



Supporting the Contribution of Higher Education Institutions to Regional Development

Peer Review Report

Nuevo León, Mexico

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EXECUTIVE SUMMARY

Background: OECD/IMHE review

The review of the Nuevo León region in México is part of the OECD/IMHE project entitled Supporting the Contribution of Higher Education Institutions to Regional Development which embraced 14 regions in 12 countries in 2005/2006. The IMHE thematic review project was launched as a response to a multiplicity of initiatives across OECD countries seeking to mobilise higher education in support of regional development. The aim was to synthesise this experience into a coherent body of policy and practice to guide higher education institutions and regional and national governments. At the same time, the IMHE project was designed to assist with capacity-building in each country/region through providing an opportunity for dialogue between HEIs and regional stakeholders and clarifying roles and responsibilities.

Review process

The Peer Review drew on a self-evaluation process guided by an OECD template. This asked HEIs to critically evaluate, with their regional partners and in the context of national higher education and regional policies, how effective they were in contributing to the development of their regions. Key aspects of the self evaluation related to: the contribution of research to regional innovation; the role of teaching and learning in the development of human capital; the contribution to social, cultural and environmental development and the role of the HEIs in building regional capacity to act in an increasingly competitive global economy.

The Nuevo León self-evaluation was overseen by the Regional Integration Program of North Eastern Mexican States and Linkage with the State of Texas (INVITE), a recently created state government agency. Participation from higher education institutions, government-related agencies and businesses was pursued.

The direct costs of the project were covered by the state government. The OECD review visit took place on 26-31 March 2006. The Peer Review Team - Professor José Ginés Mora-Ruiz (Spain), Dr. Vera Pavlakovich-Kochi (United States), Professor Roberto Rodríguez-Gómez (Mexico), and Francisco Marmolejo (OECD/IMHE) - met with more than 150 people from universities, government agencies, community based organisations and companies.

The Nuevo León region

The state of Nuevo León is located in the North Eastern region of Mexico. Monterrey, the capital city and its metropolitan area, is the financial, commercial and industrial centre of the Northern region of Mexico and the industrial capital of the country. Nuevo León is located in an important North American logistical corridor. It has a total population of 4.2 million of which 85% live in Monterrey metropolitan area, just 200 km from the border with Texas, USA. Nuevo León has the third largest economy of all the states in Mexico and its per capita income exceeds the national average to a significant degree. It has a well developed infrastructure including highway and railroad network and an international airport. The most important sector is manufacturing. The traditional industrial base of Nuevo León is, however, becoming obsolete. The industrial mix affords limited value added and has a limited technological base.

Nuevo León has a well known entrepreneurial culture which has consolidated a dynamic society and a position of economic leadership in Mexico and Latin America. The strategic position of the region, the metropolitan character of the population and the proximity with the United States are important factors explaining the economic development of the area, the entrepreneurial attitude of business people and the international approach of both the regional economy and the universities in the state of Nuevo León.

Having a prosperous history in traditional industrial sectors, the state is now trying to move towards the knowledge-based economy, developing new high technology sectors and specialized medical services. Unlike elsewhere in Latin America, there is a clear regional preoccupation about the need to transform the economy into a knowledge-based economy. The regional stakeholders are taking on the challenge of convincing companies about the need to re-evaluate the region's economic model and to engage them in this new approach. In response to the new situation the state government has launched a series of initiatives including International City of Knowledge Program (MICK), and INVITE.

The government-initiated Monterrey International City of Knowledge Program (MICK) is a new framework for collaboration between government, universities and business associations. It is an efficient linkage between the scientific research of academia, the private sector and government and the main model for the encouragement of regional

partnerships in pursuing the generation of business activity based on knowledge transfer and technology incubation.

Higher education institution's contributions to region building

The state of Nuevo León has a higher proportion of higher education students than the Mexican average. The state's population represents 4% of the total population of Mexico while the share of higher education students is 5.4%. There are 44 higher education institutions (HEIs) offering education to more than 111 000 undergraduate students, and more than 10 000 students at the graduate level. In addition, there are 8 000 students in other categories (vocational technical studies and teacher training).

The main higher education institutions which were in the scope of the OECD review were (1) the Autonomous University of Nuevo León (UANL) - a public research comprehensive university; (2) the Monterrey Institute of Technology (ITESM) - a private comprehensive university with the tradition of offering programs in engineering, and business and (3) the University of Monterrey (UDEM) - a private undergraduate and master's degree teaching oriented institution.

These HEIs are becoming critical partners for industry and government in pursuing improved economic competitiveness and prosperity through research and innovation. While the academic staff have been entrepreneurial and has established successful relationships with private companies, there is a need to institutionalize the linkages between the University and the business sector. In addition, the roles and responsibilities concerning the management of industrial property at HEIs need to be clearly defined and articulated.

The HEIs also contribute to the regional innovation system by educating students and exposing them to research and entrepreneurship. There are some linkages between universities and the business and government sectors and encouraging efforts on the part of universities for the periodic updating of curricula. There is a need to improve curricula in order to make them more adapted to social needs. More courses, training and awareness on entrepreneurship also need to be included in the academic programs offered by HEIs.

There is a wide variety of programs that HEIs have implemented to foster the social and cultural development in the region. These include mandatory Social Service (SSP) for all university students, the intensive use of technology to deliver educational programs to remote communities and non-traditional students, the preservation of buildings and monuments of historic value and the health services to underprivileged communities. While Social Service provides a powerful mechanism for region building, it too often remains paternalistic and aid-based rather than aligned with community development objectives. By better administering it and linking it to the community needs, HEIs can foster regional development at the same time as they provide quality teaching and learning experience to students and staff. Similarly, efforts in the field of culture should be integrated into the teaching and research functions.

Despite the efforts made by the federal and the state government to support the higher education system, such as increasing investment in education and increasing student enrolment, there are some

inefficiencies and shortages throughout the system. The most critical aspect is that the education system needs to become more integrated. The absence of articulation between the various education levels, as well as the limited linkages that exist between the education and economic systems could explain the limited research and scientific development and high rates of unemployment and underemployment. In spite of the existence of different coordinating bodies, there is no framework identifying clear priority areas for the development of a coherent educational offering. As a consequence, there is a limited effectiveness of policies to promote equity in education regarding gender and socioeconomic status and no solid mechanisms are in place to develop, obtain and disseminate measures and indicators that allow for the evaluation and benchmarking of higher education institutions in the region.

The national perspective

Mexico has experienced considerable growth and transformation in higher education. At the same time, government policies have attempted to address issues of access, relevance and quality in an environment characterized by demographic pressures, political diversification, economic globalization, government decentralisation, and the proliferation of higher education institutions. While the system of higher education has made significant progress in a relatively short period, some problems remain, and new challenges have emerged.

As Mexico faces the need to play a more effective role in the knowledge-based society, the higher education system must adapt to new challenges. The imperative for change provides an invaluable opportunity for higher education institutions and must be taken advantage of. Higher education stakeholders in Nuevo León, with the support of the state government, are in a unique position to engage in a constructive dialogue with the national government and the different key ministries involved, as well as with the broader national higher education community, the business sector and other important actors to further review and implement necessary changes to:

- funding mechanisms,
- regulations for quality assurance,
- institutional governance,
- levels of flexibility in the offering of academic programs,
- contracting of academic staff, and
- internationalisation of institutions.

The Peer Review Team considers it important for the state government of Nuevo León, together with its higher education institutions, to take the lead at the national level and press ahead with specific proposals for development and where these are barred by national law or regulation to bring this clearly to the attention of the national government. Nuevo León is one more time pioneering in the quest for new approaches, and, again, it can succeed.

The regional perspective

The successful insertion of Nuevo León in the knowledge economy and the achievement of further integrated regional development make it necessary to establish solid and effective partnerships between key stakeholders. Consensus must be built among them in identifying strengths and weaknesses as well as in defining the threats and opportunities faced by the region. Higher education has an essential role to play in this. This implies that the various HEIs in Nuevo León must work much more effectively, both individually and collectively as a system. This will happen only if there is firm leadership and direction from the state government in establishing a higher education plan and system and in creating an appropriate regulatory framework, funding mechanisms and rewards systems (institutional and individual) that align with these purposes and needs. The government of Nuevo León must use its influence to persuade and require that universities adapt in this way. The state government, together with the universities and other regional stakeholders, must also lobby and persuade the national government to make the required legal, regulatory and financial changes that will allow the region and its higher education institutions to address the challenges ahead.

There is a limited tradition of collaboration among HEIs. Working inter-institutional networks are not visible. Historically, coordination among universities at the institutional level in order to develop plans together, homogenize academic programs, or carry out collaborative projects has been very limited if not absent. The complexity of the innovation continuum together with increasing competition for resources requires not only stronger inter-institutional collaboration, but also new mechanisms for partnerships between HEIs, government and the private sector. The momentum created by recently established state government policies, including the creation of as Monterrey International City of Knowledge (MICK), has fostered collaboration at an accelerated pace and provides a starting point for a stable connection between universities, industry, government, and among universities themselves.

The OECD/IMHE review has stimulated dialogue in the state of Nuevo León about the importance of higher education institutions in regional development. This opportunity should be seized to develop a stronger consensus and working agenda for higher education action in and for the region. The key element for success lies in the recognition that this is a process not to be left to HEIs alone, but it is a participatory one in which relevant stakeholders should be actively engaged. This will lead the region and its main actors to further appreciate the importance of higher education, to better use the talents and capacity of HEIs, to refine the work that related government agencies conduct, to engage the business sector in a more responsive way, and also to foster necessary change in the higher education sector by abandoning some old attitudes and habits and creating the channels and means of working together.

The HEI perspective

It is essential to better connect and engage the universities with the various sectors and stakeholders in Nuevo León and also to connect them in productive synergy with one another and other levels of the educational sector. In other words, HEIs in the region can work more

effectively and can create powerful and continuous connections with their society by being part of a real and effective educational system, rather than just a cluster of institutions.

This new environment will allow institutions - public or private, large or small - to address more quickly, creatively and responsively what needs to be done within their academic, research and extension functions. This includes, but is not limited to:

- making concrete efforts to assure that future graduates will have a more complete preparation for global, national and regional challenges,
- adapting academic programs in a more timely fashion to the anticipated needs of the region,
- assuring that students acquire appropriate foreign language competences, as well as global and intercultural awareness,
- responding faster and more effectively to the continuously changing needs of the market,
- bringing together employer and HEI perspectives in meaningful, effective and permanent ways,
- continuing and further expanding entrepreneurship culture for all students,
- aligning research efforts more effectively to the needs of the region; not ignoring the critical importance of research in social sciences, arts and humanities to integrated regional sustainable development,
- establishing and/or strengthening the activities of offices serving as liaisons between the needs and opportunities identified by external stakeholders and the capabilities of the institutions; disseminating relevant information about the research capabilities and products of HEIs at the regional level,
- developing and implementing clearer, more specific policies promoting innovation, and regulating and protecting intellectual property,
- collaborating with other HEIs in complementary areas,
- offering more lifelong learning programs designed to help graduates and the general public to adapt their skills to the emerging and changing needs of the labour market, and
- conducting regular follow-up of graduates' performance in the labour market.

Conclusion

The region of Nuevo León is facing major challenges which have profound implications for both higher education and territorial development. If the main stakeholders in the region are clear in the intention to address regional capacity building as an urgent task, the region and its universities can turn Nuevo León's distinctive and at times unique features to their advantage.