



# MEXICO

The Mexican Qualifications Framework (*Marco Mexicano de Cualificaciones*) (MMC) is a comprehensive framework developed by the General Directorate of Accreditation, Authorisation and Recognition (*Dirección General de Acreditación, Incorporación y Revalidación*) (DGAIR), within the Secretariat of Public Education (SEP) (DGAIR, 2011a)

## 1. CHALLENGES THE NQF WOULD NEED TO ADDRESS

While Mexico's economic productivity has grown over the last two decades, the pace of growth today is lower than in other emerging economies. This is largely attributable to deficiencies in human capital, workforce training and education. Data from the World Economic Forum's Global Competitiveness Report 2012–2013 suggest that Mexico's innovative potential is hampered by the low quality of its education system. The country was ranked 100th overall out of 148 countries, 124th in mathematics and science, 81st in Information and Communications Technology, and 75th in the uptake of new technology in business.

Due to demographic changes and migration of many young people to the USA, a gradual aging of the population has taken place. At the same time the proportion of people who never entered school or who left school early is higher than those who are registered in initial education. Despite these features, Mexican society places high importance on qualification levels and is a strongly credentialist society. Raising levels of education, skills development and social engagement are seen as crucial for the continued development of a strong social and economic democracy in Mexico.

Over the last decade, capacity building in higher education has been the main concern of the Mexican higher education policy. The Gross Enrolment Rate was only 13 per cent of the age group 19–23 in 1991–1992 and reached 32.4 twenty years later. Yet, in 2008, Mexico's coverage rate was still the lowest one among the big countries (Brazil, Argentina and Chile) in Latin America. It was also the lowest in the OECD, where most countries are well above 50 per cent—or even over 70 per cent in e.g. the Nordic region. Most of the growth in Mexican higher education has been concentrated at the licenciatura level (first degree requiring 4.5 to 5 years of study) while shorter vocational higher education grew at a much slower pace (it represents only one percent of graduates in Mexico, compared to an OECD average of 9 per cent. In recent years Mexico's attention has therefore focused more on the postgraduate studies.

A major priority of SEP is to increase the contribution of higher education to the development of the country and its transition to the Knowledge Society. For graduates the current situation is rather satisfactory, with higher than average private return of higher education studies and a smoother access to the labour market than elsewhere in Latin America, as well as in Europe. Against this mixed picture, the SEPs main priorities are to articulate educational programmes at all levels of the National Qualifications Framework with skills demanded in the labour market.

## 2. MAIN POLICY OBJECTIVES

The main objectives of the MMC are to:

- serve as a reference for the process of certification, which is the responsibility of DGAIR;
- recognize partial qualifications through the accumulation and transfer of credits;
- recognize existing qualifications in the national education and system in cooperation with other national bodies and institutions;
- recognize learning outcomes from formal, non-formal and informal learning;
- facilitate the readability and coherence of each qualification in the national system of education;
- improve the quality, accessibility and comparability of qualifications as well as of labour certification by explicitly classifying qualifications according to complexity of level descriptors;
- cover all sectors: general education, higher education, vocational and technical education as well as labour competences; learning in formal, non-formal and informal learning settings; as well as knowledge, skills and broader social and personal competences, aptitudes and values;
- improve comparability between: different subsystems of the education system; between formal, non-formal and informal: and between vocational education and training and labour competences.

The National System of Competence Standards (NSCS) is a framework for the recognition and accreditation of labour competences. It is based on six strategic principles:

- Helping employers, workers, educators and the government to work together to improve economic competitiveness and growth.
- Involving all sector leaders in setting agendas and making decisions.
- Encouraging employers and workers to play an active role in designing the NSCS, thus fostering demand for competent workers.
- Offering recognition and certification to all who require it, including private sector and self-employed workers, government workers, teachers and students.
- Developing educational curricula aligned to the NSCS;
- Promoting new paradigms for assessment based on demonstration of competences in addition to traditional knowledge tests.

## 3. INVOLVEMENT OF STAKEHOLDERS AND LEGAL ARRANGEMENTS

DGAIR has been responsible for the development of the Mexican Qualifications Framework. Among the other relevant responsibilities of DGAIR effecting directly the present and future education and training system are: regulating and assessing the national system of accreditation and certification of studies; promoting the national and international mobility of students; regulating the operation of private providers of education; allocating scholarships.

Stakeholders from all sectors (industry, education and civil society) have participated in the development of the MMC. CONOCER has been active specifically on issues related to the NSCS and on equivalencies with formal educational degrees. The NSCS was created by the National Council for Standardization and Certification of Labour Competences (CONOCER) for the purpose of organizing, implementing and regulating mechanisms for the recognition and accreditation of all learning— formal, non-formal and informal. A government organization with a three party governance model, CONOCER provides a platform for linking education and the world of work in order to make the Mexican labour force more competitive. NSCS recognition practices are agreed by all stakeholders: employers, workers, educators and the government. They are designed to ensure that Mexican society has competent workers in every area, thus promoting economic growth, educational development and social progress. Mexico's NSCS is sustained by three institutional pillars. These are:

1. sector committees;
2. mechanisms for alignment between educational curricula and 'on-the-job' training; and
3. a national structure for evaluation and certification.

Sector committees of employers and workers develop competence standards for the economic sector they represent. They may adjust educational curricula and recommend the creation of ad-hoc programmes. Members are high level executives and experts from key areas (e.g. production, logistics, sales, purchasing, human resources, research and development), as well as representatives of employers' organizations, social organizations and government institutions.

Mechanisms for alignment between educational curricula and 'on-the-job' training depend on the competence standards developed by the sector committees. These are formally enshrined in the National Register of Competence Standards, which functions as a national reference for everyone certifiable by CONOCER.

The national structure for evaluation and certification is a network of training, evaluation and certification providers which assures credibility to users, both within the country and internationally. All formal basic education and most upper-medium (baccalaureate and technological) education is coordinated by the SEP. However, some institutions for upper-medium education are run or recognized by autonomous universities or by the National Polytechnic Institute (IPN)<sup>1</sup>. The SEP issues nationally valid formal certificates at the end of primary, secondary, upper-medium and higher education, and confers technical titles upon completion of a specialization in upper-medium technological education. On behalf of the SEP, the General Directorate of (Liberal) Professions registers and confers titles (*titulos*) upon completion of bachelor's degrees, master's degrees and doctorates.

In addition to this, the Secretariats of Education, Labour and Economy, which belong to the governing board of CONOCER, have been working together for some time on improving training, evaluation and certification in the workplace. This involves identifying the sectors of the economy which are most in need of greater human capital and using competence standards to make educational curricula more relevant to the needs of these sectors.

By June 2013 the NSCS had 127 sector committees, of which ninety belonged to the private sector. Of the remainder, fifteen were government sector committees providing standards and qualifications for public servants; twelve concerned culture, the arts, education and sport; and ten covered the voluntary sector (e.g. Red Cross, women's and children's protection, etc.).

#### **4. LEVELS AND DESCRIPTORS AND THE USE OF LEARNING OUTCOMES**

The MMC has eight levels and is similar in design to the European Qualifications Framework. Competences are evaluated through the NSCS, which, in addition to providing for technical and professional education, includes five levels dedicated to vocational qualifications.

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<sup>2</sup> *Instituto Politécnico Nacional (IPN).*

**Table 1. The Mexican Qualifications Framework (MMC)**

MQF Levels	Formal Education	Level	NSCS	Competences Demonstrated
8	Higher Education	Doctorate		- Corresponds to level 6 of UNESCO's ISCED <sup>2</sup> . Includes advanced and specialised knowledge. Ability to synthesise, evaluate and resolve critical problems in research and/or innovations
7		Master	Diploma of Higher Specialisation	- Corresponds to level 6 of UNESCO's ISCED. Includes responsibilities dealing with the development of knowledge and professional abilities of the team.
6		Professional Licence	Specialized Diploma	- Corresponds to level 5 of UNESCO ISCED. Ability to integrate academic knowledge with the world of work; ability to understand principles and theories; ability to solve complex problems related to work or studies
5.		Superior Technician	Advanced Diploma  Diploma	- Manages complex technical and professional activities, whether programmed or unpredictable. - Gives general guidelines and specific instructions to subordinate workers. - Takes responsibility for the results obtained from own work and the work of others. - Responsible for planning the activities of a working group. - Responsible for the professional development of individuals and groups of workers.
4	Upper Medium	Professional Technician	Certificate IV	- Various programmed and/or routinized activities. Some unpredictable activities requiring application of learned techniques and principles. - Receives general guidelines from supervisor. - Gives specific instructions to subordinate workers. - Takes responsibility for the results obtained from own work and the work of others.
3		Bachelor	Certificate III	- Routinized as well as some unpredictable activities. - Receives general orientation or specific instruction from supervisor. - Supervises and guides subordinate workers.
2	Basic Education	Secondary	Certificate II	- Programmed activities which are largely routinized and predictable. - Works under instruction of supervisor. - Works effectively in peer group.
1		Primary	Certificate I	- Highly routinized and predictable activities. - Works under instruction of supervisor.

<sup>2</sup> ISCED is the acronym for International Standard Classification of Education

0		Pre-school		
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Source: DGAIR, 2012.

The five labour competence level descriptors developed by CONOCER are aligned with the first five levels in the MMC. CONOCER adopts a holistic approach to competences. 'Competence' may refer to any combination of the following:

- The knowledge and abilities required to execute a particular function in any service or manufacturing sector;
- Social skills, including the ability to work in teams and build social networks based on relationships of trust with others;
- Attitudes, including self-reliance and resilience, motivation to achieve projected goals, and the strength to fight for one's beliefs;
- Intellectual competences, including the ability to generate new ideas;
- Ethical competences, including core values and a sense of right and wrong.

## 5. PROGRESSION PATHWAYS AND RECOGNITION AND VALIDATION OF NON-FORMAL AND INFORMAL LEARNING

Since the 1990s, lifelong learning has played an increasingly important role in the thinking of Mexican policymakers, and a number of measures have been introduced accordingly. The conception and development of Agreement 286 (and the associated Agreements) is a key policy response to the above challenges. It is designed to give learners access to all levels of the education system by offering an alternative pathway to that provided by the formal system. This Act also allows equivalences of competence certificates with credits of formal education programmes at the vocational and professional levels. The Mexican approach distinguishes between separate pathways to the same educational or qualification outcome. The informal and non-formal pathways, though outside the traditional institutional structures, are nevertheless considered significant enough to be deemed equivalent pathways to a qualification (Campero Cuenca et al., 2008).

Mexico displays a sub-sectoral approach to the recognition of non-formal and informal learning, with different approaches in primary and secondary education, higher education and the employment sector.

The Mexican national education system covers all schools in the country, public (federal and state) and private. It consists of four main levels: basic education, upper-middle (baccalaureate and technological) education which can be either terminal or a preparation for further study, bachelor's degrees, and postgraduate degrees (including specializations, master's degrees and doctoral degrees). The system also includes training-for-work via technical diplomas. In Mexico, alternative pathways for basic education for youth and adults as well as certification are the main responsibility of the National Institute for Adult Education (INEA).

Curricula in recognized national educational institutions are set by DGAIR and certificates awarded by the SEP (De Anda, 2010, pp. 5–8). Outside the national education system, diplomas (called *constancias*) are awarded for certain courses and for non-formal education. Following completion of certain legally required procedures, these diplomas can be recognized by the SEP as equivalent to qualifications in the national system.

The recognition of labour competences for workforce development and employability is closely associated with the National System of Competency Standards (NSCS), which has been developed by the National Council for Standardisation and Certification of Labour Competences (CONOCER) and under which the recognition of non-formal and informal learning is organised, regulated and implemented (García-Bullé, 2013). In accordance with Agreement 286 of the Ministry of Education (*Acuerdo 286 de la SEP*; issued on 30 October 2000) CONOCER promotes the development of certifiable standards for recognising the competences of employers and workers, accredits the assessment and certifications unit standards, and issues the official "labour competence certificates".

Companies, whatever their focus, are now legally obliged to provide their employees with training and skills development based on the standards of competence set out in the NSCS. Assessment is based on portfolios of evidence, observation of work performance, interviews and demonstration of knowledge. Where necessary, attitudes, behaviour and personal values may also be assessed. Tools for assessment are designed to have a positive impact on the career development of both employers and employees, thus contributing to the success of the organization. Trainees in some international companies in Mexico are even involved in designing their own learning processes and in recognizing and validating the competences gained from them. In most companies, however, models for assessment are still in the process of being developed.

To promote mobility within the country and in the region, CONOCER relates the NSCS with formal educational degrees and the Mexican Qualifications Framework.

Policies for the recognition of prior learning (RPL) are designed to provide value and credibility for employers, workers, educators and society in general. This involves:

- 1) recognizing competences that are relevant to a particular sector;
- 2) conducting recognition and accreditation in a way that is credible for employers;
- 3) providing mobility for workers and better working conditions, including higher salaries;
- 4) generating information to help align educational curricula with the requirements of industrial sectors.

Certification of competences under the NSCS is largely driven by the need to make certain industries more economically competitive. Certification often occurs as a result of a personal decision by employers, trade unions, academic institutions or individuals within the industry concerned. In the case of voluntary work, certification is often mandatory in order to comply with the legal requirements of government institutions, government-funded civil organizations, or international institutions. Specific programmes for certification of competences exist for disabled people, non-Spanish-speaking indigenous people and social workers serving these sectors, as well as in the areas of childcare and women's protection. Low-skilled workers who lack formal education can have their labour competences evaluated and certified by a national programme managed by the National Institute for Adult Education (INEA) and credited by CONOCER. The SEP is continually engaged in identifying targets for RPL in particular industries and areas of the country. Employers and trade unions play a significant role in this process, both in the design of training programmes and in the evaluation and certification of workers' competences according to the NSCS framework.

In October 2012, the Secretariat of Public Education announced the Mexican Bank of Academic Credits<sup>3</sup>. This allows certificates of accredited certification centres, including those from CONOCER to count towards formal educational programmes at upper-middle and higher levels.

**Table 2. The Mexican Bank of Academic Credits**

MQF Levels	Level	Document of Certification (NSCS)	Credits
8	Doctorate		300 credits (3 years)
7	Master	Diploma of higher specialisation	60–120 credits (1–2 years)
6	Professional Licence	Specialised Diploma	240–300 (4–5 years)
5.	Superior Technician	Advanced Diploma	120–180 (2–3.5 years)
4	Professional Technician	Certificate IV	136–180 (2–3 years)
3	Bachelor	Certificate III	91–135 (1–2 years)
2	Secondary	Certificate II	46–90 (3 years)
1	Primary	Certificate I	1–45 (6 years)

<sup>3</sup> Article 8 of the Announcement published by DGAIR on the official Mexican Government Diary of 4 October 2012.

0	Pre-school	Certificate of Pre-school	(3 years)
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Source: DGAIR, 2011b

## 6. REFERENCING TO REGIONAL FRAMEWORKS

Both the MQF and the NSCS aspire to create links with international qualifications frameworks in order to facilitate labour mobility within the country, the region and eventually the wider world (García-Bullé, 2013).

In light of the internationalisation of higher education Mexico is developing transparency tools to facilitate mobility and academic cooperation across regions, particularly with the European Union. Historically, the main emphasis of the “good quality” higher education (making up the higher education network ANUIES) has been cooperation and mobility with the US. Proximity and the NAFTA agreements play a big role in US-Mexico trade and migration relations. ANUIES members organize their internationalisation mainly (up to 92 percent) on the basis of inter-institutional agreements.

## 7. IMPORTANT LESSONS AND FUTURE PLANS

Further implementation of the MMC would benefit cross-regional mobility and cooperation, but above all it would produce lasting benefits for Mexico and Mexicans, in particular if it linked to a solid credit system at national level and a comprehensive system of quality assurance.

While several of the reforms in qualifications and credit systems have been initiated by DGAIR, they can only be successfully implemented with the full support of the Federal Government as whole.

The MMC has facilitated the work of CONOCER by setting out equivalencies between labour certificates and formal educational degrees.

With regard to the CONOCER model for RPL, from the national reform of 2009 until now (June 2013), more than 400,000 certificates were issued in the last 5 years. This success is attributable to the fact that the model enjoys official recognition and national validity, as well as to fruitful collaboration between the ministries of Education, Labour and Economic Affairs. Even more important, however, is the active role played by stakeholders from the grassroots up.

Although RPL of labour competences is promoted, regulated and financed by the federal government through CONOCER, it is driven by employers, workers’ association and academic institutions.

At a deeper level, the success of the Mexican initiative is perhaps also explained by the fact that it is fundamentally motivated by a desire to increase competitiveness in order to promote progress and prosperity. Operational issues of training, evaluation and certification, although critical, are seen as instruments for the pursuit of this aim and not as ends in themselves.

## MAIN SOURCES OF INFORMATION

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