

Policy Transfer in Global Perspective

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Chapter 8

Transferring Higher Education Policies to Mexico: The Case of the Technological Universities

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Introduction

This chapter evaluates higher educational policy change in Mexico using the policy transfer framework. It is organized into three parts. In the first part it will be shown that because of its intrinsic characteristics, education policy can function either as a channel or a means for moving ideas from one place to another as objects of transfer. It is precisely in this context that education has become the subject of unprecedented international cooperation and is consequently a fertile policy arena for the study of policy transfer. External assistance in the educational sector has also led to a system of entangled relations between the governments of less developed nations, international agencies and financial organizations. As a consequence of the economic crises experienced by Latin American countries, some states are facing the dilemma of either remaining the main providers of educational services or embarking upon reforms in which state intervention is restrained and public funding limited. Such reforms meet significant political resistance as education in countries such as Mexico has historically proved the key vehicle for social and economic development. Indeed, several Mexican scholars subscribe to the view that the 1990s university reforms were imposed by financial international agencies such as the WB, the IMF or OECD (see, for example, Marín, 1998 and González-Casanova, 2001). Even though the influential role of such organizations should not be underestimated, it is equally important for policy analysts to pay careful attention to the role of national actors. For these above reasons, it is argued that education policy in Mexico represents a fertile policy arena for investigating the policy transfer approach.

The second part of this chapter observes that the Mexican government created a vocational-oriented model of tertiary education by emulating the model of the *Institute Universitaire de Technologie* in France. In the development and implementation of the Mexican Technological Universities (hereafter referred to as UTs) the imperatives of the global epoch as well as the social purposes of educational policy sought to be reconciled. As the vocational courses of the UTs

responded to the needs of local employers, it was expected that vocationally oriented education reform would help to stimulate regional economic development in some of the relatively poor areas of Mexico. It was also claimed that short course programmes could dramatically reduce the opportunity cost of studying and that the practical orientation of the curriculum would facilitate the transition from school to work. The creation of the UTs has certainly enhanced the quality of life of many individuals (see Flores-Crespo, 2002a and b), notwithstanding the structural inequalities in Mexico, which still limit the effectiveness of education policy as an instrument of development. In contrast with France, a much lower number of young people in Mexico successfully complete their technical studies. Moreover, drop-out rates seem to vary in accordance with regional income disparities in Mexico, and, sadly, in some cases, the naïve attitudes of some UT students are associated with their socially and culturally deprived background.

The third part of the chapter explores the implementation lessons that can be drawn from Mexican experience for other countries that share similar development problems. It will be argued that if policy-makers and practitioners really wish to make education relevant for development they need to conceptualize education within a broader perspective and thus introduce reform that will maximize the potential of knowledge for development purposes.

Understanding Education Policy in Mexico

To venture into the study of policy transfer with education as a subject of analysis involves several intellectual challenges. Owing to its capacity to help knowledge dissemination, education can be used as a *means* of transferring particular ideas from one place to another, but it can also be the *object* of transfer through the introduction of new pedagogical practices or educational reforms. This dual character of education can be investigated simultaneously within the policy transfer process. The most recent investment policies in education help to illustrate this claim. The WB and the influential financial leader George Soros have recently committed themselves to fund The New Economic School of Moscow (NES), which aims to help 'Russia and the other members of the Commonwealth of Independent States (CIS) develop all aspects of modern economics – education, academic research, policy analysis, and the training of professionals' (*Transition*, 2001: 6). The NES was founded in 1992 and it is the first non-state graduate school in Russia. While the Bank is investing US\$250,000 a year for at least the next three years into the budget of the NES, Soros is providing US\$350,000 a year for the next five years. Hence, the knowledge provided by the NES constitutes a way of diffusing 'modern' education practices and pedagogy in economics within a former socialist state that is historically biased towards Marxist ideas. Of course, this is not to say that students are subjects determined to act by following a particular ideology, as this assumption neglects the critical capacity of individuals to learn and to deal critically with their own reality (see Freire, 1993 and 1996).

Analyzing education reform through the study of policy transfer predisposes

policy analysts to investigate international cooperation and external assistance in the educational sector. According to Phillip Coombs (1985: 287), there was a remarkable growth in inter-country educational cooperation in the immediate post-war years:

Hundreds of governmental, intergovernmental, and nongovernmental organizations the world over became involved in cooperative educational activities, especially in connection with student and faculty exchanges and with material and technical assistance to Third World countries to spur educational and other forms of development.

As a consequence of the economic crises of the 1980s, this unprecedented upsurge of international cooperation in education created a new complexity of relations between developing countries and international organizations. Faced with rising international interest rates, hyperinflation, recession, and debt crisis, Latin American countries were left in a state of economic disarray (Torres and Puiggrós, 1997). To overcome this situation, international agencies such as the IMF and the WB exhorted governments in the region to adopt structural adjustment policies (Samoff, 1994). These policy recommendations included the reduction of government expenditure, currency devaluations, reduction in import tariffs, and an increase in public and private savings. These measures were aimed at reducing drastically the participation of the state in economic and social affairs and shifting industrial and agricultural production toward exports.

As the role of the state contracted, concerns emerged regarding the future of public education. This was more evident in Latin America where the nation-state has traditionally played an active role in extending, through education, social benefits to vast sectors of the population. Mass schooling, for example, was viewed as a means of building a responsible citizen, a skilled labour force and also of increasing social mobility. This was particularly evident in Mexico where education was one of the 'pillars of the social policy of the post-revolutionary administrations' (OECD, 1997: 29). For example, the total number of students in the educational system rose from 1.3 million in 1930 to more than 30 million in 2000 (PNE, 2001). The 'hand of the state' was undoubtedly crucial to this extraordinary period of growth.

It is also worth noting that Article 3 of the Mexican Constitution establishes that education policy should be designed '...to develop harmoniously all the faculties of human beings, fostering a love of the homeland, awareness of international solidarity, independence and justice' (OECD, 1997: 33). This Article also states that '...all kinds of education provided by the state will be free'. Hence when a policy analyst engages in the study of policy transfer in Mexico, it is necessary to bear in mind two key issues. First, it is the notion of the 'conditioned' state that helps us to understand the contradictions in public policy formation. Secondly, as Torres and Puiggrós (1997: 21) observe the institutional identity of the state is bound up in its role as a promoter of development and social change. Hence, the globalizing elements of education reform represent a challenge to the traditional development role of the Mexican state and provide a source of tension as the 'hollowing out of the state' progresses (see Latapi 1996, 1997, 1998 and

2000). If the state loses its role as the main promoter of educational provision and alternative private delivery systems undertake this responsibility, it is very likely that education will become an increasingly politically sensitive issue for policy transfer analyses.

When a group of international experts commissioned by the OECD visited Mexico with the aim of gathering information for the *Review of National Policies for Education*, they were ‘...struck by how quickly any debate or initiative affecting higher education turned political’ (OECD, 1997: 139). Though they recognized that this was not exclusive to Mexico, they noted that ‘...several factors seem to have contributed to this process of politicization’ (ibid: 140). According to Torres and Puiggrós (1997: 11), apart from its unquestionable contribution to social development, Mexico’s educational system has also been ‘...dependent on the consolidation of the corporatist state as a mode of governance and political legitimization’. This point is supported by some authors who argue that the astronomic growth in higher education, which was much higher than the rate of population growth during the 1970s, was a useful strategy used by the Mexican government to co-opt dissident students and teachers of previous decades (see Vaughan, 1975; Torres, 1991; Ordorika, 1996). As a result of the frenetic expansion of the 1970s a period of ‘improvization’ emerged because academic structures and the role of teachers were not redefined as the disproportionate growth in student enrolment and teachers’ recruitment took place (OECD, 1997: 139-140).

In addition, some public universities became political arenas in which student activists proclaimed that the prime role of the university was not to provide education but to change society. For Levy (1994: 260), various university groups have ‘powerfully’ affected policies and, in so doing, ‘...they often block innovation ardently pursued by other sectors of the university’. Levy’s observation highlights the recurrent tension between two distinct conceptions of university reform. One has been labelled the ‘modernist’ perspective and the other the ‘populist’ perspective. Ornelas and Post (1992) argue that the former includes the efficient integration of graduates into the labour force with the purpose of meeting the needs of the economy (or the needs of employers). The ‘modernist’ perspective embraces greater student competition for university places based on standardized examinations and it is suggested that the direct cost of studying should be paid by the direct beneficiaries of university education rather than by the state. Hence, they argue for ‘top-up’ tuition fees. In contrast, the ‘populist’ perspective seeks broader social change as a result of university reform. Its proponents emphasize ‘social classes, not individuals, as the clientele of the university’ (Ornelas and Post, 1992: 279). Populist reformers generally reject any increase in tuition fees and favour the widest possible access to the education system. This leftist reform project aims at establishing the university system as an instrument of popular struggle and emphasizes the importance of broadening the role of students, professors and workers in university governance.

It is argued in this chapter that ideological polarization can lead to irrational policy-making. Drawing constructive lessons from successful exemplars in the

international domain can be a wholly rational approach to policy-making as long as the non-indigenous lessons that are drawn are culturally compatible with the indigenous context. For example, if a university succeeds in making higher education accessible to the masses by drawing constructive lessons from other overseas institutions then this is to be applauded. For instance, some Scottish universities organize summer access schemes ‘...to help youngsters for whom university would otherwise be an unattainable goal’. These schemes consist of short orientation courses to introduce disciplines to students as well as to allow them to become familiar with facilities and life on campus (*The Guardian Education*, 16 July 2002).

A set of observations should be highlighted from this brief introduction to education policy in Mexico to provide an understanding of the policy environment. First, the education policy arena is both a site of significant state transformation in which the traditional role of the state is being challenged and a site of struggle between populists and modernizers. Secondly, an open-minded approach should be adopted in studying policy transfer within the educational sector. As stated above, it is necessary to bear in mind the dual role of education as a *means* and as an *object* of development within policy transfer processes. Furthermore, it is crucial to adopt rational policy analysis when reviewing the policy recommendations of international agencies and their possible outcomes as the inappropriate transfer of education policy can have a devastating impact on educational facilities in less advanced nations. Finally, as Will Hutton and Anthony Giddens (2001) put it, as everything seems in question in a globalizing world, it is necessary to adopt an imaginative, reflexive approach to public policy rather than conforming to old dogmas.

Transferring Modernization: The Mexican Technological Universities

The case of the Technological Universities constitutes an interesting example of policy transfer in the education policy arena. The main aims of the policy were twofold: first to respond effectively to the economic challenges of globalization; and, secondly, to broaden educational opportunities for citizens in the relatively poor regions of Mexico. The following section considers why Mexican policy-makers engaged in policy transfer.

Why Policy Transfer? Globalization and Higher Education

During the administration of President Carlos Salinas (1989-1994), modernization was the main element of the national development strategy. Moreover, within this strategy education policy was viewed as a key instrument of economic reconstruction for shifting Mexico from one state of development to another. According to the National Development Programme, 1989-1994, the transformation of education constituted an ‘...indispensable condition for modernizing the country’ (PND, 1989: 102). Significant changes were therefore implemented in the educational sector, modifying both the broader aims of higher

education and the institutional organization of the university sector. Scholars noted that the traditional concern for expansion and universal consumption was substituted with a concern for quality and efficiency (Ordorika, 1996). Hence, an emphasis was placed on the introduction of planning and coordination instruments, as well as teaching quality assessment exercises and outcomes-oriented schemes to inform the distribution of public funding (Rodríguez, 2002). The content of public discourse emphasized the contribution of higher education policy to economic development as it was increasingly argued that global economic competitiveness rested on the knowledge and skill of the workforce (Brown, 2001). Hence, the content of the curriculum was transformed in order to produce a virtuous cycle between schooling and the economy. In sum, technical education was regarded as a key policy instrument for achieving higher rates of economic growth in Mexico. As the OECD (1997: 179) reported:

The effectiveness of a modern economy depends to a considerable extent on its technicians and middle managers: within the North American economic area, the development of these intermediate qualifications may in the medium term represent Mexico's opportunity. In particular, trained technicians and middle managers are better suited to the needs and capacities of smaller enterprises which represent the bulk of the Mexican economy.

The Secretariat of Public Education therefore decided that the development of technical education would help to bridge the technological gap that exists between advanced countries and Mexico (SEP, 1991). Hence, with the technical assistance of Professor Phillip Coombs, the secretary of public education, scanned the education reforms which had been introduced in countries experiencing high economic growth such as the United States, Germany, Great Britain, France and Japan. It was found that the *Institute Universitaire de Technologie* (IUTs) in France was '...the most adequate' option for adaptation in the Mexican context (CGUT, 2000a: 10).

Despite the disillusionment in the 1970s with manpower forecasting due to its over-rigid view (Blaug, 1974), and its ambiguous methodology (Hinchliffe, 1987, Lorey, 1993); it was thought that the potential of Mexico's economic growth depended on matching the education supply with the future demand for professionals (Reséndiz, 1998). This presumption was evidenced with data from the International Standard Classification of Education (ISCED) developed by UNESCO, which showed that Mexico lacked technically qualified workers in comparison with developed countries (see Table 8.1). As the former sub-secretary of higher education in Mexico, Daniel Reséndiz (1998) observes, the creation of the UTs provided a new cohort of professionals with 'intermediate' qualifications.

It is worth noting that the ISCED classifies higher education programmes into three levels. *Level 5* refers to academic programmes leading to an award not equivalent to a first university degree. This is sub-divided into two ('A' and 'B') sublevels. The former comprises of programmes that are largely theoretically based and are intended to provide sufficient qualification for gaining entry into advanced research programmes and professions with high skills requirements. The latter

includes programmes that are generally more occupationally specific than ISCED '5A' programmes. It is precisely in this latter category where the UT's educational model falls. *Level 6* programmes consist of those leading to a first university degree or an equivalent qualification. While *Level 7* includes programmes leading to a postgraduate university degree or equivalent qualification (UNESCO, 1997). Table 8.1 supports Reséndiz's observations, but also shows that, if Mexico wishes to catch up with the economic pattern of advanced nations, it needs to train professionals not only at ISCED *Level 6*, but also at levels six and seven.

France, the nation that Mexican policy-makers have used as a reference point for developing its higher education model, registers the highest proportion of workers holding *Level 7* ISCEDs (18 per cent). This is clearly at odds with the Mexican government's focus on investing more in *Level '5B'* than levels six and seven. The former sub-secretary of higher education scientific research explains that the stock of highly qualified personnel is outstripping the actual requirements of Mexico's labour structure (Reséndiz, 1998). Thus, in order to avoid social and political conflicts and regressive economic effects (i.e. over-training, and/or brain drain), adjustments on the supply side have to be introduced. Nevertheless, gearing human resources towards specific needs in the labour market also reveals the limited capacity of an economic system for providing valuable employment opportunities for highly skilled professionals. This highlights the importance of conducting structural changes not only in the education sector but also within the whole economic system of a less advanced nation.

Searching for Solutions

The creation of the UTs can be defined as a case of 'negotiated transfer' in response to economic interdependence, externalities, perceptions of the performance of other nations, and the impact of technological change. Negotiated transfer occurs through the voluntary agency of politicians and policy-makers who devise transfer strategies when they perceive that their country is falling behind its neighbours or competitors. In the case of the UTs, policy change may be understood as a consequence of both a changing macro-economic environment affecting educational systems and a voluntary process of policy learning. It should be stressed that Mexican policy-makers were proactive in responding to global changes in educational systems. They actively sought to draw lessons from French educational experience. However, although the French educational system possesses some remarkable qualities that are often a source of inspiration and emulation, the Mexican government failed to explain why it adopted the *Institutes Universitaire de Technologie* (IUTs) model, if, as the SEP recognised, similar characteristics were found in other educational systems. The US, Japan, Germany and Great Britain, have all created higher education institutions where intensive courses (of two or three years in length) of this type are taught. Indeed they all have courses with: well-equipped laboratories; strong links with industry and business; entrance examinations; and, highly qualified teachers. Moreover, these

colleges have allowed students the opportunity to pursue further studies such as bachelor degrees (SEP, 1991). Given this, why did the Mexican government adopt the IUT model?

Table 8.1 The employment structure in Mexico in comparison with a sample of developed countries

| Type of qualification | ISCED level | Percentage of population employed in the formal economy | | | |
|-----------------------------------|-------------|---|-------|-------------|--------|
| | | Mexico | Italy | Switzerland | France |
| Directors & professionals | 6 & 7 | 3.7 | 10 | 17 | 18 |
| Intermediate occupations | 5 | 3.2 | 15 | 17 | 16 |
| Operators & technicians | 3 | 10.6 | 35 | 30 | 31 |
| Low skilled technicians & workmen | 2 | 82.5 | 40 | 36 | 35 |

Source: Reséndiz, 1998: 60.

The answer lies in the historical influence of the French system. According to Tünnermann (1996), when Latin American universities were reformed in the eighteenth century, they followed the Napoleonic model of education. This imported model consisted basically of substituting universities with professional schools and concentrating scientific research in institutes and academies. At that time it was thought that the cultural and professional training of the bourgeoisie within special institutes would ensure both the unity and the political stability of the state (Tünnermann, 1996: 21). Latin American elites clearly had a fascination in this period for all things French. At the end of the nineteenth and the beginning of the twentieth centuries, the positivism of the French sociologist, Auguste Comte, arrived in Mexico thanks to a Mexican political and intellectual elite who had travelled to Europe to study undergraduate and postgraduate courses. Subsequently, a positivist approach was introduced as a mode of teaching in all Mexican universities (Pallán *et al.* 1995: 14). It is worth noting that political actors primarily promoted the imposition of the positivist approach on the Mexican education system. International financial institutions or other international organizations had yet to emerge. Hence, historically national actors have been no strangers to transferring policies voluntarily. It is also worth noting that the education secretary who proposed the transportation of the UT model to Mexico studied in France. Hence it is possible to identify a continuous exchange of ideas

between Mexican policy-makers and their French counterparts. In sum, policy transfer historically begets policy transfer contemporaneously.

Defining the Public Policy Problem

There are more cross-cultural influences in the world than is typically acknowledged by those alarmed by the prospect of cultural subversion (Sen, 1999). However, recognizing this trend does not preclude evaluating the limitations of applying non-indigenous policies from developed countries in less developed countries such as Mexico. Attempting to catch up with economic development in advanced nations through human capital formation raises big questions concerning the way in which structural inequalities in developing countries can be addressed. Vocational-oriented models of higher education can certainly play a key role in the formation of skills for competing in a global economy, but it is necessary to pay primary attention to how knowledge can enrich the lives of human beings. Although President Vicente Fox has ranked Mexico's economy ninth in the world (*La Jornada*, 22 July 2002), only one in five Mexicans aged 19-23 are enrolled in a university programme (PNE, 2001). Moreover, despite the relative increase in higher education enrolment during the last decade there has been a significant increase in people excluded from provision. According to the *Observatorio Ciudadano de la Educación* (a citizen's education watchdog), while in 1990 there were 6.7 million persons without access to university education, by 2000, this number had increased to nearly 8 million (OCE, 2000a). This statistic reveals a serious problem of inequity. What barriers are preventing young people from entering public or private higher education institutions? In order to explain this, it is necessary to pay careful attention to both the severe economic restrictions that most Mexicans face and the controversial public policies that have been formulated to finance public education (Márquez, 1999).

Between 1984 and 1996 household incomes in Mexico have fallen considerably (OCE, 2000b). In the aftermath of the economic collapse of 1995, almost two million jobs were lost and real wages in manufacturing fell by almost 40 per cent (Faux and Mishel, 2001). At the same time public expenditure in advanced levels of higher education has decreased significantly. From 1994 to 1998, public expenditure per student in the upper secondary and higher education levels fell by 25 per cent and 46.3 per cent, respectively (OCE, 2000c). The development of these policies was strongly predicated on the WB's thesis that public subsidization at the advanced education level is regressive because university students in this sector normally come from richer households (WB, 1994). Hence to make-up for the reduction of public funds it was proposed that this cohort should be charged for higher education services (see Barnés, 1999). This policy was clearly unwise at a time when Mexico needed to increase its proportion of highly qualified citizens (Ruiz, 1997).

The high drop-out rate from the higher education system in Mexico was also an issue of great concern. The SEP (1991) reported that the graduation rate in Mexican universities was only 50 per cent. High drop-out rates are normally

attributable to economic problems. As the OECD (1997: 169), notes, ‘...young people cannot assume the cost of their studies or have to work at the same time in order to pay their way, this merely exposes the unfairness of the system’. However, students also experience problems with traditional teaching and learning methods:

... students find it difficult to adapt to the demands placed upon them, this must raise doubts either about the admissions procedure or about teaching methods. Another cause may be that, for some of the population, especially those of more modest origins the prospect of such lengthy studies is discouraging, which brings us back to the lack of differentiation in course lengths (Ibid).

It is important to bear in mind that all these inequities do not follow a homogenous pattern. Educational, economic and social disadvantages tend to reflect the deep regional disparity that has characterised Mexico’s historical development. In educational terms, for instance, the consumption of higher education is very uneven across the Mexican republic. While the richer states such as Nuevo León or Mexico City have enrolment rates for first degrees of over 25 per cent, the poorest states such as Oaxaca, Chiapas, or Hidalgo have rates of less than 15 per cent (ANUIES, 2000). This means that a young person aged between 20-24 who lives in an affluent region has more chance of coping with tertiary studies than a student in a relatively deprived zone. Moreover, this disparity is broadened by the regional migration of skilled professionals from poor areas to affluent regions (ANUIES, 2000). Hence, special attention needs to be paid to the development of education policy instruments that can help to offset structural inequalities.

Implementing Technological Universities in Mexico

The national aspiration of achieving higher rates of economic growth combined with the urgent need to diversify tertiary education and to meet the educational needs of citizens from the most deprived regions of Mexico encouraged policy-makers to engage in policy transfer. They sought a solution that would deal with both the imperatives of a global economy and the structural inequalities it facilitates. According to the SEP, technological universities are state-government decentralized public bodies that offer two-year programmes leading to a higher university technician qualification. It follows that their aim is to encourage young people to remain in their place of origin and subsequently take up work there, thus contributing to the development of that region (SEP, 2000).

The UTs were an attractive model to the Mexican government for three main reasons. First, it was expected that as the relationship between the UTs and industry became closer, curriculum design would be informed by the needs of local enterprises and would thus be sustainable. Secondly, it was also considered that through privileging practical learning over theoretical knowledge the transition from school to work would be easier for people living in relatively poor areas. Thirdly, it was argued that short academic courses would reduce significantly the

opportunity costs of studying, contributing to an increase in graduation rates. In comparison with the other options for higher education, the growth of the UTs' system has been very ambitious (OCE, 2000e). Table 8.2 shows that in relative terms enrolment in UTs has increased by almost 45 per cent, while that of the technological institutes and autonomous universities has been less than 3 and 4 per cent, respectively. Despite this, the number of young people enrolled represents only 1.5 per cent of total enrolment in the higher education system.

Table 8.2 Enrolment in Mexican higher education by sector and type of institution, 1998-2000

| Institutions | 1998-1999 thousands | 1999-2000 thousands | Change (No.) | Change (%) |
|--|------------------------|------------------------|-----------------|---------------|
| <i>Public sector</i> | 1315.6 | 1367.1 | 51.5 | 3.9 |
| <i>Autonomous universities</i> | 816.2 | 862.0 | 31.6 | 3.8 |
| <i>Technological institutes</i> | 202.7 | 273.6 | 7.2 | 2.7 |
| <i>Technological universities</i> | 20.6 | 29.8 | 9.2 | 44.7 |
| <i>Teacher training schools</i> | 144.2 | 137.1 | -5.1 | -3.6 |
| <i>Others (e.g. military & naval colleges)</i> | 133.9 | 64.6 | 8.6 | 15.4 |
| <i>Private sector</i> | 522.3 | 595.7 | 73.4 | 14.1 |
| Total | 1837.9 | 1962.8 | 124.9 | 6.8 |

Source: SEP, 1999 and 2000.

It is evident that the UTs' system has been promoted enthusiastically. While in 1991 only three UTs were created, in 2000 the Mexican government embarked upon the creation of forty-four new educational institutions covering 24 states in the republic. In the 2000-2001 academic year 40,000 students were enrolled, an increase of 34 per cent from the previous year. Since its creation in 1991, the UT system has registered a positive growth in student enrolment. However, it is equally important to note that there is a gap between the official student enrolment and the maximum student capacity in such higher education systems (CGUT, 2000a, b).

The number of places available in the UT system has considerably exceeded demand over time. While in the 1997/98 academic year almost 30,000 places were available in the UT system, by 2000/01, this number had risen to 40,000 places. This trend necessitates some thinking about what measures should be implemented to cope with the evident under-utilization of the UTs' infrastructure. If young people from relatively disadvantaged regions are charged for studying in the UT, as the SEP initially proposed, will it be possible to attract a higher number of youngsters to these universities? This seems unlikely as structural inequalities in Mexico are reproduced in its educational system. For example, drop-out rates vary

from 4.2 per cent to 29.4 per cent by UT, which reflects economic regional disparities. According to the CGUT, drop-outs are caused basically by the poor academic background of students and by their limited economic capacity to afford monthly university tuition fees (CGUT, 2000: 21). Graduation rates in the UT system have fallen over time too. While in 1993 62 per cent of students finished their studies successfully, by 2000 this proportion had fallen to 52.7 per cent (CGUT, 2000a). Sadly, this indicator is also significantly lower than that expected by the SEP (80 per cent). This highlights again, the fact that vocational-oriented models of tertiary education should be seen as a key component of a more comprehensive and equitable social policy. However, a realistic vision of what education can do for development within the relatively poor areas of Mexico must be adopted. This discussion of the structural inequalities that characterize the Mexican education system allows for the identification of cultural differences between the UT model and the IUTs in France, which are reflected in the emergence of implementation gaps.

It is expected that as the macro conditions in both nations differ greatly, their respective technical models of higher education will also work differently. Table 8.3 presents some economic and social indicators that help us to contrast the situation in Mexico, as a 'borrower' of education policy, with France, as the 'donor' of the UT model. Even though GDP per capita has increased considerably in Mexico from 1990 to 1999, the minimum wage also fell dramatically. In contrast, in France, the minimum wage doubled in the same period. Moreover, in 1999, a French worker spent less time in his or her job than their Mexican counterparts. This demonstrates that they have the spare time to pursue part-time study. Indeed these statistics provide *prima facie* evidence that the economic conditions in France seem to be contributing to improvements in the living standard of the people. The capacity of people to live the kind of lives that people have reason to value has to be incorporated, as Amartya Sen (1999) argues, in a broader concept of development which contrasts with narrower views of development that centre on the growth of gross national product, the rise in personal incomes, or with social modernization.

As Table 8.3 reveals, there has been a remarkable increase in the proportion of young people entering university in France, despite the fact that annual government expenditure per student is considerably higher than in Mexico (US\$7,177 and US\$4,519, respectively). It seems that as France has grown economically, it has also developed an inclusive education system. While in 1990 only 20 per cent of youngsters entered the French higher education system, by 1999 the percentage had risen to 50 per cent. In Mexico, only 20 per cent of young people aged 20-24 entered higher education in 2000.

These inequalities are captured in the Human Development Index (HDI) of both nations. The HDI of Mexico has registered a greater decline than that of France. Coincidentally, this has occurred since the government adopted a modernization strategy.

Table 8.3 Macro economic and social indicators in Mexico and France

| | Mexico | | France | |
|--|--------|-------|--------|--------|
| | 1990 | 1999 | 1990 | 1999 |
| <i>Real GDP per capita (US\$)</i> | 4,624 | 8,297 | 13,961 | 22,897 |
| <i>Minimum wage (US\$)</i> | 1,343 | 768 | 6,053 | 12,072 |
| <i>Average hours worked per week</i> | 43 | 45 | 40 | 39 |
| <i>Annual expenditure per student in all tertiary education (US\$)</i> | - | 4,519 | - | 7,177 |
| <i>Gross enrolment ratio in tertiary education</i> | 14 | 20 | 25 | 51 |
| <i>Human development index</i> | 0.876 | 0.790 | 0.974 | 0.924 |

Within such vastly different policy environments, it is not surprising that the IUT system has performed more efficiently than their UT counterparts. In 1990, the French IUTs registered graduation rates of 67 per cent for those students enrolled in a manufacturing-related course and 71 per cent for those who studied a programme related to the tertiary sector of the economy (Villa and Flores-Crespo, 2002). In contrast, the graduation rate in the university system of Mexico was 50 per cent when the UTs were created in 1991 (SEP, 1991), but by 2000 it still remained at the same level (PNE, 2001). Although the graduation rate in the UT system was slightly above the national mean (53 per cent and 50 per cent, respectively), it remained significantly lower than those reported by the French IUTs of 67 per cent and 71 per cent. In sum, more young people in France successfully complete their technical courses than in Mexico.

‘Fairness’ is also an issue that is highlighted when the UT system has been the subject of international assessments (see CGUT, 2000a). Since 1996, leading international experts such as Rector Claude Pair (France), Dr. John R. Mallea (Canada) and Dr Martin Carnoy (USA), amongst others, have recommended the implementation of institutional mechanisms to protect students from academic failure and dropping-out. These have included: the creation of scholarship schemes; the reduction of class sizes; and, the development of personal career development strategies with the purpose of integrating students into the labour market. In some UTs an association between the persistence of naïve attitudes to the job market and the low socio-economic backgrounds of students has been identified. For example, according to the Director of the Alumni department of the UT of Tula, Mr Miguel Cruz, local employers generally recognize that the academic qualifications of the UT graduates are relevant, yet, when young people

are interviewed for an occupation, '...they do not know how to express themselves' (Flores-Crepeo, 2002a, b). The inability of students to communicate effectively has proved to be a bigger handicap than educational planners had imagined when they created the UTs. In order to address this problem, the UT of Tula has organized extra curricular activities to empower its students and its graduates. 'Interpersonal Skills' workshops are conducted by Mr Cruz every Saturday with the aim of raising the self-esteem of young people as well as advising them on how to deal with difficulties that arise in the workplace. It is evident that attempts to adapt the curriculum to the needs of the productive sector has not facilitated an easy transition from school to work in the Tula region (Flores-Crespo, 2002a). Extensive institutional changes and remedial strategies were also required. This is an important lesson to be learned by policy-makers in other developing countries that are facing similar problems.

It would be wrong, however, to give the impression that IUTs have been an unmitigated success. Bureaucratic innovations have been persistently recommended for the system of the French institutes (Villa and Flores-Crespo, 2002). In 1994, the review of the *Cour des Comptes* highlighted the need to improve accounting and administrative procedures and coordination between the IUTs and departments in the Ministry of Education. It was also proposed that greater decision-making capacity should be devolved to rectors who participate in academic groups and that greater coordination was needed between the IUTs and universities.

Most UT graduates in Mexico, like their counterparts in France, wish to continue their studies at tertiary level as a traditional university degree is held in higher esteem in the job market than a UT qualification. According to local employers, UT graduates lack analytical skills and in-depth knowledge of specific subjects, thus it is very difficult for a technically trained person to occupy a white-collar position (Flores-Crespo, 2002a). Hence effective institutional cooperation is required to bring the UTs and other higher education systems into a fruitful association. However, this has been very slow to happen. It was not until eight years after the creation of the UTs, that a cooperation agreement was signed with the Office of the Technological Institutes (ITs) to allow students to upgrade their technical qualifications to a higher degree (engineer or bachelor). Despite this agreement, it can be argued that in the most deprived regions such as Tula, mechanisms to upgrade technical qualifications are not available. This has meant that the opportunities for self-improvement through the education system remain severely restricted. Hence the bureaucratic innovations that have been persistently recommended for the French institutes should also be implemented in Mexican UTs.

As the UT system is growing exponentially and becoming gradually more complex, it will be necessary to respond efficiently to future challenges to vocational-oriented models of higher education as they emerge. It is therefore only rational that a continuous process of policy learning is established with appropriate exemplars.

In Conclusion: Voluntary Policy Transfer in a ‘Runaway’ World

This case study illustrates the importance of developing a multi-level explanation of policy change in the Mexican education sector. The policy transfer framework provides a useful approach in this regard. The negotiated policy transfer of the UTs may be viewed partly as a response to the imperatives of globalization (WB, 2000), and, partly as a response to poor performance at the micro-level. This policy transfer was founded on the flawed premise that UTs could be used as an effective tool of development. The French IUT system was identified as the appropriate model for transfer to the Mexican context. This was because historical ties between the Mexican and French education system created an opportunity structure for further transfer. Yet paradoxically, the Mexican state also dramatically reduced public funds to tertiary education during the period of reform provoking severe contradictions between policy systems and precipitating popular political resistance. Much of this resistance was founded on the assumption that modernization strategies have challenged the traditional role of the state in offsetting structural inequalities thus exacerbating social cleavages. In hindsight there has been little evidence that inequalities and poverty in Mexico could have been alleviated during the last twenty years (see Cortés, *et al.*, 2002 and Boltvinik, 2000). This calls into question the way in which educational policy has been developed and implemented. In sum, the thesis that vocationally oriented higher education systems can function as an instrument of economic growth, needs to be re-examined.

Nonetheless, in a ‘runaway world’ (Giddens, 2002) where cross-cultural influences are increasingly common and progressive, it would be irrational to ignore foreign experiences in the development of indigenous public policy processes. However, policy learning must work with the grain of indigenous policy systems and be compatible with social norms, values and behaviour.