and the corresponding incentives will be responsibility of the Secretariat of Finance and the Secretariat of Economy.
- The Secretariat of Education and the Secretariat of Labour ensure that existing technical degree programmes are responsive to labour market demands. This could involve limiting the expansion of existing technical degree programmes to those that are able to locate work placements for their students. Firms and trade union associations, in close collaboration with relevant public institutions (CONOCER, CONALEP, or other institutions of the upper secondary or higher education subsystems) could certify the work-based component of the technical programme. As in the previous recommendations, new incentives and regulations should be considered to encourage the participation of firms and trade unions in this effort. Also like in the previous case, the creation of the new regulations will be responsibility of the Secretariat of Education and the Secretariat of Labour and the corresponding incentives will be responsibility of the Secretariat of Finance and the Secretariat of Economy.

Proposed performance/progress indicators:

- Completed inventory of all government programmes with a strong work-based component to identify good practices that can be replicated.
- Rules are introduced to ensure that new technical degree programmes have a substantial work-based learning component.
- Rules are introduced to ensure that existing technical degree programmes are responsive to labour market demands.

2.3. Create opportunities for teachers to gain recent industry experience

It is recommended that:

- The Secretariat of Education takes the lead to identify means to encourage and support teachers to obtain recent industry experience (especially for those teaching technical programmes from lower-secondary level onwards).
- The Secretariat of Economy and the Secretariat of Finance establish a working group to discuss possible incentives for employers to offer practicums or exchanges, such as the subsidisation of salaries. Also, mechanisms can be explored to allow industry practitioners to teach relevant subjects in educational/training institutions.
- The Secretariat of Labour and CONACYT take the lead to develop a pilot initiative for teacher participation in workplace practicums or exchanges with industry.

Proposed performance/progress indicators:

- Incentives are put in place to encourage employers to provide and for teachers to seek workplace practicums or exchanges.
- Pilot initiative (with impact and evaluation framework included) is launched.

2.4. Consider developing a national qualifications framework

It is recommended that:

- The Secretariat of Education and the Secretariat of Labour establish a working group to discuss the updating of a national qualification framework that is linked to national occupational profiles. CONOCER and the Secretariat of Labour, due to their experience in the field, should provide technical advice. For example, the National System of Classification of Occupations (SINCO) can be updated as part of this process.

Proposed performance/progress indicators:

- Completed report assessing the pros and cons of developing a national qualifications framework.

3. SUPPORT PARTNERSHIPS BETWEEN SUB-NATIONAL AUTHORITIES AND LOCAL STAKEHOLDERS TO IMPROVE SKILLS DEVELOPMENT IN ALL REGIONS

Key issues

Improving collaboration with state authorities and local stakeholders

Collaboration among different levels of government and with stakeholders throughout the country helps to promote policy coherence. Promoting closer co-operation between state governments and state educational authorities, as well as partnerships between national and state governments, is important to help address the different challenges facing various regions and flexibly implement tailored policies. Aligning skills supply and demand at the local level requires that local public institutions, such as public employment services and local training authorities, work not only together, but also with state employers, unions and other stakeholders.

Governance can be strengthened to support collaboration across and within levels of government

Effective governance mechanisms can help to improve co-operation between and within different levels of government. In Mexico, the representation of state authorities could be strengthened in bodies or forums (or any other type of mechanism) where transversal policies having a sub-national impact are discussed. In doing so, information asymmetries between the national and the state levels of government can be bridged when designing, implementing, and delivering public policy. Sub-national entities have a stock of regional and local knowledge that is crucial for delivering effective policies at all levels (Charbit and Michalun, 2009).

Governance mechanisms can take multiple forms

Effective governance mechanisms to support states' efforts for partnerships with local stakeholders can take multiple forms. To facilitate collaboration between different levels of government in policy development and implementation, OECD countries have developed many types of co-ordination mechanisms, including: 1) legal mechanisms (often used to allocate fiscal resources and administrative competences); 2) standard setting mechanisms (used as instruments to secure homogeneous quality in the provision of public services and goods across a country's territory); 3) contractual mechanisms (used to establish mutual obligations); and 4) strategic co-ordinating committees and partnership group mechanisms (perhaps the most flexible and convenient mechanisms when there is also an aspiration to engage stakeholders in addition to government actors).

Mexico can learn what other countries are doing

In **Australia**, *The Keep Australia Working* strategy has made the co-ordination of employment policies at the local level a priority. One of the measures includes the identification of Priority Employment Areas (areas most vulnerable to expected downturn and future unemployment) to ensure that these areas receive their appropriate share of additional funding and support. In each Priority Employment Area, Local Employment Co-ordinators (LECs) were appointed and advisory committees established comprising local stakeholders from employment, vocational education and training, as well as economic development backgrounds. LECs assist in developing local responses to local labour market problems. LECs are agents of the federal government and their main role is to identify the area's skills and labour needs, structural barriers to these needs being met. In addition, they match skills needs with employment, education and training opportunities. Finally they organise Jobs and Skills Expos that bring together employers, employment service providers, labour and recruitment agencies, and registered training providers (OECD, 2014c).

Perspectives of government officials and stakeholders

Discussions with government officials and stakeholders in Mexico confirmed the need to support partnerships between state authorities and local stakeholders to improve skills development in all regions. In particular, there was consensus about the need to find both the right policy mechanisms and organisational structure to facilitate co-ordination with the federal level and across different state governments to make sure that regional specific needs are taken into account when designing and implementing skills policies.

Recommendations

3.1. Strengthen collaboration with sub-national authorities and their stakeholders on skills policies

It is recommended that:

- The National Productivity Committee creates a working group to assess how to strengthen State Productivity Committees or replace them with new institutions to foster alignment between national and state skills policies. The improved or new body should balance the need for consistent standards across the nation with the need for flexibility to respond to the specific needs of each region or territorial unit. The body should be provided with sufficient financial and legal resources to transcend political cycles at national and state levels. It will be important to ensure an institutional working relationship with the NPC, CONAGO (National Conference of States' Governors) and AMSDE (Mexican Association of Economic Development Secretaries – at state level).
- The Secretariat of Education will share its experience with similar mechanisms such as CONAEDU (State Secretariats of Education) and the Secretariat of Labour with mechanisms such as CONASETRA (State Secretariats of Labour).

Proposed performance/progress indicators:

- A decision is made about the organisational form to be adopted to support collaboration with state authorities and their stakeholders.
- An institutional plan is established with the financial and legal characteristics needed to be effective and transcend political cycles.

3.2. Each state government should assess the alignment of its skills programmes with priorities at the state and national levels.

It is recommended that each state government:

- Create an inventory of all of their skills-related programmes (at national and state levels, the work done in a previous recommendation about identifying secretariats' programmes in the same area should be taken into account in this effort as well). The inventory should identify each programme's policy objectives, operational rules and resources. A clear and shared methodology should be agreed upon before any state undertakes this task to ensure consistency and comparability of information.
- Assess whether these programmes are well aligned with the skills priorities of National and State Development Plans. This assessment should identify for each state entity any policy duplications or gaps (identified by comparing the programmes against the priorities identified in the National and State Development Plans and the *Strategic Policy Plan*).
- Identify how resources can be consolidated or relocated to ensure alignment with National and State Development Plans and other strategic policy documents⁷.

Proposed performance/progress indicators:

- Completed inventory of all skills-related programmes undertaken by state entities.
- Completed assessment of any gaps in alignment between the *Strategic Policy Plan*, the National and State Development Plans and corresponding public expenditures.
- Final report completed during the next administration to inform its design of skills policies together with state authorities.

⁷ In general, federal programmes are also present at state/regional level. Therefore, it is recommended to take the national catalogue as a main reference and then complement it when necessary with state/regional mechanisms (NPT, 2017).

4. IDENTIFY THE NECESSARY SKILLS TO ADVANCE AND SUCCEED IN HIGHER EDUCATION LEVELS

Key issues

Ensuring that more Mexican students advance to, and succeed in, higher education

The world is changing and with that the skills requirements of jobs are rising. Increasingly, students will be expected to solve problems creatively, synthesise and use knowledge efficiently and learn how to learn on their own to navigate an increasingly digital and data-driven world. Countries are introducing new education goals, curricula, pedagogy and assessments that equip their students with such skills (e.g. Korea, Finland, Canada, and Singapore). These reforms are being complemented by the introductions of new teacher training models, which encourage teachers to coach students and work collaboratively in cross-disciplinary teams in order to learn with and from their peers. Countries are adjusting schooling models by facilitating more co-operation between schools, work and society at all levels (e.g. the Netherlands, Austria). Mexico needs to do more to ensure that its own students develop the skills needed to advance to, and succeed in, higher education.

Many Mexicans are not developing strong foundation skills

Too many Mexicans are not developing strong foundation skills. In 2015, 56.6% of Mexican students were low performers in mathematics (OECD average 23.4%), 41.7% were low performers in reading (OECD average 20.1%), 47.8% were low performers in science (OECD average 21.2%), and 33.8% were low performers in all three of these subjects (OECD average 13%)(OECD, 2014a). Student performance varies greatly by region, by gender, and socio-economic background. Indigenous students in particular perform below the average. All students in Mexico should have the chance to receive a quality education regardless of their background or where they live. Due to high drop-out rates, the enrolment rate of 15 to 19 year-olds in all educational programmes is only 55.6%, which is the lowest rate for this group among OECD countries, and well below the OECD average of 84% (OECD, 2016a).

Establish minimum standards for student achievement and ensure students and teachers have the resources and supports to meet them

Establishing minimum standards for skills achievement in school would help to ensure that students do not drop out of school and are better prepared for success in further education and training as well as for work and life. Establishing minimum skills standards would allow schools to better identify students who are following behind, so that additional supports could be provided to them. Monitoring student achievement of these standards would facilitate the evaluation of teacher performance, thereby allowing for the identification of teacher training and development needs.

In contrast to cognitive skills (e.g. literacy and numeracy), many countries do not measure social and emotional skills using standardised measures and formal assessments. Instead, governments provide guidelines for assessing social and emotional skills, so that teachers observe and evaluate students' behaviour in different situations in a formative manner to identify strengths and weaknesses of students and improve teaching. Some countries (e.g. Ireland) also promote self-assessment – which is completed with peer assessments based on fixed criteria – by students in order to raise their own self-awareness of social and emotional skills (OECD, 2015e).

Mexico can learn from what other countries are doing

Singapore has developed a high-quality system for ensuring school completion, quality and efficiency. High minimum standards for skills achievement are set for the Primary School Leaving Examination and O- and A-levels to ensure that all students graduate with strong foundation skills. Ensuring that these standards are developed and upheld has required strong political leadership and alignment between policy and practice across all levels of government as well as a long-term vision. Teachers and principals are held accountable on the results. Teachers are selected carefully, well-prepared, rewarded based on performance and supported through continuous professional development. Recent measures include the GROW package referring to initiatives to promote teacher Growth, Recognition, Opportunity and Well-being. The best teachers are assigned to the schools that struggle the most (OECD, 2011). These measures among others could explain how Singapore was able to transition from a poor education system in the 1960s to one of the best in the world today. Indeed, Singaporean students have some of the highest scores in the latest PISA 2015 round.

In the **United States**, the Partnership for 21st Century Learning (P21) was founded in 2002 to bring together the business community, education leaders, and policymakers to better prepare students for the 21st century. The coalition also aims to start a national conversation on the importance of 21st century skills for all students. The P21 Framework for 21st Century Learning uses input from teachers, education experts, and business leaders to define and illustrate the skills and knowledge students need to succeed in work and life. The framework was enhanced by resources that were developed in collaboration with hundreds of educators, who were shown how to integrate 21st Century Skills within their disciplines such as English, mathematics, science, geography, social studies, world languages and the arts. Apart from the framework, the P21 also offers different resources for educators, policy makers and parents/the community, including guidelines, case studies and toolkits (Partnership for 21st Century Learning, 2017).

In Ontario, **Canada**, the government provides templates for report cards in which “learning skills and work habits” are evaluated. The learning skills and work habits have six categories – responsibility, organisation, independent work, collaboration, initiative, self-regulation – for each of which the teacher gives one of four evaluations, “excellent”, “good”, “satisfactory” and “needs improvement”. In the report cards for Grade 1-8, the section for reporting on students' development of the learning skills and work habits is placed ahead of the section for reporting on students' achievement of the curriculum expectations. In the cards for Grades 9-12, there is a space for recording an evaluation for each of the learning skills and work habits for every subject.

In British Columbia, **Canada**, “social responsibility” performance standards have been developed by the Ministry of Education for voluntary use in schools. The standards involve four assessment criteria: 1) contributing to the classroom and school community; 2) solving problems in peaceful ways; 3) valuing diversity and defending human rights; and 4) exercising democratic rights and responsibilities. There are four scales for different grade groups (kindergarten to 3rd grade, 4th to 5th grade, 6th to 8th grade and 8th to 10th grade). The assessment is based on accumulated observations over time, both in the classroom and in the playground (OECD, 2015e).

In New Zealand primary schools, progress towards the achievement of national curriculum goals is measured via the National Education Monitoring Project (NEMP). NEMP is designed to be as well aligned as possible with the curriculum by incorporating competency and value elements. Many of the NEMP assessment tasks are performance-based, requiring students to transfer learning to authentic close-to-real life situations. Students are assessed in different situations, including in one-to-one interviews, at their work stations and while working in teams. Since the assessment does not carry high stakes for students it is particularly important that tasks are meaningful and enjoyable to them in order for them to complete the exercise. The assessment provides rich information on the processes used by students to solve problems or conduct experiments. Most assessment tasks are carried out orally so as to analyse what students can do without the interference of reading and writing skills. Some of the tasks are videotaped to allow for an in-depth analysis of student responses and interaction with teachers. NEMP also assesses students’ cross-curricular skills, and attitudes towards the learning areas being assessed. Students’ enjoyment of particular assessment tasks is also surveyed. For instance, 82.5% are reported as enjoying hands-on tasks, versus around 50% for paper and pencil tests. While NEMP is designed for system monitoring, examples of previous assessment tasks are available for teachers and may be used in the classroom. This can help teachers estimate how their own group of students compares to national assessment results (Nusche *et al*, 2012).

Perspectives of government officials and stakeholders

Discussions with government officials and stakeholders in Mexico City confirmed the need to improve mechanisms for establishing minimum standards for student achievement and supporting students to achieve these standards. There was agreement that as there were already many initiatives in this area, but there was also uncertainty about their effectiveness.

Recommendations

4.1. Establish minimum standards for student skills achievement

It is recommended that:

- The Secretariat of Education and the Secretariat of Labour take the lead to prepare an inventory of institutions (e.g. CONOCER) and programmes (including those of the public and private sector) that are already involved in defining minimum standards for skills achievement (both foundation skills and social and emotional skills). This inventory should map out how skills are defined at each level of education.

- Working together, the Secretariat of Education and the Secretariat of Labour prepare a report assessing the effectiveness of existing boards/bodies that oversee these institutions and programmes that identify the skills students need to achieve to succeed in higher education. The report should identify which existing boards/bodies are best positioned and equipped to perform these functions, and make recommendations for how they could be strengthened. Consideration should be given to stakeholder perspectives, including different levels of government, chambers of commerce, unions, experts (e.g., researchers, Human resource professionals, psychologists, etc.) and young people. As there have been past experiences of conducting this type of assessment, it would be useful to revise those first in order not to repeat efforts.

Proposed performance/progress indicators:

- Completed report providing an inventory of institutions and programmes involved in the definition of the minimum levels of skills achievement at each level of education.
- Completed report assessing the effectiveness of existing boards/bodies overseeing the process of defining and updating skills and determining the minimum levels of skills.
- Final report submitted to the next administration to inform its design of skills policies.

4.2. Improve support programmes for students falling behind as well as for teachers and refine skills assessments

It is recommended that:

- The Secretariat of Education creates an inventory of school support and training programmes, assess gaps and duplications, and make recommendations for how they could be improved. School support programmes include: i) any programmes designed to support students who are struggling to meet the minimum skill levels; and ii) any programmes that support teacher professional development and training.
- The Secretariat of Education creates an inventory of existing skills assessment, identify gaps and duplications, and make recommendations for how they could be improved⁸.

⁸ OECD identified the following policy priorities for assessments : taking a holistic approach, aligning assessments with educational goals, focusing on improving classroom practices, avoiding distortions in terms of how and what students are being taught (e.g. phenomena of “teaching to the test”), putting students at the centre, building capacity at all levels, managing local needs, and building consensus. For more information on best practices and country examples, please consult the following OECD publication: Synergies for Better Learning: An International Perspective on Evaluation and Assessment (OECD, 2013b).

Proposed performance/progress indicators:

- Completed inventory of school support programmes.
- Completed inventory of the existing skills assessments that measure students' progress and proficiency in specific skill areas.
- Completed assessment of the effectiveness of student and teacher programmes and preparation of recommendations for their improvement.
- Final report completed and proposed to design of skills policies to help students and teachers to succeed in higher education levels.

5. GATHER HIGH QUALITY INFORMATION ABOUT SKILLS SUPPLY AND DEMAND

Key issues

Improving the quality and range of skills information collected

Improving information about skills supply and demand is important for ensuring the quality and relevance of education. Better information about the labour market outcomes of graduates of different institutions and fields of study (e.g., graduate outcome or tracer surveys) could help to employers to signal the value of studies, thereby encouraging more students to enrol in institutions and fields of education that are well aligned with the needs of the economy. This behaviour could, in turn, create greater competition among institutions, thereby potentially raising educational quality and relevance. Mexico is already taking a number of steps to improve information about skills.

Rich data sources would benefit from integration and co-ordination.

The rich data sources available would benefit from further integration and co-ordination. Many individual databases exist (e.g. National Survey of Occupations and Employment), but they are not linked and integrated. Information on the supply of, and demand for, qualifications could be connected with a national qualification framework and made more in line with international standards. Improved integration and co-ordination of skills information would make it easier for: employers to specify which skills are required for employment; educational institutes to design their programmes to develop these skills; and students to know what type of skills are in demand and where they can be developed. This information about skills would also help employers to understand what a qualification from a newly created degree programme means, and how degree programmes across universities are similar or different. This type of information could help to improve the match between the qualifications and skills of workers and those needed for jobs.

Mexico can learn from what other countries are doing

In **Italy** Universities have joined together in a Consortium – the *Almalaurea* Consortium – which has developed a student and a graduate tracking survey to collect information on the profile of graduates and on their performance when entering the labour market. After 20 years, the Consortium now tracks 80% of the graduates from Italian institutions and the results (published and accessible online at www.almalaurea.it) are returned to higher education institutions to help them further develop and fine-tune their programme offerings (Almalaurea, 2017).

In the **European Union**, the European Commission developed the European Skills Passport, an electronic portfolio which documents all the skills and qualifications citizens have acquired, including those learnt during apprenticeships. The portfolio is designed to

facilitate the recognition of employability skills across European countries and fields of work, and to help graduates and students find a job or training (CEDEFOP, 2017).

In **Japan**, the Job Card is a document that records the individual's education, training and employment history. On the completion of education, training, and work placements, the skills and knowledge of participants have acquired are formally and objectively evaluated and recorded on the Job Cards. Participants in the programme also receive career guidance to facilitate their transition from training to employment (Ministry of Health, Labour, and Welfare of Japan, 2009).

In **Australia**, the government introduced the Unique Student Identifier (USI). The USI allows all of an individual's training records, entered in the national vocational education and training (VET) data system, to be linked. It makes it easier for students to have their skills recognised and validated, thereby supporting good skills-job matches. It also ensures that students' VET records are not lost. The USI stays with the student for life and records any nationally recognised VET course that is undertaken from when the USI came into effect (Government of Australia, 2017).

Perspectives of government officials and stakeholders

Discussions with government officials and stakeholders in Mexico City confirmed the need to reinforce mechanisms to gather quality information about skills supply and demand. Specifically, there was agreement that since there are already many initiatives in this area, it would be useful to have inventory of all these initiatives and to assess how effective they are and seek ways to strengthen them.

Recommendations

5.1. Improve the quality and range of skills information collected

It is recommended that:

- Together, the Secretariat of Education and the Secretariat of Labour, in close collaboration with INEGI, create an inventory of institutions and programmes that are involved in the collecting information that could be used to guide career and education choices, analyse labour market trends, inform policy and curriculum design, and inform employer hiring decisions. This should include the administrative and survey data of the Secretariat of Education and the Secretariat of Labour, and any other information sources on educational and training programmes or courses, employment and earnings perspectives, quality of education institutions, etc. The users of this information include students, employed, unemployed, parents, policy makers, among others.
- The Secretariat of Education and the Secretariat of Labour, in close collaboration with INEGI, create a working group to assess how the skills information could be improved. This could entail developing a better legal framework to encourage transparent information sharing, a funding structure to ensure long-term sustainability of efforts, and new indicators (e.g. position in the workplace, work profile) and new types of surveys (e.g. tracer surveys tracking students' outcomes by education institution). It would be valuable to assess at what moment and with what tools and methodology information can be most effectively gathered.

Existing tools such as the National System of Classification of Occupations (*Sistema Nacional de Clasificación de Ocupaciones – SINCO*) could be updated, extended and improved. Attention should also be given to gathering information about the learning and labour market choices and outcomes of vulnerable groups (e.g. drop-outs, NEETs, women, informal workers, indigenous people) to support the development of policies that better respond to their needs.

- The working group previously mentioned creates a report making recommendations for improving the quality and range of skills information collected. These recommendations should be made in consultations with all secretariats and stakeholders.

Proposed performance/progress indicators:

- Completed inventory of institutions and programmes involved in the gathering of skills information.
- Completed assessment of the existing information gathering processes.
- Completed report making recommendations for improving the information collection process.
- Final report submitted to the next administration to inform its design of skills policies.

5.2. Improve complementarity of skills information

It is recommended that:

- Together, the Secretariat of Education and the Secretariat of Labour, in close collaboration with INEGI, create a working group to conduct an assessment of how the various existing databases could be made complementary to one another. This could involve ensuring a consistent classification system or linking data bases. It could also involve reinforcing some specific instruments already in place such as the *Observatorio Laboral Mexicano* and *Decide tus estudios*.
- The working group consults with other relevant Secretariats and government institutions (e.g. INADEM), and stakeholders (e.g. chambers of commerce, employers' associations, unions, NGOs, academics...) on what can be done to improve the complementarity of databases.
- The working group creates a report making recommendations for improving the complementarity of databases.

Proposed performance/progress indicators:

- Completed assessment of how the databases could be made more complementary.

- Completed report making recommendations for improving database complementarity.
- Final report submitted to the next administration to inform its design of skills policies.

6. DISSEMINATE INFORMATION ABOUT SKILLS SUPPLY AND DEMAND

Key issues

Improve the dissemination of skill information

Information about skills supply and demand needs to be disseminated effectively to be useful (OECD, 2016c). In a survey of youth in Mexico, one in two reported not having known which careers had the best job opportunities and high wages, or what studies would have high job placement rates (McKinsey & Company, 2012). Successful strategies for the dissemination of skills information include: making information accessible through multiple channels (i.e. mobile apps, interactive website); using social media platform functionalities; and providing complementary face-to-face services and telephone contact. Students and parents also need to access to career guidance services that make clear what information is available and how to interpret this information. Information should also be customised to meet the specific needs of different groups (CEDEFOP, 2015).

Dissemination mechanisms already exist in Mexico

A number of mechanisms already exist in Mexico to disseminate skills information. The Mexican Labour Market Observatory (*Observatorio Laboral*) was launched by the federal government in 2005 and provides information on trends and characteristics of various occupations and professions for students, employers and policy makers. The online platform Compare Careers (*Compara Carreras*), maintained by the Mexican Institute for Competitiveness (*Instituto Mexicano para la Competividad*), provides comparative data on various careers to inform student decisions. Similar platforms include Get Connected (*Vincúlate*) and Talents (*Talentos*). The Secretariat of Education helps young people from upper secondary to tertiary education choose the right career option through the Decide your Studies (*Decide tus estudios*) platform. This tool provides information on the different options for enrolment in upper secondary education programmes and training options for employment. It also offers a test, developed in collaboration with CENEVAL, which allows students to identify their skills and professional interests. Students receive a report based on their results and academic background.

Mexico can learn from what other countries are doing

Finland's career guidance system covers all parts of lifelong learning from ECEC to adult education. There are also targeted programmes for those who are out of the labour market and not participating in learning. The ministries of education and employment established a national steering group for guidance and counselling to strengthen the cross-sectoral and multi-professional co-operation between the key actors and stakeholders (OECD, 2012b).

In the **United Kingdom** would-be students have access to information on the universities they are considering, including information that allows them to make comparisons between institutions through the Key Information Sets (KIS) published on the

Unistats site. The KIS provide information on 17 aspects of full- and part-time undergraduate courses, including student satisfaction, employment and earnings outcomes/salary data, learning and teaching activities, assessment methods, tuition fees and student finance, accommodation, and professional accreditation. The data are regularly updated and made available on The Complete University Guide website (Higher Education Funding Council for England, 2017).

In **Sweden** the PES has launched a Facebook account to represent the organisation at the national level and to reach out to young people. This initiative was launched in January 2011 with the aim of creating a forum for people to meet and discuss issues related to employment and job search. It is maintained by two PES experts who initiate discussions, answer questions, and mediate debates, but who are not supposed to engage in individual counselling (if requested they refer clients to their local PES). Postings typically pass on links to news and information, but can also be questions to stimulate discussion (e.g. the most popular post so far has asked: “what is your dream profession?”) (Scharle and Weber, 2011).

In **Germany**, the Federal Employment Office’s career counsellors visit schools, run class talks, and provide small-group guidance and short personal interviews in the penultimate year of compulsory schooling. Many of these counsellors have undertaken a specialised three-year course of study at the Federal College of Public Administration. School classes are taken to the Employment Office’s career information centres (BIZ), where they are familiarised with the centre’s facilities. They can subsequently re-visit the centre and book longer career counselling interviews at the local employment office.

Perspectives of government officials and stakeholders

Discussions with government officials and stakeholders in Mexico City confirmed the need to reinforce mechanisms to disseminate effectively information about skills supply and demand. In specific, there was agreement that since there are already many initiatives in this area, it would be useful to have inventory of all these initiatives and to assess how effective they are and seek ways to strengthen them.

Recommendations

6.1. Improve the co-ordination of information dissemination

It is recommended that:

- Together, the Secretariat of Education and the Secretariat of Labour, in close collaboration with INEGI, create a working group to elaborate an inventory of institutions and programmes that are currently involved currently in the dissemination of skills information (e.g. ANUIES, SEP, STPS, SHCP, CONOCER, DGCFI, *Servicio Nacional de Empleo*, Chambers of Commerce).
- The working group assesses the feasibility of assigning co-ordination function to an existing body in order to streamline information, so that the information can be made accessible in a single platform. This could be, for example, INEGI or existing mechanisms such as the *Observatorio Laboral Mexicano*.

- The working group creates a report making recommendations for improving information dissemination and a briefing note for the NPC council. It is recommended that Chambers of Commerce (e.g. CONACINTRA, CCE, CONCAMIN, COPARMEX, CONCANACO) labour unions (e.g. CTM, CROM, CROC) and student associations at a local and national level be asked for input.

Proposed performance/progress indicators:

- Completed inventory of institutions and programmes involved in the dissemination of information.
- Completed assessment of feasibility of assigning co-ordination function to an existing body in order to streamline information dissemination.
- Received comments from stakeholders, in particular from employers about skill needs by sector and in the short, medium and long-term.
- Final report submitted to the next administration to inform its design of skills policies.

6.2. Provide training to policy makers on the use of skills information

It is recommended that:

- The Secretariat of Education, the Secretariat of Labour and the Secretariat of Economy, coordinate with INEGI a set of training sessions for government officials in the use of skills information (mainly database). The aim of these sessions will be to assess how policy makers from the different secretariats can be trained in how to interpret information from databases to promote evidence-based policy making.
- The Secretariat of Education and the Secretariat of Labour assess how staff in educational institutions and the national employment service (SNE) can be trained in how to interpret information from databases, so that they can communicate better that information and guide young people and those in search for work.

Proposed performance/progress indicators:

- Completed assessment of training programmes for policy makers.
- Final report submitted to the next administration to inform its design of skills policies.

7. SUPPORT THE TRANSITION OF STUDENTS FROM EDUCATION TO EMPLOYMENT

Key issues

Improving youth transitions from education to employment

Successful youth transition from education to employment is important for their long-term success in the labour market and society. The longer it takes for youth to find a good job, the more likely they are to lose motivation and skills and face marginalisation in the labour market (OECD, 2015a). Youth who are neither in employment, education or training (NEET) are at greater risk of remaining unemployed, at least in the medium term (i.e. one year after) (Ranzani and Rosati, 2013) or finding employment only in the informal economy (Cunningham and Salvagno, 2011). These young people are also at a higher risk of joining gangs or being forced to migrate to look for jobs. For example, empirical research shows that a growth in the number of NEETs in Mexico is associated with increases in the size of the illegal markets and criminal demand for youth labour (de Hoyos, Gutiérrez, and Vargas, 2015; see also de Hoyos, Rogers, and M. Székely, 2016).

Young people in Mexico struggle to activate their skills in the labour market

After they have left the education system, many young people in Mexico are neither in employment, education or training (NEET), and therefore are neither developing nor activating their skills. Youth in Mexico stay in education for a shorter period of time on average: the age at which 50% of Mexican youth leave education is 18, which is well below what is generally observed in both advanced and major emerging countries (with the notable exception of India and Indonesia).

Very few youth in Mexico combine study and work (Quintini and Martin, 2014), despite international evidence showing that this can help young people transition into the world of work (OECD, 2016b). Combining study with work is an important means to further develop skills while gaining professional experience. In addition to raising the skill outcomes of young people, it is also essential to expand employment opportunities for them. Achieving this would, in turn, provide stronger incentives for young people complete their education, thereby creating a virtuous circle.

Youth NEET are very costly to Mexico

Youth who do not activate their skills in the labour market are very costly to the country. In 2015, Youth accounted for 27% of the working-age population (20-64), the highest share in the OECD area (OECD, 2016b). The economic implications of failing to activate the skills of these young people in the labour market are therefore significant. OECD estimates that youth NEET cost Mexico, in the form of forgone earnings

(calculated as the gross labour income NEETs could command if they were employed, measured as the gross labour cost, including social security contributions), the equivalent of 0.9% of GDP per year (similar to the OECD average). Additional costs not measured in these estimates include poor health, higher crime, and the increased cost of out-of-work benefits (OECD, 2016b).

While the government is currently stepping-up efforts to address the NEET challenge, more remains to be done to provide youth with the support they need to integrate into the world of work. For example, teachers with experience in industry could be recruited and teachers could be better trained for teaching. In Mexico, the majority of teachers do not have access to formal induction (72%) or mentoring programmes (60%) in their institutions, which is far above the OECD Teaching and Learning International Survey averages of 34% and 26%, respectively (OECD, 2014e).

Recruit and prepare teachers who can support youth transition from education to employment

The importance of teacher recruitment and support is reflected in the New Professional Teaching Service Law (2013) and the New Education Model announced in 2016. How these proposed changes will take place remain to be seen, as the changes will effect in the 2018-2019 school year. The new education reform, the 2016 Education Model, is planning to have newly trained teachers accompanied for two years through a programme of tutorials and continuous training activities in order to support their transition to the teaching profession and the school community.

Mexico can learn from what other countries are doing

In **Ireland**, one of the most prominent initiatives to provide education and training opportunities outside mainstream education settings for early school leavers is “Youthreach”, a joint programme funded by the Department of Education and Skills and the Department of Jobs, Enterprise and Innovation. Youthreach seeks to provide early school leavers (aged 16-20) with the knowledge, skills and confidence required to participate fully in society and progress to further education, training and employment (Irish Department of Education and Science, 2008). The programme is delivered through Youthreach centres and community training centres. An internal evaluation study by the Irish Department of Education and Science found the programme to be relatively efficient and for the most part maximising output from the input available. This is particularly true in relation to the following input areas – learner supports, accommodation, national co-ordination and support, and programme support and development.

The time and effort devoted by staff members in practically all of the centres evaluated to get to know the individual learners, their background, their parents and families, play a key role in the support offered to learners. The programme appears effective in addressing learners’ needs for personal and social development and in recruiting its target group. Those learners who engaged fully with the programme that was on offer to them in their centres indicated positive learning experiences, improved self-esteem and self-worth and enhanced personal and social development. Some centres also successfully implemented targeted strategies to promote learners’ attendance and punctuality. However, efforts appear to be necessary to retain more of the learners to the end of the progression phase. There is also room for improvement in terms of the number of learners who obtain

certification, as well as the levels at which they obtain certification, so that they can successfully progress from the centres to appropriate further education, training or employment. The centres also seem to have very limited links or communications with national agencies and relevant post-primary curricular support services. Communication is also lacking between some of the centres evaluated and their local post-primary schools and businesses. Last but not least, tracking systems to monitor the progression of learners after they leave the centres still need to be developed.

In the **Netherlands** the programme IkStartSmart (“I Start Smart”) is an integrated support programme for people in the province of Gelderland who wish to start a business or develop an existing business that is less than five years old. Businesses in this province have lower than average survival rates and there are few policy instruments that aim to support new start-ups. The programme aims to increase business creation in Gelderland and to support young businesses in their development. The IkStartSmart initiative uses an eight-step scheme to train and support new business owners. First, potential participants attend information meetings that screen their interest and suitability for the support. Following this, participants take a test to identify their strengths and weaknesses and the results are discussed with a business advisor from the Chamber of Commerce. In this meeting the advisor designs a personal training plan. Coaches are then assigned and their role is defined in collaboration with the participant. The aim of the coach is to support personal development. The business advice stage provides access to more specialised business support and relies on experts to provide more technical support than the coaches. This is complemented with training according to the personal plan and networking workshops. The final stage supports access to microcredit, which is offered by partner organisations. Participants pay a fee of EUR 250 for this support. An evaluation shows that the IkStartSmart programme achieved all of its stated objectives (OECD, 2014d) even though the programme has wide eligibility criteria, namely all those individuals who have had their own company for a maximum of five years, regardless of gender, age or background. A significant proportion of entrepreneurs were women and immigrants.

In **Austria** the region of Upper Austria set up the “Your Chance Programme” to reduce early school leaving and improve transitions for disadvantaged youth, focusing on children of parents with low educational status and young migrants. The project aims at supporting the labour market integration and career choices of young people at risk of dropping out through diverse activities. The project approached schools (in some schools 80% of pupils have a migrant background) and asked them to select young people who were struggling with the transition to the next stage in education. They use workshops, excursions, tutoring and vocational counselling to work with the young people. Approaches and tools differ between schools. Approximately one quarter of activities take place in the schools and the rest outside. The project also involves the teachers and families of struggling youth.

Perspectives of government officials and stakeholders

Discussions with government officials and stakeholders in Mexico City confirmed the need to improve the transition of students from education to employment. Specifically, there was agreement that there were many initiatives in this domain and that it would, therefore, be important to assess their effectiveness and identify ways to strengthen them.

Recommendations

7.1. Improve collaboration between educational institutions and employers

It is recommended that:

- The Secretariat of Education and the Secretariat of Economy, with the support of the Secretariat of Labour, create a working group to elaborate an inventory and evaluate the effectiveness of existing mechanisms that support collaboration between education institutions (e.g. upper secondary education, higher education) and employers on the design and update of curriculum and teaching materials to meet industry standards.
- The working group prepares draft recommendations for improving the collaboration between education and employers. The recommendations should be tested with stakeholders, including employers and educators, to ensure their feasibility. Ideally, the sample of employers would be large enough to be representative of the different sectors and sizes of companies. In addition, these recommendations should be considered in the context of related recommendations for producing a catalogue/inventory of skills needs (see recommendation 9.1).

Proposed performance/progress indicators:

- Completed inventory of existing collaboration mechanisms between educational institutions and employers.
- Completed assessment of the effectiveness of collaboration mechanisms.
- Submission of the final reports to be handed over to the next administration for the design of skills policies.

7.2. Improve programmes to support youth transition from education to employment

It is recommended that:

- The Secretariat of Education and the Secretariat of Labour work together to create an inventory of programmes to facilitate youth transition to employment (e.g. programmes from the National Employment Service, internships at FESE-ANUIES, Dual Model, “*Emprender Jugando*”, programmes from the National Institute of Entrepreneurs). Programmes that should be considered include work-based learning programmes (e.g., internships, field experience, entrepreneurship programmes), career entry support programmes (e.g., visits to employers, mock interviews, training workshops on job-search techniques, career counselling, CV preparation, job fairs, job boards, job search website portals), financial incentives for employers to hire (e.g. subsidies, tax credits), financial incentives for students to work (e.g. start-up funding) and job creation programmes.

- The Secretariat of Education and the Secretariat of Labour create a working group to evaluate the accessibility and effectiveness of these programmes in terms of, for example, the number of participants, employment placements, job search duration, earnings, and relevance of studies. These efforts should be supported by an expert, interdisciplinary team. Explore feasibility of having pilots to test best practices for work-employment transition programmes.
- The working group prepares a report making recommendations for improving the quality of existing programmes, expanding the most successful ones, and, if applicable, creating new ones. These recommendations should be made in the context of related recommendation on strengthening work-based learning programmes and the recommendation about supporting partnerships with stakeholders (see recommendation 2).

Proposed performance/progress indicators:

- Completed inventory of programmes that facilitate youth transition to employment.
- Completed assessment of the accessibility and effectiveness of these programmes.
- Final report submitted to the next administration to inform its design of skills policies.

7.3. Improve teacher recruitment and training

It is recommended that:

- The Secretariat of Education evaluates how it could improve the recruitment and training of teachers (e.g. CONALEP professional training of teachers) to ensure that they are better equipped to support students to transition to the world of work. For example, more could be done to recruit teachers with industry experience or encourage existing teachers of vocational education to spend time (e.g. sabbatical) in industry. Another possibility is recruiting professionals who are close to retiring or who have recently retired to teach for some time.
- The Secretariat of Education prepares a report making recommendations for improving the recruitment and training of teachers. Ideally, this would expand on the current education reform and the new education model. Recommendations should be tested with stakeholders, including teachers, to assess their likely effectiveness. These recommendations should also be considered in the context of related recommendations for facilitating participation of teachers in the industry and industry professionals in teaching.

Proposed performance/progress indicators:

- Completed assessment of existing teacher recruitment and training strategies to the extent possible.

- Completed report making recommendations for improving teacher recruitment and training.
- Final report submitted to the next administration to inform its design of skills policies.

8. SUPPORT PARTICIPATION AND POSITIVE OUTCOMES IN ACTIVE EMPLOYMENT PROGRAMMES FOR FORMAL JOBS

Key issues

Improving the labour market activation of working-age adults

To realise the full benefits of investments in skills, the skills of working-age individuals must be fully activated in the labour market. The successful activation of skills in the labour market can have positive effects on both individuals and the society. Individuals who successfully supply their skills in the labour market typically enjoy better economic and social outcomes. By activating all available skills, a country can maximise its economic growth and support the transition towards a more productive, knowledge-based economy.

The skills of many vulnerable groups are not being fully activated

Boosting the labour force participation of vulnerable groups is critical for inclusive growth. In the context of slow economic growth, marked by fewer job opportunities the risk of vulnerable groups being left behind in the labour market increases. In Mexico, young people and women are two of the most vulnerable groups and they face considerable challenges to enter and remain in the labour market. For example, many young people in Mexico are struggling to transition from school to the world of work, and many end up becoming NEET (neither in employment, education, or training). These young people risk being permanently marginalised from the labour market and society, and are at a high risk of joining gangs or being forced to migrate (Petroni and Aho, 2012). Women are also struggling to activate their skills in the labour market in Mexico. Few participate by international standards, often because they bear the burden of household work and family responsibilities. The under-representation of these vulnerable population groups in the labour market comes at a significant cost to society.

Informal employment remains a challenge for many Mexican workers

Despite the efforts to reduce informal employment, it remains one of the biggest challenges for the Mexican economy, with negative implications for the quality of skills and jobs. Slightly more than half of the working population in Mexico holds an informal job (OECD, 2015a). Informal jobs are typically those with low skills content and with limited opportunities for training and skills development. At the same time, many informal workers face considerable wage penalties, labour market insecurity, poor working conditions, and financial hardship in the case of job loss.

High-quality employment services are important to activate skills in the labour market

High-quality employment services are important for supporting jobseekers to activate their skills in the labour market. Public Employment Services (PES) can play a central role in matching the supply of skills to demand through the provision of information, placement and active support services, especially for those groups in need of better support, namely youth and women. PES is usually the primary institution responsible for providing active labour market programmes (ALMP) to jobseekers. The Mexican Public Employment Service (*Servicio Nacional de Empleo*) can play a crucial role in getting people closer to (formal) jobs and activating their skills. The Mexican PES provides counselling services to jobseekers, access to several active labour market programmes, and administers job vacancy databases. Unfortunately PES does not serve the entire workforce in need of its services, and is not commonly used by employers (World Bank, 2013; Flores-Lima, 2010). From January to October 2016, around 2.9 million vacancies were registered by employers in the system, and around 1 million people were placed in a job through SNE services (SNE, 2016).

Mexico can learn from what other countries are doing

OECD research finds that there are a number of principles that can help to improve the effectiveness of active labour market policies: 1) the presence of adequate job-search monitoring and verification can have a considerable positive impact on re-employment rates; 2) high quality job-search assistance through intensive counselling interviews is essential to increase its probabilities to be effective; 3) strong public employment services for employers should be also considered as a priority; 4) digitalisation and new technologies can help to improve the way public employment services operate, disseminate their information, and improve their impact; 5) resources dedicated to ALMP should be carefully estimated considering the mix of policies/services needed to combine motivation, opportunity and employability objectives; and 6) assessments ALMP interventions should include the cost-effectiveness of these policies.

In **Sweden**, Job Security Councils (JSC) were developed in the 1970s against the backdrop of the deteriorating economic conditions and massive job losses of white-collar workers in the wake of the oil crisis in 1973. At that time, the Swedish public employment service was not regarded by employers as providing sufficient support for white-collar workers to find new jobs. JSCs, based on collective agreements between social partners in a sector or occupational field, are actively involved in the process of restructuring and provide advice and consultation to employers and trade unions at an early stage, while also providing transition services (individual counselling, career planning and job-search assistance) to redundant workers. JSC activities are financed by employer contributions (typically 0.3% of the payroll). JSCs distribute the risk and costs of restructuring among its members while allowing access for workers in small and medium enterprises. Around 80% of JSC participants find a solution (either employment or retraining) within a period of seven months, and this high number was sustained even during the crisis of 2008-10 (OECD, 2017b).

Perspectives of government officials and stakeholders

Discussions with government officials and stakeholders in Mexico confirmed the need to support participation and positive outcomes in employment programmes for formal jobs. In specific, there was consensus in the working groups that public employment services in Mexico require more support, and different services for the unemployed should be consolidated within one agency to improve access and efficiency in delivery, and that vulnerable groups need increased access to measures that are tailored to their specific needs.

Recommendations*8.1. Increase support to public employment services*

It is recommended that:

- The NPC creates a working group led by the Secretariat of Labour, with the participation of the Secretariat of Economy, the Secretariat of Education and the Secretariat of Finance, to assess how other public entities can support the activities undertaken by PES in recognition of their important role in tackling unemployment and informality. Efforts in this area should be aligned with other skills policy objectives.
- Within the efforts of this working group, the Secretariat of Economy will take the lead in exploring how the private sector (e.g., individual firms, associations or event private labour market intermediaries) can support the PES to improve its services

Proposed performance/progress indicators:

- A decision is made about how other members of the NPC can offer additional support to PES.
- A decision is made about how the private sector can also support the work done by PES. This proposal should be handed over to the next administration in the country.

8.2. Consolidate ALMPs into a single entity

It is recommended that:

- The Secretariat of Labour creates an inventory of all active labour market programmes (ALMPs) or related services in Mexico under different entities (like the Social Security Institute or the Secretariat of Labour, for instance), including initiatives for training and entrepreneurship, and assess whether it is feasible to “consolidate” their delivery through a single platform or service in the current PES (*Servicio Nacional de Empleo, SNE*).

- The Secretariat of Labour undertakes an assessment should at the same time be made of any duplication of efforts and of the relative effectiveness of programmes (including through cost-benefit analysis).
- The Secretariat of Labour undertakes steps to make digital platforms already in place even more user-friendly and combine information from PES with labour market information for different professions and educational options (for example, the kind of information contained in the *Observatorio Laboral Mexicano*) so this instrument can be used more effectively by both workers, families and employers. This recommendation should be considered in close co-ordination with all the other recommendations presented in this document that pertain to the collection and dissemination of educational and labour market information.
- The Secretariat of Labour in close co-operation with the Secretariat of Economy, ensure that employment services collaborate with employers to post job vacancies, thereby facilitating recruitment and job matching. The aim is that the SNE should be the first point of reference not only for individuals looking to for work but also for employers wishing to fill vacancies (please note that enlarging responsibilities for institutions like the SNE will require additional funding support as well).

Proposed performance/progress indicators:

- Completed inventory of all AMLPs.
- Completed assessment of the feasibility of consolidating the delivery of these programmes is done and presented before the relevant secretariats; as an important basis to make these decisions, cost-benefit analyses should be also presented, there should be already available these documents for many of them.
- Completed proposal for a user-friendly platform that combines information from the Public Employment Services on job vacancies with other relevant information, such as educational and training options and labour market data (like the one contained in the *Observatorio Laboral Mexicano*).

8.3. Improve ALMPs targeting vulnerable groups

It is recommended that:

- The Secretariat of Labour, undertakes, as part of the inventory recommended in recommendation 8.2, an inventory and assessment of all related PES programmes with especial emphasis on those for youth and women (for this particular recommendation), including those administered by other secretariats (like SEDESOL or the Secretariat of Economy, for example).
- The Secretariat of Labour identifies all skills programmes that target these groups offered by members of the NPC (these could include specific sectoral and employment programmes targeting these groups). A number of secretariats and their agencies may already have programmes and services in place that serve these

groups (such as employment programmes in specific industries for vulnerable groups).

Proposed performance/progress indicators:

- Completed inventory of all PES programmes for youth and women.
- Completed recommendations for how to improve these programmes is presented to the relevant secretariats.
- Completed assessment of existing ALMPS targeting youth and women, as well as of programming gaps, This assessment, along the assessment of the previous section about how to consolidate a number of PES related services into a single platform, should be submitted to the next administration to inform its design of skills policies.

9. IDENTIFY THE SKILLS NEEDED TO SUCCEED IN THE ADVANCED TRAINING REQUIRED TO IMPROVE PRODUCTIVITY AND INNOVATION

Key issues

Ensuring that adults have the high skills needed to boost innovation

High levels of foundational cognitive skills (such as literacy and numeracy skills) and social and emotional skills (such as conscientiousness, sociability and emotional coping) as well as advanced technical skills are needed to adopt and use technology as well as other innovations. First, low levels of foundational skills may hinder the development of digital skills needed to fully harness the potential of information and communications technology (ICT). Second, even if adults develop basic digital skills, those with low foundational skills will find it difficult to perform many of the more advanced information management and processing tasks encountered in work and life. This implies that, low levels of cognitive and social and emotional skills may slow the adoption and use of ICT, which could undermine the labour market outcomes of adults and the economic performance of the country. Policies to promote innovation should focus not only on improving access to ICTs, but also on improving cognitive and social and emotional skills. At the same time, boosting innovation will also require that more people develop the higher level foundation and technical skills that are associated with the completion of advanced degrees.

Boosting innovation will require both broadening and deepening the skills of Mexicans

Supporting firms to innovate and grow implies both raising the skills of the general population to support the adoption of innovation and increasing access highly skilled researchers to create new innovations. Moving up the value chain will require more than merely shifting the most skilled existing workers from less productive to more productive work. It will also require that Mexico increase its stock of highly skilled individuals to boost Mexico's weak R&D and patenting performance (OECD, 2015b). A more highly educated and skilled population could also play an important role in building an entrepreneurial culture (such as the efforts made by the National Institute for Entrepreneurship).

More emphasis is needs to be placed on developing ICT skills

Basic foundational skills are essential for individuals to adjust to rapid change in inter-dependent, knowledge-based economies. But they are not sufficient for individuals to thrive in an environment that is increasingly digitalised and data-driven. To ensure that all people can engage in and benefit from the digital economy and adapt rapidly to new and emerging occupations and skills needs, there needs to be a strong emphasis on promoting general ICT skills, ICT specialist skills, and ICT-complementary skills (including digital literacy, higher-order critical thinking skills as well as social and emotional skills). New production

technologies also require higher levels of skills and have raised the importance of interdisciplinary education and research.

Supporting the demand for higher-level skills to boost innovation and productivity is important

Skills demand and supply interact to determine a country's industrial specialisation, integration in global value chains, and innovativeness. Boosting innovation is critical to improve productivity and move into higher-value-added activities and increasing the skills of workers is necessary to enable innovation. Improving the skills of workers facilitates the introduction of innovative new products and services, new markets and business ideas, while also ensuring that workers can adapt more quickly to evolving organisational forms and production methods generated by growing digitalisation. By increasing the productivity of workers, higher levels of skills can also help individuals to transition from informal to formal jobs. In Mexico, a growing number of large modern firms demand and employ high-skilled and well-educated workers, but many other firms still demand relatively low-skilled workers attached to relatively low value-added activities (OECD, 2017a). Mexico needs to do more to foster a virtuous circle of skills improvements leading to greater innovation, productivity and growth.

Mexico can learn from what other countries are doing

Korea's economic development path illustrates how the overarching objective of productive diversification was achieved and accompanied by appropriate skills development policies. The Government of Korea initiated an economic development strategy based on a top-down approach that consisted of two main pillars. First, the government selected core industries on which the country's economic development should be based (e.g. the light or heavy chemical industry). Second, the government assessed employers' training capacities and, depending on whether or not they were deemed sufficient to meet the scaled-up needs for skilled and technical manpower, chose to either support employers to carry out enterprise training or directly trained the workforce needed (OECD, 2017a).

In **Norway**, the labour market has experienced continuous reorganisation over the last decades. In the coming years, technological advances, climate change, globalisation, changes in industrial structure, immigration and aging of the population will affect skills needs in all areas of employment. The rapid changes in technology and working life imply increased need for lifelong learning. In order to succeed, Norway has interpreted that a joint effort is required, in which various government actors and administrative levels, the social partners, businesses and NGOs are actively involved and coordinate their efforts. Based on the "Skills Strategy Action Report Norway" produced by the OECD Norway is working now on setting up a skills strategy agenda incorporating a whole-of-government approach and a strong stakeholder involvement (OECD, 2014d).

Perspectives of government officials and stakeholders

Discussions with government officials and stakeholders in Mexico confirmed the need to develop the skills required to boost productivity and innovation. In particular, participants highlighted the need to identify with stakeholders the skills are most needed to boost productivity and innovation in Mexico. In addition, they emphasised the need to work

with pedagogical experts to determine what are the best mechanisms for identifying students' skill levels (cognitive, social and emotional and technical skills) and for helping students to successfully improve those skills.

Recommendations

9.1. Assess the performance of students in developing the skills needed for innovation and productivity

It is recommended that:

- The Secretariat of Education identifies the programmes currently used to assess the performance of students' social and emotional skills, cognitive skills and technical skills with a special emphasis on those considered relevant to drive innovation and productivity. Because this is could be a novel task for the case of social and emotional skills in particular, the advice of expert in the field will be essential. If possible, this effort should be extended to other groups like unemployed people, vulnerable groups outside the educational system and regular workers.
- The Secretariat of Education takes steps to strengthen collaboration between schools and skills assessment bodies to improve the effectiveness and transparency of skills assessments for students, teachers, families and even businesses and trade unions. Information sessions can take place inside schools to explain the nature and purpose of the assessment exercise.
- The Secretariat of Education and the Secretariat of Economy create a working group to identify and catalogue the skills that are most needed to drive innovation and productivity. The aim of the catalogue is to create a common language for describing skills, thereby facilitating communication between schools (in compulsory education) and business in a way that will help to bring skills supply and demand into balance. The catalogue should build on existing efforts (such as *Construye-T*).
- The Secretariat of Education and Secretariat of Finance create a working group to estimate which resources are needed and available to undertake the evaluation of qualifications at school level.

Proposed performance/progress indicators:

- Completed identification of the programmes and mechanisms currently in place to assess students' skills.
- Resources for the implementation of evaluation of qualifications at school level are estimated and a report will be delivered to the next administration.
- Completed catalogue of the skills needed to drive innovation and productivity.

9.2. Improve supports available to underperforming students

It is recommended that:

- The Secretariat of Education assess the current level of efforts to develop in academic programmes the skills most needed for innovation (as in recent educational reform) as well as efforts to foster entrepreneurship (the New Education Model can be used as reference).
- The Secretariat of Education develop mechanisms for strengthening collaboration among schools, families and other relevant institutions to improve support for underperforming students.

Proposed performance/progress indicators:

- Completed assessment of the effectiveness of schools in imparting to students the skills needed to innovate.
- Work plan for helping underperforming students to develop their skills is completed and submitted to the next administration to inform its design of skills policies.

10. PROVIDE ONGOING AND HIGH QUALITY TRAINING TO WORKERS

Key issues

Providing on-the-job training to strengthen firms' productivity and competitiveness

Employers know best what skills they need and provide on-the-job training ensure that their workers develop these skills. Firms benefit from providing on-the-job training to their workforce through increased productivity and competitiveness. On-the-job training also reduces recruitment costs, as employers have more options to hire, raise the reputation of the firm, and raise the life satisfaction of employees.

Comparatively few firms in Mexico provide training to workers

According to the World Economic Forum Global Competitiveness Index 2014-15, gaps in the education and training of workers are a significant drag on economic efficiency. Approximately half of firms in Mexico provide on-the-job training to their workers, a share that is greater than the average in Latin America (44.4%), Brazil (42.2%), Korea (39.5%) and Germany (35.4%), but lower than in Colombia (65%), Argentina (63%), Peru (60%) and Chile (57.5%) (World Bank, 2014). When interpreting the share of firms in Mexico providing training, it is important to note that this accounts only those firms in the formal sector. Since, there is large informal sector in Mexico and informal firms are less likely to provide training, it is fair to assume that the actual share of firms providing training would be lower. This is likely also the case for other Latin American countries.

The quality of training varies greatly

Training quality varies greatly across firms in Mexico. Large firms (251+ workers) are more likely to invest in training than smaller firms, but they employ relatively few workers. Approximately 64% workers receiving employer-sponsored training is employed by large firms, but these firms employ only 10.6% of the labour force. In contrast, only around 12% of workers receiving employer-sponsored training are employed by micro firms, but these firms employ around 57% of all workers. Participation in training also varies greatly across sectors.

Mexico can learn from what other countries are doing

In **Korea** all training programmes for existing workers are financed through the Employment Insurance Fund. Most programmes provide subsidies, which are paid to employers who provide skills development programmes for their employees. The government refunds training expenses to insured employers when they provide, either directly or through outsourced providers, vocational training authorised by the Ministry of

Education and Labour. A subsidy can also be paid to cover training costs and minimum wages when an employer offers training leave to employees with one or more years of service.

Korea also has a number of programmes to encourage SMEs to provide training to their employees. SMEs can be reimbursed for all or part of the training costs for their employees who take part in authorised training programmes to improve performance of “core tasks”, such as sales, marketing, production and quality management, human resources and organisation management. There is also support for groups setting up a “training consortium” to help provide vocational training to SME workers. The government subsidises training expenses and facility and equipment expenses to the consortium. Training consortia are composed of companies, employers’ federations, universities or other training providers. Around 250 000 employees from 120 000 SMEs participated in such consortia in 2011, a very small proportion of all employees of SMES in Korea (OECD, 2013a).

In **Ireland**, Skillnets was established to promote and facilitate workplace training and upskilling by SMEs. It is the largest organisation supporting workplace training in Ireland. In 2011, it had 70 operational networks, through which it trained over 40 000 people for a total expenditure of EUR 25 million. It is a state-funded, enterprise-led body that co-invests with enterprises, particularly SMEs. They co-operate in networks to identify and deliver training to their workforces. The networks of SMEs, which are mostly sectoral or regional, are guided by a steering group of local enterprise representatives. The steering group gives strategic direction and guidance to a network manager, who co-ordinates all operational activity. This leads to the delivery of an agreed training plan with learning interventions tailored to need of the member company’s workforce. The national programme is co-ordinated by Skillnets Ltd., which has contracts with all networks and provides programme support and monitoring to ensure the delivery of agreed quantitative and qualitative target outputs. In 2011, 30 networks were located in Dublin, but these were predominantly sectoral networks with a national remit and company membership. Some 25% of Skillnets member companies, and 33% of trainees, are Dublin-based (OECD, 2014b).

Perspectives of government officials and stakeholders

Discussions with government officials and stakeholders in Mexico City confirmed the need to reinforce mechanisms to provide continuous quality training throughout working life. In specific, there was agreement that since there are already many initiatives in this area it would be useful to have inventory of all these initiatives and to assess how effective they are and seek ways to strengthen them.

Recommendations

10.1. Improve incentives for provision of, and participation in, training

It is recommended that:

- The Secretariat of Labour creates an inventory of all existing continuous training programmes and instruments and identifies the secretariats/agencies administering them. These programmes could include financial incentives to provide training (e.g. tax refunds, subsidies), programmes that connect education

and research institutions with firms, online courses (e.g. administered by CONACYT) and other types Massive Open Online Courses (e.g. those administered by UNAM and IPN).

- The Secretariat of Labour assesses how to increase incentives for firms to provide training in close co-operation with education and training institutions and firms (e.g. Productivity Support Program, SIRCE from Secretariat of Labour). This could involve making training provision tax deductible and introducing regulations to decrease poaching after training provision. Attention should be paid in particular to incentives for increasing training provision among SMEs.
- The Secretariat of Labour assesses how to increase incentives for individuals to participate in training (and research, if possible). Incentives could include making participation in training more affordable through the creation a national fund for training (e.g. training funded through unemployment insurance) or direct subsidies to firms that provide training.
- The Secretariat of Labour elaborates a report making recommendations for improving the provision of, and participation in, training.

Proposed performance/progress indicators:

- Completed inventory of all existing continuous training programmes (and research/innovation programmes if possible).
- Completed assessment of how to increase incentives for firms to provide and workers to participation training.
- Completed report that makes recommendations for improvements.
- Final report submitted to the next administration to inform its design of skills policies.

10.2. Conduct evaluations of training to ensure quality

It is recommended that:

- The Secretariat of Labour evaluates what are the barriers that hinder training provision (especially by SMEs) and training participation and drafts proposals to reduce them.

- The Secretariat of Labour assesses the quality of public training and drafts proposals to expand those training programmes with the most promising outcomes. This could include, for example, strengthening the “*Sistema de Registro de Capacitación Empresarial*” (SIRCE) and the “*Servicio Nacional de Empleo*”. Attention should be given in particular how best practices, effective courses and quality trainers can be provided to a greater extent among the Small Medium Enterprises. If no data is available for such an assessment, explore how such data could be generated.

Proposed performance/progress indicators:

- Completed evaluation of the barriers to training as well as proposals for their improvement.
- Final report submitted to the next administration to inform its design of skills policies.

11. IDENTIFY THE SKILLS NEEDED TO INCREASE BOTH EMPLOYABILITY AND PROMOTE LEARNING THROUGHOUT LIFE

Key issues

Improving the responsiveness of the skills system to labour market needs

Ensuring a good alignment between skills supply and demand is important for helping Mexico to position itself in global value chains and participate fully in the knowledge economy. This implies the importance of ensuring that people both develop the skills (and complete the fields of study) that are most in demand in the labour market and also continue to develop their skills in adulthood to bridge skills gaps and ensure that their skills continue to meet the needs of changing workplaces

Mexico is not doing a good enough job of matching skills supply with demand

Mexico needs to do a better job of ensuring a good match between the skills people develop in education and those that are needed in the labour market. Mexico's skills system is not sufficiently responsive to the labour market. Currently, a large share of workers in Mexico are working in jobs that they are either over-qualified for (an estimated 26% of worker is over-educated) under-qualified (an estimated 31% of workers in undereducated for their jobs (OECD, 2016c). Furthermore, a large number of firms report having difficulties in finding the skills they require (30.9% against 14.8% in the OECD).

Information about skills mismatches and shortages can support the improved use of skills

Skills mismatches are a barrier to improving productivity, reducing levels of informality and improving the quality of work. The prevalence of these mismatches suggests an inefficient allocation of skilled workers across the economy, and/or (in the case of over-educated workers) a lost opportunity on the part of firms to reorganise their workplaces to make better use of the available talent to boost their productivity and competitiveness. Collaboration between firms and educational institutions could reduce these mismatches, while effective firm-sponsored training could reduce skills gaps and improve skills use in the workplace. In addition, better human resource practices can help workers to make optimal use of their skills, and set incentives for continuous learning and skills development. High quality information about skills mismatches and shortages are prerequisites for improving collaboration between the education and business sectors and supporting better firm-level decisions about training, human resource and workplace organisation practices

Mexico currently lacks robust and detailed information about skills mismatches and shortages

Mexico currently lacks robust and detailed information about skills mismatches and shortages. At the moment, there are a number of isolated efforts done by secretariats (such as Economy in some specific sectors) or employers' associations. But this information is neither collected nor disseminated so that all participants can use the same information to design and implement effective skills policies, encourage and promote skills development within a firm, improve human resources practices within firms, and guide educational and training intuitions in designing curricula and programmes, just to mentioned a few examples.

Mexico can learn from what other countries are doing

In **Flanders, Belgium**, collaborations have been built between unions, academics and government representatives to help managers promote better skills utilisation in a number of different sectors. Such collaboration is particularly evident in the province of Limburg. Local policy makers are faced with the problem of finding new employment for low-skilled ex-factory workers whose transferable skills are limited. At the same time, the ambition is to move the region towards more productive, higher-skilled employment. The local Christian Trade Union (ACV) has responded by setting up “best practice labs” for innovative work organisation in co-operation with a coalition between academics, unions, enterprises and consultants (Flanders Synergy), subsidised by the Flemish government. Best practice labs have been set up in the construction, logistics, healthcare, social economy, social service/care sector and agricultural sectors. Each functions as a learning network where companies share experience. Each lab covers seven themes, each representing a domain in which managers can have an influence. One theme has been exploring new ways that firms can expand their market base, while also improving job quality; another has been exploring ways of involving workers more in decision making. The workshops have proved so helpful that one sector, construction, is now running its own labs, independent of public funding (OECD, 2015c).

Perspectives of government officials and stakeholders

Discussions with government officials and stakeholders in Mexico City confirmed the need to support developing the skills required for employability. In particular, participants in the working groups indicated that it would be essential to identify mechanisms to collect information about skills needs for employability, the most convenient way to disseminate this information, and how to use this information for policy design and evaluation of education and training programmes.

Recommendations

11.1. Develop mechanisms to identify skills needs for employability

It is recommended that:

- The Secretariat of Economy, with the support of CONACYT, establishes a working group to identify the most effective mechanism for collecting

information about the skills needs of companies⁹. Also, additional mechanisms can be considered to increase the incentives of firms to share information about their skills needs.

- The Secretariat of Economy, the Secretariat of Labour and CONACYT, in close collaboration from INEGI, establish a working group to assess the feasibility of running a pilot for assessing the skills needs of companies and, if it proves to be successful, extend this mechanism across country (using a representative survey) so a more comprehensive picture of skills needs can be developed for the country.
- The working group (Economy, Labour, CONACYT and INEGI) prepares a report with the results of this exercise to measure skills mismatches and shortages per economic sector and occupation (by contrasting these data with information about skills supply) to be handed over the next administration.
- Please note that these recommendations should be considered in close coordination with all the previous recommendations dealing with the identification and/or collection of skills relevant information in the system such as: recommendation 4.1, recommendation 5.1, recommendation 6.1, and recommendation 9.1.

Proposed performance/progress indicators:

- Identification and assessment of current instruments for skills collection information is done.
- Assessment of feasibility of extending current instruments to collect skills information is completed and presented to all the relevant Secretariats.
- Completed first report assessing skills mismatches and shortages per sector and occupation. This report is submitted to the next administration to inform its design of skills policies.

11.2. Process and disseminate information about skills for employability

It is recommended that:

- The Secretariat of Labour and the Secretariat of Economy, in close collaboration with INEGI, establish a working group to identify an instrument and entity

⁹ As in previous sections of this document, Mexico is encouraged to take advantage of its previous experiences. For example, the Secretariat of Economy suggests to make available to all participating entities the results achieved by the studies carried out to implement and monitor the human capital programme. It should be remembered that the objective of the project was to develop a methodology that would allow Mexico to quantify talent gaps and close them in the short term. For this purpose, a job-forecasting model was implemented in 13 industries and 3 sectors of the Mexican economy.

responsible for processing and disseminating the information collected on the previous recommendation.

- The working group prepares a report with the results of this exercise.

Proposed performance/progress indicators:

- Identification and assessment of current instruments for collecting and disseminating the information is done.
- Report is completed and submitted to the next administration to inform its design of skills policies.

ACRONYMS, ABBREVIATIONS AND DEFINITIONS

ALMP	Active labour market programmes
AMSDE	Mexican Association of State's Economic Development Secretaries
ANUIES-FESE	National Association of Universities and Institutions of Higher Education – Foundation Higher Education - Enterprise Business Coordinator Council
CCE	National Assessment Centre for Higher Education
CENEVAL	Center of Economic Research and Teaching - Interdisciplinary Program on Policy and Educational Practices
CIDE-PIPE	National Council for Science and Technology
CONACYT	National Council of State Secretariats of Education
CONAEDU	National Conference of States' Governors
CONAGO	National College of Technical Professional Education
CONALEP	National Conference of State Secretariats of Labour
CONASETRA	Confederation of Industrial Chambers
CONCAMIN	National Council for the Standardization and Certification of Competencies
CONOCER	National Confederation of Industrial Chambers of Commerce, Services and Tourism
CONCANACO	Employer's Confederation of the Mexican Republic
COPARMEX	Revolutionary Confederation of Workers and Farmers
CROC	Regional Confederation of Mexican Workers
CROM	Mexico's Workers Confederation
CTM	Directorate General of Training Centers for Work
DGCFT	Economic Development Board
EDB	Information and communication technology
ICT	Mexican Institute for Competitiveness
IMCO	National Institute of the Entrepreneur
INADEM	National Institute for Educational Assessment and Evaluation
INEE	National Institute of Statistics and
INEGI	

IPN	Geography
NEET	National Polytechnic Institute
	Neither employed nor in education or training
NPC	National Productivity Committee
OECD	Organisation for Economic Co-operation and Development
PES	Public Employment Service
PISA	OECD Programme for International Student Assessment
R&D	Research and development
SE	Secretariat of Economic Affairs
SEDESOL	Secretariat of Social Development
SEP	Secretariat of Education
SIEM	Mexican System of Enterprise Information
SINCO	National System of Classification of Occupations
SIRCE	Enterprise Training Registration System (Sistema de Registro de Capacitación Empresarial)
Skills	The OECD Skills Strategy defines skills (or competences) as the bundle of knowledge, attributes and capacities that can be learnt enabling individuals to successfully and consistently perform an activity or task, and that can be built upon and extended through learning. This definition includes the full range of cognitive, technical and socio-emotional skills. The concepts of “skill” and “competence” are used interchangeably in this report. The sum of all skills available to the economy at a given point in time forms the human capital of a country.
SME	Small and medium-sized enterprise
SNE	National Employment Service
STPS	Secretariat of Labour and Social Protection
UNAM	National Autonomous University of Mexico
UPE	Economic Productivity Unit of the Secretariat of Finance
VET	Vocational education and training

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OECD Skills Strategy

Policy Note: Summary

Mexico

Better skills policies help build economic resilience, boost employment and reinforce social cohesion. The OECD Skills Strategy provides countries with a framework to analyse their skills strengths and challenges. Each OECD Skills Strategy diagnostic report reflects a set of skills challenges identified by broad stakeholder engagement and OECD comparative evidence while offering concrete examples of how other countries have tackled similar skills challenges.

These reports tackle questions such as: How can countries maximise their skills potential? How can they improve their performance in developing relevant skills, activating skills supply and using skills effectively? What is the benefit of a whole-of-government approach to skills? How can governments build stronger partnerships with employers, trade unions, teachers and students to deliver better skills outcomes? OECD Skills Strategy diagnostic reports provide new insights into these questions and help identify the core components of successful skills strategies.

This report is part of the OECD's ongoing work on building effective national and local skills strategies.

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Directorate for Education and Skills - OECD
2, rue André Pascal - 75775 Paris Cedex 16 - FRANCE
edu.contact@oecd.org

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Further reading

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