

## Chapter 2.

### Strengthening schools and student learning in Puebla

*Significant progress has been made in expanding access and raising student performance in basic education, greater attention is now being placed on students' performance and several recent initiatives could have an impact with further development and implementation. However, school failure remains a challenge: only three of four students who enter primary are expected to complete lower secondary education. Learning time is short, the curriculum lacks a local focus and is often narrowed down to tests, and assessment practices do not fully focus on improvement. Many schools operate under very challenging conditions, with scarce resources and weak support, particularly in the case of multi-grade schools.*

*To strengthen schools and student learning, this chapter looks into policies to:*

- ▶ *Provide high-quality and supportive learning experiences, particularly in early years and multi-grade schools*
- ▶ *Further develop and exploit the potential of early warning systems and the use of assessments for learning*
- ▶ *Foster a more efficient distribution of resources*
- ▶ *Restructure school supervision, support and evaluation systems*

Over recent decades Puebla has made great progress in extending the provision of basic education. Some policy initiatives have started having a positive impact on education services and student learning. However, considerable challenges remain in terms of the quality, equity, governance and management of basic education services. Some of these challenges relate particularly to the state while others are shared across Mexico.

The Secretariat of Public Education of the state of Puebla (*Secretaría de Educación del Estado de Puebla, SEP-Puebla hereafter*) has declared its intention to make concerted efforts to create a long term plan of high-quality educational provision. This objective seems to be shared among key stakeholders and personnel within the state education system. Such an alignment is a key fundamental prerequisite to change the current situation and achieve high standards (OECD, 2010a).

### **Schools, pupils, teachers**

The state of Puebla provides basic education for more than 1.4 million students: 260 000 in pre-school, 840 000 in primary school and 320 000 in the various types of lower secondary establishments. About 10% of all students attend private schools and, since these are mainly located in urban areas, the state is responsible for nearly all education services in remote rural areas. In the school year 2010-11, Puebla employed 58 917 teachers and 6 591 school principals and other education leaders in 11 575 schools. There are schools for indigenous students whose mother tongue is not Spanish (11.5% of the population in Puebla speak an indigenous language). Most students with special education needs attend mainstream schools, although there are a number of special schools for those with profound learning or physical needs (Proyecto Educativo, 2012).

Enrolment levels are relatively high: 86% of pre-school age children, 98% of children of primary-school age, and 92% of students of lower secondary school age are in education. Completion of basic education is still a challenge: only 77 % of the students who entered primary in 2012 are expected to finish basic education (Proyecto Educativo, 2012).

Around 44% of schools in primary education are *multigrado* in which one teacher teaches students of various ages (INEE, 2010). *Multigrado* schools were originally created as a temporary means to serve students in specific conditions; however, over time they became a standard solution to increase coverage (Proyecto Educativo, 2012). Lower secondary students attend a general education school, a general technical school, or a *telesecundaria*.<sup>1</sup> Only 70% of students who pursue this latter type of secondary education complete it. More than 67 000 students in Puebla attend school in one of 32 *Centros Escolares*. These are learning centres which group all basic education levels under one management structure and also provide upper secondary education.

### **The schooling structure and the learning environment**

As in the other Mexican States, basic schooling in Puebla consists of three years of pre-school, six years of primary school and three years of lower secondary education. Students attend school either in the morning or in the afternoon. Afternoon schools tend to have higher percentages of students from low income families and lower learning outcomes, such as higher dropout, repetition and coverage rates (Cárdenas Denham, 2011). While the compulsory instruction time is above the OECD average,<sup>2</sup> the effective instruction time may be lower as 70% of school principals in Mexico report extensive absenteeism and late arrival of teachers as factors that hinder instruction and reduce the

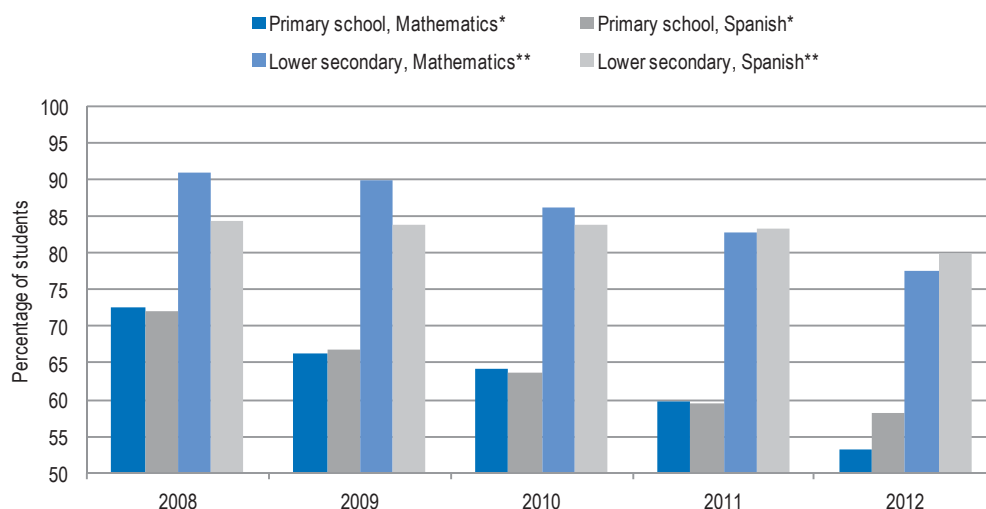
quality of teaching (OECD 2009). The federal Full-Time Schools Programme was created in 2007 and introduced in 85 basic education schools in Puebla with the aim of extending the school day to eight hours. While benefits are claimed, this programme has not been evaluated yet. Moreover, the student-teacher ratios are higher than the OECD on average, but the ratios in Puebla are below the national average with the exception of primary schools.<sup>3</sup>

Basic education schools vary considerably in the quality of their infrastructure, suitability of educational spaces and options for flexible approaches to learning. The provision and quality of educational resources, including basic furniture, also varies and in some instances is unsatisfactory. Classrooms often are overcrowded and lack the visual stimulation of posters and learning charts. Students rarely have access to shared educational resources which could support their learning either within the classroom (*i.e.*, computers, library books) or outside (sport facilities, playgrounds) (see Chapter 5).

The curriculum in basic education schools is set at the federal level. In 2004, Mexico put in place an extensive reform programme, the Comprehensive Reform of Basic Education (*Reforma Integral de la Educación Básica*, RIEB) to ensure a coherent and connected the curriculum across the different levels of education and to improve student achievement. The Reform also asked teachers to use a competence-based, rather than a knowledge-based, approach to learning.<sup>4</sup> The Reform began with Pre-school Education (*Reforma de la Educación Preescolar*), continued in 2006 with Lower Secondary Education Reform (*Reforma de la Educación Secundaria*) and culminated in 2009 with Primary Education Reform (*Reforma de la Educación Primaria*). The impact of the RIEB on teaching approaches, providing more autonomy and responsibility to students, varying the ways of organising their learning, and using appropriate assessment strategies, has not been evaluated yet.

### *Performance data*

Student performance in Puebla is below the national average, but has improved between 2008 and 2012, most notably in mathematics for both primary and lower secondary students (see Figure 2.1). ENLACE (National Assessment of Academic Achievement in Schools) is the main measure of students' performance in Spanish, mathematics and a third subject that varies each year. This test designed at the federal Secretariat of Public Education (*Secretaría de Educación Pública*, federal-SEP hereafter) level and administered at the state level to all students from the third grade (mid-primary) to the ninth grade (end of lower secondary). Performance is graded as “insufficient”, “basic”, “good” or “excellent”.

**Figure 2.1. Percentage of students in Puebla with "insufficient" or "basic" results in ENLACE**

Note: \* 3rd to 6th grades; \*\* 7th to 9th grades

Source: ENLACE, SEP (Evaluación Nacional de Logro Académico en Centros Escolares, Secretaría de Educación Pública), [www.enlace.sep.gob.mx](http://www.enlace.sep.gob.mx).

StatLink  <http://dx.doi.org/10.1787/888932830198>

In PISA 2009, the mean score was 38 points higher than in 2003- the equivalent of nearly one full year of formal schooling- and above the national 25 score points increase. Puebla ranks eighth of all 32 states and above the national average in student performance, which is a remarkable achievement considering that the state ranks 28<sup>th</sup> in socio-economic status (see Table 2.1) (Proyecto Educativo, 2012).

**Table 2.1. Results of Puebla in PISA 2003-2009**

	State	Score 2003	Score 2009	Variation
1	Distrito Federal	455	469	14
2	Nuevo León	416	450	34
3	Chihuahua	422	449	27
4	Aguascalientes	441	449	8
5	State of Mexico	403	440	37
6	Jalisco	434	438	4
7	Colima	461	436	-25
8	Puebla	395	433	38
	<b>NATIONAL</b>	400	425	25
30	Tabasco	346	391	45
31	Guerrero	362	374	12
32	Chiapas	357	364	7

Source: (INEE) (2010), *México en PISA 2009*, INEE, Mexico, D.F.

StatLink  <http://dx.doi.org/10.1787/888932830350>

While 19% of students had repeated a year at the end of primary school (INEE, 2010), grade repetition rates in primary education have decreased from 6.8 % in 2000-01

to 3% in 2010-11 (Proyecto Educativo, 2012). At the age of 15, 21.5% of students in Mexico report that they have repeated a grade (OECD, 2012b). Recently, some legal restrictions have been introduced in order to decrease grade repetition rates (Proyecto Educativo, 2012).

### *School governance and support for schools, school principals and teachers*

In Puebla, and in Mexico in general, schools are managed by a school principal, or a teacher “commissioned” to undertake this function (*comisionado*). The work of the school principal or equivalent is largely administrative and a significant portion of their time is devoted to managing the various federal education programmes in which the school is involved (OECD, 2010a). This leaves little time for other leadership roles, such as stimulating improvements in learning and teaching, and might not compensate the additional funding received. Puebla authorities have taken steps to reduce the number of programmes in schools and have engaged in a roll-out of the best leadership and management features of the *Programa Escuelas de Calidad (PEC)* to all school principals.

There is a long established tradition of oversight of school work by supervisors and other personnel external to the school. Each state has a system of supervision of schools, structured according to geographical areas at two levels: sectors (*sectores*) and zones (*zonas*). Sectors consist of a number of zones (about 10) and each zone comprises a number of schools (typically between 8 and 20 schools). Supervisors (or Inspectors, as they are commonly called at the lower secondary level) take responsibility for each zone (and the respective schools) and report to Heads of Sector (Jefes de Sector, sometimes also called General Supervisors or General Inspectors). Supervisors function as the direct link between schools and educational authorities (UNESCO-IBE, 2010). There are no explicit job descriptions and few support, accountability and evaluation arrangements for these roles, even though criteria for eligibility to the posts are included in the teacher career programme (see Chapter 3 and Santiago *et al.*, 2012). However, to date the role of supervisors has been largely associated with ensuring schools’ compliance with regulations and other administrative tasks. Their capacity to engage in school evaluations in ways which may promote school improvement as well as resulting in accurate evaluation of the quality of a school’s work is limited under present conditions (Santiago *et al.*, 2012).

More recently administrative support for schools is also available through the system of 19 development centres (*Coordinaciones Regionales de Desarrollo Educativo – CORDEs*) that were set up some 20 years ago as a means to decentralise administrative and legal services. The CORDEs aim at becoming local administrative hubs, bringing some education services closer to the communities they serve, which is particularly important given the size of the state of Puebla and the dispersed nature of a large part of the populace.

### *Parental and community involvement in education*

Considerable efforts are made in Puebla to engage and involve parents in the education of their children. The Parents’ Associations (*Asociaciones de Padres de Familia*) operates at state, local and school levels. Their role is to help parents engage with their children’s schools. Schools are also required to have a social participation council (*Consejo de Participacion Social*), which is intended to give parents, other members of the community, and sometimes students a voice in the school’s planning and

improvement. The General Education Law provides these councils with some responsibilities but these are not fully implemented as further instruments have not yet been provided (Santiago *et al.*, 2012).

### ***Priorities and opportunities for the years ahead***

Some of the changes needed to improve Puebla's education system are in the hands of the federal government, but the scope for improvement at the state level is substantial and Puebla can also put forward reforms. Success in the implementation depends to a great extent on the quality of teachers, school leaders and supervisors, which are analysed in Chapter 3. To achieve long-term and sustainable improvements in schools and student achievement, the state of Puebla could begin by focusing on four interrelated areas:

- *Provide high-quality and supportive learning experiences for all:* Make classroom experiences, learning time and curriculum more relevant for students, particularly focusing on the early years and multi-grade schools.
- *Track and support each student:* Follow students throughout their education, develop early warning systems that focus on students' learning, and use formative assessments to align subsequent support.
- *Foster a more efficient distribution of resources:* foster learning communities, and consider alternative ways of distributing resources and organising schools, particularly in remote areas.
- *Restructure supervision, support and evaluation of schools:* Improve the system of school supervision and evaluation, transfer administrative tasks to existing and new professional administrators and create a specialised evaluation agency.

## **Recommendation 1: Provide high-quality and supportive learning experiences for all, particularly focusing on early years and multi-grade schools**

### *The Puebla context*

The current demographic changes suggest a greater focus in upper secondary education, but Puebla should also reinforce and consolidate pre-school and the first years of primary education to ensure a solid educational foundation on which young learners can build. Moreover, current performance and non-completion rates in secondary levels indicate that many Puebla students may enter secondary education already having substantial learning difficulties, particularly - but not exclusively - in literacy and numeracy (OECD, 2010a).

Although the Reform of Basic Education is in its very early days, teachers and school leaders show a shift in thinking, looking critically at the types of tasks they set for pupils and moving towards a more problem-solving approach (OECD 2010a, 2011a; Santiago *et al.* 2012). However, there are specific barriers to achieve the goals of the new curriculum and improve learning in schools and classrooms which will need the attention of educational leaders and teachers. Some of these, mainly centred on learning time, curriculum implementation and pedagogy in the classroom, are outlined below.

Short school days and issues such as poor teacher quality, absenteeism or late arrival at their school hinder the effectiveness of the working hours (OECD, 2009). This reduces the opportunities open to teachers to revise and recycle previous work, a key strategy in scaffolding students' learning. Given the pressure to cover all aspects of the curriculum, teachers understandably find it difficult to trust that time spent on formative assessment or project-based learning activities would bring a positive return. This is particularly challenging in *multi-grade* schools, where students with lower socio-economic background are concentrated and peer and external support structures for teachers are scarcer.

Despite the aims of the RIEB, the curriculum delivered in too many schools may be insufficiently broad. This issue derives from a number of factors, such as the pressure on teachers to 'cover' all the topics set down, the pressure for students to perform well in the national assessments and on bi-monthly tests and the subsequent doubt that time spent on certain curricular elements really is time well spent. Important learning elements, such as those associated with music, sports, arts, enterprise and environmental issues, are under-emphasised.

The curriculum seems to have little, if any, local focus. The experiences that children bring from their home background to the formal learning context of the school are not valued, which is particularly detrimental to indigenous children and those with few experiences outside their community (*i.e.* without internet access). Most teachers do not yet have the capacity to adapt the curriculum to children's contexts while still fulfilling the demands of the national requirements. In addition, the ENLACE test do not always take into account the differing contexts of the indigenous populations, although the federal SEP is currently exploring alternatives.

In Puebla, and other states of Mexico, work is only beginning in ensuring smooth transitions between pre-school and primary and primary and lower secondary settings. The new curriculum, if duly implemented offers a good start. Puebla lacks a state-wide policy to guide schools on how best to support students particularly in times of transition and, in practice, there appear to be few support strategies for students. The consequences

of such matters may be that students fail to achieve what they are capable of, loose motivation for schooling, find themselves having to repeat a year or drop out. Almost half the schools in Puebla are multi-grade and most of these are challenging working and learning environments for teachers and students.

In 2009 the federal SEP developed the *Programa para la Mejora del Logro Educativo* (Programme to Improve Academic Achievement, PEMLE), which in 2011 became the *Estrategia Integral para la Mejora del Logro Educativo* (EIMLE). Around 500 schools participate in EIMLE in Puebla. While the EIMLE has an ambitious programme<sup>5</sup>, does not seem to be well articulated yet with other state and federal initiatives and its implementation is challenging.

In Puebla, as in other states in Mexico, there are a number of mechanisms to promote links between parents and their children's school. These include social partnership councils and associations of parents. In 2012, 92.6% of schools in basic, initial and special education in Puebla have integrated their School Council of Social Participation, the highest percentage in Mexico only after Tabasco (96.3%) and Hidalgo (93.4%) (SEP and CONAPASE, 2012).

### ***The international context***

Many studies show that learning problems and difficulties among students are exacerbated, and often initiated by a poor learning experience during the early years. If not addressed, learning challenges and poor skills are compounded year on year, causing demotivation, often behavioural issues, alienation and eventually leading, in the extreme cases, to dropping out of school (Heckman, 2011; OECD, 2012b). The fundamentals of literacy and numeracy are laid in pre-school and the very first years of primary education, often through non-formal learning situations and especially in playful contexts. Investing in quality education provision during the early years of all students, and in particular in children from disadvantaged backgrounds, reinforces equity in the system and efficiency of financial resources (Cunha and Heckman, 2007, 2008; OECD, 2012b; Woessman, 2008).

The quality of instruction has far greater impact on learning outcomes than the number of instruction hours (OECD, 2005; OECD 2010). At this point in the reform trajectory of Mexico, investments in the quality of teacher recruitment and continued teacher development can yield greater benefits than extending the school day (see Chapter 3). Moreover, increasing the learning time can lead to the recruitment of more poorly qualified teachers and, therefore, risks becoming a long-term major liability.

Research on out-of-school academic and social activities as well as summer school programmes show positive effects on academic performance and motivation (Lauer *et al.*, 2006; Cooper *et al.*, 2000).<sup>6</sup> Additional time can be particularly beneficial for disadvantaged students, who may not have a supportive environment at home (OECD, 2012b). To this end, countries have considered reconfiguration of the organisation of learning time. Some countries have introduced after-school and holiday programmes, study support or breakfast clubs (Mahoney, Lord and Carryl, 2005; MacBeath *et al.*, 2005) particularly targeting at disadvantaged students as they are less likely to participate in these activities (Horgan, 2009). Schools' learning time can also be modified, changing the number of hours per day and/or days per week. In Spain for example, since 2006, some schools can offer students more instruction time, and/or modify the learning time to better serve their students (IFIIE, 2011).



Mixed age grouping is commonly found in 'small' pre-school learning or primary learning environments, such as multi-grade schools, because there are insufficient teachers and/or finances available to organise the range of year groups into single-grade classes. Although mixed age groups are generally created out of administrative necessity, in some systems well structured mixed age grouping may be formed for pedagogical reasons (Gray, 2008).<sup>7</sup> Many studies have also shown the potential of multi-grade teaching programmes (OECD, 2008), such as Colombia's *Escuela Nueva* (see Box 2.1), Guatemala's *Nueva Escuela Unitaria*, and Chile's *MECE-Rural* in the region. In particular, the *Escuela Nueva*, which encourages new kinds of instruction (see Box 2.2) has been positively reviewed (McEwan, 2008; Psacharopoulos, Rojas and Velez, 1992), it has been introduced in many other countries and its under consideration in Puebla.

### Box 2.1. What is Escuela Nueva?

Escuela Nueva is an educational model designed in Colombia in the 1970's to improve the quality and effectiveness of the schools in the country. The program was initially aimed at rural multi-grade schools where one or two teachers simultaneously taught all of the different grades. Schools were typically isolated and in great need of support.

The learning model benefits children, teachers, administrators, families, and the community through four interrelated and structured components: the curriculum and classroom, community, training, and management and evaluations, Escuela Nueva promotes a classroom environment where students actively learn, participate, and collaborate with simple and structured strategies. Fundación Escuela Nueva also works to strengthen the relationship between the school and community. It is a flexible model tailored to meet the needs of each individual child, allowing students to complete units and advance to higher grade levels at their own pace.

Source: Fundación Escuela Nueva, website: [www.escuelanueva.org/portal/en/escuela-nueva-model.html](http://www.escuelanueva.org/portal/en/escuela-nueva-model.html).

Greater parental involvement in education encourages more positive attitudes towards school, improves homework habits, reduces absenteeism, disengagement and dropout and enhances academic achievement. Children are more likely to learn when they have structured home environments with clear expectations about learning but adapted to child specific needs and personalities (Schneider *et al.*, in Dumont, Istance and Benavides, 2010).<sup>8</sup> Parental engagement in education mostly happens through two vectors (OECD, 2010): the support parents give to their children at home, such as discussing school activities and helping with homework, and in-school activities, such as taking part in parent-school meetings and other school activities (Nusche, 2009; Dumont, Istance and Benavides, 2010).

## Strategies for action

### 1A. Explore additional ways of organising learning time and support multi-grade schools

Puebla should explore strategies with a view to compensating for short school days, late school hours (for those in the afternoon shift) and low quality schooling, particularly in multi-grade schools. Potentially fruitful ways for governments to improve the learning experiences are: facilitating a better use of the existing learning time, providing more

time for learning and encouraging more flexible pedagogy arrangements in schools (the latest is analysed in Recommendation 1B).

### *Full Day School Programme, out-of-school programmes and summer schools*

Puebla schools' participation in the federal Full Day School Programme (*Escuelas de Tiempo Completo*) could contribute to shifting the public's and teachers' perceptions of what a school day should look like. However, extending the school day is expensive and available evidence is insufficient to analyse the impact of this initiative in student learning and motivation. Therefore, Puebla may wish to undertake a rigorous cost-effectiveness study based on current pilot schools before considering the expansion of the programme state-wide. Alternative options, such as extending the school day by only 1 or 2 hours, may also be considered and piloted.

When possible, students should also be encouraged to spend more time at school for learning, extra-curricular or leisure activities, particularly in the early years. Evidence shows that participation in school clubs and activity circles can promote better relationships between teachers and students, with both groups earning more respect in a less formal atmosphere. Under certain circumstances, some schools can be reorganised to extend learning time by introducing remedial classes before, after school or on Saturday (OECD 2012b). If teachers are not available to organise activities, then parents or ATPs might be willing to get more involved. Setting aside more time for learning after-school will be beneficial for Puebla students (particularly those in remote areas) who must help in family work, and perhaps even undertake economic activities, and it could foster more positive attitudes towards schooling. Also, well-structured learning programmes during summer and other holiday periods could be beneficial. These programmes could be extended to other children, adolescents and/or adults from the community.

### *Multi-grade and other disadvantaged schools*

A state-wide policy to support multi-grade schools, their teachers, leaders and students should be designed as half of the primary schools in Puebla are multi-grade. This strategy could be developed as part of the EIMLE initiative and it should aim at providing students with quality education during the few hours that they spend in school. The strategy should be holistic, provide teachers and leaders with special training and instructional materials for multi-grade schools and classes, and encourage new kinds of instruction and curriculum adaptation. To this end, some *Normales* can be turned into specialised centres for preparing teachers, leaders and supervisors working in these schools (see Recommendation 2A in Chapter 3). Also, adequate financial and career progression incentives should be developed for staff working in multi-grade schools.

Puebla could continue exploring initiatives such as the adaptation of the *Escuela Nueva* model to the Puebla context. The impact of the programme should be evaluated (e.g. in terms of student achievement, dropout rates and other important variables like teacher motivation or community involvement) in order to inform decisions on sustaining and/or expanding the programme across the state.

The state could consider piloting a remedial teaching programme in schools with low performance and enrolment and high dropout rates, which may be the case of some multi-grade schools. The remedial teacher would support a cluster of schools and could be part of the expert learning teams suggested on Recommendation 3A. Establishing and applying strict criteria to select remedial teachers, ATPs and other suitable individuals, providing them with high-quality training and additional support and evaluating them

continuously is critical for the success of the programme. In several high-performing education systems, such as Finland, remedial teaching is an effective strategy for students who need additional learning support.

### ***1B. Ensure a relevant curriculum to all students and encourage flexible and innovative ways of learning***

The national reform of the basic education curriculum is a significant step towards broadening curriculum at all stages. However, given the way in which current testing, assessment practices and outcomes are used (e.g. as a large component of the *Evaluación Universal* and *Carrera Magisterial*), teachers inevitably tend to teach towards the test, with a consequent narrowing the curriculum and teaching approaches (Santiago *et al.*, 2012). Unless the influence of ENLACE tests is reduced, the chances are limited for the introduction of a relevant curriculum (Santiago *et al.*, 2012). Therefore Puebla needs to develop policies that encourage and facilitate teachers' implementation of *a truly broad curriculum in the classroom* to impact student learning.

Although some work on adapting the curriculum and assessments appears to be happening at federal level, SEP-Puebla can take the lead in the construction of curricular elements and topics as well as associated assessments. These should take account of, and value of, the indigenous contexts from which they are drawn and on which they build. This is particularly relevant since the central direction of curricular content and the associated ENLACE assessments contribute towards arrangements and learning contexts which at times are foreign to groups of students, and particularly those from indigenous backgrounds.

Puebla teachers should be encouraged to use flexible pedagogies and innovative ways to organise learning for a more effective implementation of the new curricula. To this end, Puebla can consider:

- *Allowing and encouraging schools to explore different time and staff arrangements.* For example, when necessary allow longer blocks of time to be devoted to certain areas of the curriculum such as mathematics or history but also the arts, music, drama, entrepreneurial studies and so on.
- *Encouraging schools to use staff expertise in a more flexible way in order to provide students with more relevant learning experiences.* A teacher may have strengths in language, for example, while another is more comfortable with science or music.
- *Exploring innovative team teaching possibilities:* two teachers occasionally team teaching, or dividing their classes into two large ability groups for remedial or extension work, one taken by each teacher for a limited time-frame during the day (See Box 2.2).
- *Introducing in schools some form of integrated studies or project-based pedagogic approaches aligning different disciplines.* For instance education on “entrepreneurship”, or “sustainability and environmental protection” would require students to apply their skills and learning in literacy and numeracy, across varied contexts.
- *Exploring the potential of providing students in the last year of lower secondary with a short, well-structured work experience* – where such is practicable – to improve

motivation and prepare in more practical ways for upper secondary education (see Recommendation 3A in Chapter 5).

- In the long-term, setting up a number of lower secondary schools which offer extended exposure to such subjects as *music or sport to motivate disaffected students*.

Many of these moves would imply a school-wide rather than classroom-based approach to the curriculum and would require both leadership and creativity from school principals and teachers alike. As in Germany and Chile (see Box 2.2), exposure to a broader curriculum should be more the norm than the consequence of the involvement in particular programmes or randomness of individual teachers expertise.

### Box 2.2. Selected innovations in Germany and Chile

**Jenaplan-Schule, Jena, Thuringia, Germany:** This learning environment includes kindergarten, primary school, and different levels of secondary education for learners aged 3 to 20. Learners with minor physical or learning difficulties are integrated into mixed-age classes with students who have other difficulties in school. Teachers work in teams, both for teaching and peer coaching. Learners work partly in cross-grade and partly in homogeneous age groups, with a strong emphasis on open learning and interdisciplinary project work that is organised by week. Subjects change every 3 to 4 weeks. Written reports replace or supplement traditional grading, and learners' peer- and self-assessment is emphasised. Monthly roundtable meetings give parents the opportunity to discuss group-specific problems with teachers and regular consultations between parents and teachers help to support the child's individual development.

**Colegio Karol Cardenal de Cracovia, Santiago, Chile:** This state-subsidised private elementary school in a low-income community with high rates of unemployment and drug use caters to students from kindergarten to eighth grade. It is organised around the notion of a "state-school" in order to teach its students to function well in a democratic society. Classes represent communities that have an administration and departments, there is a school constitution regulating behaviour, a (symbolic) ministry of justice, a court, elections for student president, and students can participate in the school government. The school has its own incentive system, in which the school currency can be exchanged for rewards. These innovations were initiated by the headmaster, who wanted to create an environment of strong and caring relationships to help all students discover their own potential. Scores on national standardised tests have improved significantly since then.

*Source:* OECD Innovative Learning Environments Inventory database, [www.oecd.org/edu/ceri/inventorycases.htm](http://www.oecd.org/edu/ceri/inventorycases.htm).

## 1C. Foster the development of a holistic strategy to support students in a more structured way in schools

The concept of focused support for students has not been greatly developed in Pueblan schools yet. Undoubtedly many teachers and school principals help their students as much as they can, but this may not be enough to improve student learning and motivation. Puebla authorities could facilitate developing in schools a specific strategy for each student to articulate the support, track them along and allow them to feel involved. It should articulate in-school and in-class support strategies, track students' progress, smooth their transitions and raise their expectations.

Puebla should consider encouraging schools to identify a clear reference staff person for students, who will take the lead in articulating an individual support strategy, allow

students to authentically believe that ‘someone knows me, someone can help me, someone cares’ and ensure that they aim at performing at the highest possible levels. The simplest strategy is for each teacher to take on some responsibility for getting to know a group of students, whether taught by that teacher or not.

A more sophisticated arrangement would be to release teaching time of some individual teachers – this could be a commissioned teachers or specially appointed teachers – to take on oversight of a group of students in their academic, personal and vocational progress. This ‘tutor group’ approach is especially valuable in lower secondary schools where pupils have a different teacher for each subjects and thus no clear reference to turn to in case of difficulty. An extension of such an arrangement would be the adoption of a system of ‘houses’ which divide the school population under the personal and social development care of such teachers.<sup>9</sup>

Finally, Puebla could also explore ways to allow secondary students, but also those in the later stages of primary, to express their views on their own learning process and on their school experiences as a whole. Students will tend to feel more supported, engaged and responsible, and to develop important leadership skills and experience. This can range from the simplest form of teachers and the class as a whole ‘listening’ to students to student councils with elected representatives as in Scandinavian countries, the Netherlands or the United Kingdom. For example, Puebla could create a formal forum for secondary students to discuss issues that affect them and education initiatives, which could be related to the *Consejo de Educación del Estado de Puebla* (Council of Education of the State of Puebla).

#### ***1D. Encourage schools to strengthen links with all parents***

Many parents in Puebla, and in Mexico as a whole, find it difficult to engage with their child’s school. A number of steps will have to be taken to lay the foundations for enhanced cooperation. In the first instance, it would be important to design a state-wide policy that shows the full extent of current and proposed links between parents and their schools. This would include explaining the role and opportunities provided by the *Consejos Escolares de Participación Social*, the *Asociaciones de Padres de Familia* and other new or existing initiatives, which can be inspired by more ambitious initiatives to reach families of current and potential low performing students in other countries (See Box 2.3).

Schools should therefore be advised and supported to develop their own policies for attracting parents, and particularly the parents of young learners, to engage in activities. Some of these activities would be intended to familiarise parents with schooling, in general, and others would involve more “hands-on” engagement: (i) reading and working with their child at home, or offering to work with students in extra-curricular contexts; (ii) attending events that provide information on learning and the curriculum at their child’s education level and having regular discussions with their child’s teacher relating to their child’s progress; (iii) looking at displays of students’ work, observing or joining in musical or sporting events; (iv) seeking to engage in requesting particular services, such as cleaning or cooking or helping with resources; (v) reading alongside their child in a class context.

Also, schools should invite parents into the classroom to learn how to support their child and even to learn alongside their child, which could also be an effective way of tackling adult illiteracy. Family learning is a powerful tool that can begin to alleviate

educational disadvantage, promote socio-economic resilience, and foster positive attitudes towards lifelong learning. In Puebla, many young people are obliged to work after or before school to support their family. Given this reality, the work context could be used to show how skills learned in school can be applied outside of school.

### **Box 2.3. Reaching parents and communities in France, Ireland, the Netherlands, and Spain**

In **France**, after being trialed in one school district (Academie de Creteil), the “parents’ toolbox” (“la mallette des parents”) was introduced in 1 300 lower secondary schools in September 2011. Parents receive a DVD at the beginning of the school year with information on their children’s schooling and are invited to participate in three meetings at the school during the school year, on topics such as school organisation, helping with homework and sleeping patterns. The scheme aims to increase links between school and parents, and to ensure more continuity in the child’s learning. In its early stages it has achieved very positive outcomes for students, especially in terms of absenteeism.

**Ireland** has home school community liaison coordinators that organise locally based activities to encourage greater contact between parents, teachers and local voluntary and statutory groups to tackle issues in the community that impinge on learning, with a particular focus on disadvantaged ones.

In **the Netherlands** specific initiatives are devoted to parents from migrant groups, who are generally more difficult to reach and less involved in their children’s education, such as an Ethnic Minority Parents’ Platform, home visits by teachers, a room for parents in the school, courses for parents, and parent information points in the school. Many (primary) schools with a high proportion of migrant pupils have developed a policy and the municipality gives support for parental initiatives and more information for parents.

In **Jacint Verdaguer, Catalonia, Spain**: There are monthly meetings for the coordination of the management team and Parents’ Association and families participate in school workshops, trips, traditional organise festivals, become class representatives to improve relationships and mediate, and follow their childrens’ attitudes ‘information sheet’. Parental involvement and commitments of the basic triangle school-students-families are specified in a contract signed by the three parties at the beginning of each year.

*Sources:* Moisan, C. (2011), « Comment en finir avec l’échec scolaire: les mesures efficaces », Projet de rapport national de base de la France ; Akkerman, Y., *et al.* (2011), *Overcoming School Failure: Policies that Work*, Background Report for the Netherlands, Ministry of Education, Culture and Science, Den Haag; Irish Ministry of Education and Skills (forthcoming), *Overcoming School Failure: Policies that Work*, National Report Ireland, [www.oecd.org/edu/equity](http://www.oecd.org/edu/equity); OECD Innovative Learning Environments Inventory database, [www.oecd.org/edu/cei/inventorycases.htm](http://www.oecd.org/edu/cei/inventorycases.htm)

## **Recommendation 2: Further develop and exploit the potential of early warning systems and the use of assessments for learning**

### ***The Puebla context***

Teachers’ attention in Puebla is now focused on student performance, which is a positive move and aligns Puebla and Mexico with almost all OECD countries. However, the development of an assessment strategy for student learning is at rather an early stage. A formalised assessment system has been introduced with two major components: a set of arrangements for ENLACE tests and a bi-monthly testing and reporting system on

students' performance using the new reporting format (*cartilla de evaluación*).<sup>10</sup> Considerable work has yet to be undertaken to ensure that ENLACE tests are themselves valid and reliable, that they are conceived broadly enough to reflect wider student learning and are relevant enough to be meaningful for all students. Today, in Puebla and in Mexico, test results might be used in ways for which they were not designed. Also, unintended consequences may have arisen in consequence of their application, such as teachers teaching specifically to the tests, rather than the tests serving as evidence of overall learning (Santiago *et al.*, 2012).

ENLACE tests were originally conceived as a diagnostic tool for teachers to use with their students, but current arrangements do not support this purpose. Puebla authorities are exploring to recommend to schools that students should, in addition to completing the official *proforma*, record their test answers separately, so that these responses can be discussed immediately with teachers (Proyecto Educativo, 2012). While this can be a positive step ahead, it still does not allow the tests to serve a truly formative assessment function. In Puebla, and Mexico, a broader and comprehensive set of assessment principles does not exist yet. Moreover, socio-economic or other relevant factors that may influence students' performance results seem not to be sufficiently accounted for and, therefore, benchmarking might be misleading.

While the bi-monthly testing of pupils provides for assessing and reporting on student progress, the system encourages a very limited perception of performance, and is subject to manipulation by teachers to inflate results. The results of the bi-monthly tests are reported in numerical terms, with pupils' work allocated to a mark between 5 and 10. There is little understanding of the meaning of the mark among students, other than the implications of failing a class (which could eventually lead to year repetition) and consideration of the highest mark as excellence that cannot be fostered, which narrows the concept of learning and potential achievement (Santiago *et al.*, 2012). The numerical marking approach leaves little room for more formative approaches and, even if Puebla teachers tend to believe that they are engaging in formative assessment, in the Review visit it was observed that they are not.

Recognising the need to follow students through their educational journey, the Puebla authorities have started to develop a management information system to track individual students through the different stages of their schooling within basic education and beyond. A similar approach is conceived for upper secondary students (see Recommendation 3B in Chapter 5). In parallel, the federal-SEP launched recently the National Students, Teacher and School Registry (RNAME), a national initiative aiming at gathering information about students, teachers and schools in the country. In the same vein, in February 2013, the Mexican Congress approved a major education reform that provides for the creation of a national *Sistema de Información y Gestión Educativa* (Education System of Information and Management).

### ***The international context***

A growing number of countries across the world use complex data-gathering and analysis systems to contribute to school and system evaluation, indicate priorities for attention and help in the determination of educational priorities. In OECD countries there has been a move away from comparison by the use of raw performance data on its own and towards factoring in some form of contextual indicators.

The well-established information system of the Netherlands has allowed the authorities over a number of years to pinpoint schools at risk and follow them up with

external evaluation to explore the reasons for the risk and provide clear recommendations for improvement. Within the English context, OFSTED engages in comprehensive analyses of data to provide information, some of which relates to value-added measures. The Czech Republic is developing a potentially powerful on-line assessment system which is broad in concept, allows immediate feedback to students and has the capacity to analyse data almost immediately. In Scotland, schools are grouped socio-economically using principal component analysis, allowing some measure of comparison of schools' performance against a similar set of schools as well as against a national measure. In Australia, as part of a nation-wide reform aiming at improving transparency and accountability, the *Myschool system* publishes the results of every school and there is an explicit expectation that all schools will meet a common set of high level school performance and reporting requirements (Santiago *et al.*, 2011)

On student assessment, *formative assessment* has been shown to be highly effective in raising the level of student attainment, increasing equity of student outcomes, and improving students' ability to learn (OECD, 2005; Dumont, Istance and Benavides, 2010). Many successful systems across the world have been built on four pillars to use assessment to promote learning: questioning, peer and self-assessment, marking, and using summative assessment to describe learning and discuss it with students (Black and Wiliam, 1998; William, 2010 in Dumont, Istance and Benavides, 2010).

Most teachers use three types of approaches to what they call formative assessment: (i) indicating to students their mistakes in a test or a task; (ii) asking students to make more effort; and (iii) giving students praise in order to motivate them (Picaroni, 2009; Ravela, 2009a). The most effective formative assessment also involves the development of instruments such as rubrics to make students reflect by themselves about the gap between what they were expected to achieve and their actual performance (Wiggins, 1998; Ravela, 2009a).<sup>11</sup> Expanding teachers' repertoire of practices and instruments for formative assessment is not just a matter of sending new materials to schools or loading them onto a website (and expecting teachers to use them). To ensure successful implementation it is crucial to create networks of teachers and develop sustained professional interaction around the new assessment procedures (Ravela, 2010). Designing and introducing good instruments and practices for formative assessment requires collaborative, continuous and interactive work.

### ***Strategies for action***

#### ***2A. Foster the development of early warning systems and establish mechanisms to track students throughout their education***

Puebla authorities should continue and further develop the work on data-gathering, expand their capacity to use data to inform strategies and priorities, and encourage and train teachers to use data to identify priorities in support of student learning. The SIEES (*Sistema Integral de Información Educativa Estatal*) seems to be an excellent start and it should be further developed to provide accurate information on student achievement to individual schools, local authorities and the state itself.

Extending the state's capacity to develop 'fairer' measures of performance – comparing schools within groupings with similar characteristics – would allow authorities and schools to make more nuanced comparisons of student performance and to benchmark performance in additional meaningful ways. Students' socio-economic circumstances should more accurately be factored into the data to reveal the impact of



individual schools and teachers. Such analyses should be used to identify schools and students “at risk” and schools and students that which are merely “coasting” because students’ results are considered “good enough”.

Data analysis should also focus on trends over a number of years as time series are a rich source of information for both internal and external school evaluators. Data could also help determine the individual teacher’s contribution to schools’ performance. However, extracting specific teacher effects in a context of whole-school approaches to learning has been found to be as difficult as determining a single teacher’s value-added contribution to student performance, which the current Mexican arrangements purport to, but do not, do (Santiago *et al.*, 2012)

Any comprehensive management information system should include the possibility of tracking students throughout their schooling, from pre-primary through upper secondary and beyond. Puebla should continue developing its strategy to track students to support them and improve their learning. To avoid duplications and waste of resources, the authorities may wish to develop a single information system that includes all students (see also Recommendation 3B in Chapter 4) and contains or links the information on schools and schools infrastructure (see Recommendation 1B in Chapter 5), while looking for synergies with federal initiatives such as RNAME. In its development and implementation, particular attention should be paid to avoid overburdening schools and school leaders with additional unnecessary administrative work.

As in many countries, the information system should facilitate the use of “traffic lights” (red, amber, green) alerts to direct staff attention to students who are failing to progress or who are regressing in their work. Appropriate remedial action would then be required. Such a system may facilitate the development of strategies at the school level to reduce grade repetition and dropouts and foster the learning of all students. Box 2.4 shows some examples of how schools use information systems to support students and inform parents.

#### Box 2.4. Examples of online student management information systems

**Courtenay Gardens Primary School, Victoria, Australia:** All of the assessment tasks and diagnostic testing data are collated on the *Courtenay Gardens Primary School* “Assessment Tracker”, a database that records student performances on tests and indicates skills and knowledge across different domains of learning. Teachers can earmark students of concern, or those who require additional attention. A year-level coordinator is responsible for ensuring that all teachers’ student data are uploaded in a timely fashion. At a glance, teachers are able to identify which students require any further assistance and thus are able to generate Individual Learning Plans.

**Lakes South Morang P-9 School, Victoria, Australia:** At this school a collaborative data storage system is available for sharing documentation, assessments, etc. among teachers, thereby facilitating the sharing and take-up of good practices among peers. To provide ongoing access to student achievement to parents and students, the school district uses a web-based student information system, PowerSchool™. This information system is used to provide both summative and formative information to students and parents on a daily, weekly and interim basis. The students referred to how much their parents used the online student information system.

### Box 2.4. Examples of online student management information systems (continued)

**Internet Classroom, Slovenia:** The school uses a virtual learning environment (“e-classroom”) to individualise student learning. Students work individually or in pairs on teacher-designed materials and tests in order to reach goals objectives of the official curriculum. The digital system allows teachers to keep track of when individual pupils have performed which activities in the e-classroom, and classrooms are open to parents who wish to observe the activities.

Source: *OECD Innovative Learning Environments Inventory database*, [www.oecd.org/edu/ceri/inventorycases.htm](http://www.oecd.org/edu/ceri/inventorycases.htm).

Also ideally the management information system, apart from serving as an analytical tool, also comes to serve for the community as an accountability tool. An example is France’s system of indicators for the guidance of secondary schools (*Indicateurs de pilotage des établissements du secondaire/IPES*), which has also evolved into a tool for dialogue with the partners of the education system. It is essential that the information produced is presented in a simple way that which lends itself to be analysed by local stakeholders (Sauvageot and Dias da Gracia, 2007).

### 2B. Introduce a state-wide student assessment policy containing guidelines for teachers and information for students and parents

Puebla could consider developing and disseminating its own policy on student assessment. It should briefly explain the various purposes of assessment and the SEP-Puebla view on how those different purposes should be manifested in all schools and classrooms. It should underline that both diagnostic and summative strategies play a key role in the assessment of learning. It should be easy to read for the targeted audiences and include a strategic summary for decision-makers. Puebla’s student assessment policy should:

- Provide better information to students and parents. The policy should contain a section for students and parents with a brief explanation in accessible language (and in relevant indigenous languages) and encourage parents to contact their child’s school for further information. Schools should also be required to help students and parents understand the use of assessments, tests and examinations, and the qualifications that will be required of their children as they move through the basic education levels and beyond.
- Encourage teachers to use assessments to foster learning, and show how high-quality teaching approaches, supported by valid assessment practices, contribute to successful learning. A state-wide assessment policy should encourage Puebla teachers to understand that all classes are heterogeneous and that teaching approaches should be tailored to meeting the needs of all students. It should also contribute to the adoption of formative assessment practices and to reduce the use of grade repetition as a major support strategy.<sup>12</sup>
- Encourage schools to introduce learning support teachers, who could provide additional support for those most in need and who have fewer chances to receive the teacher’s attention in classes with large numbers of students. There could be a role for teachers’ aides who could become learning support teachers attached to each school who could reinforce, replace teachers whilst on training, liase among the different school actors

and help class teachers.<sup>13</sup> Some schools may benefit from rearranging their groups distribution to “free up” one or two teachers to play this role or competent ATPs could be formally deployed to play this role, particularly as Puebla seems to have many schools with teachers and ATPs who do not have appropriate equalisation duties.

### ***2C. Reinforce teachers skills on formative assessment techniques and encourage the development of assessments whose frequency and content support learning***

The implementation of RIEB presents an opportunity to move forward in fostering a new understanding of assessment in learning among teachers (Santiago *et al.*, 2012; Tamez-Guerra and Martinez-Rizo, 2012). Puebla teachers must be able to use of assessments: to track students’ progress, to provide high-quality summative reports for parents and students, and to support learning. However, teachers will need considerable guidance in the application of appropriate techniques, and organising training in this context, particularly classroom-based practical training, should be a priority for the authorities (see recommendation 3 in Chapter 3).

Puebla should consider establishing a well-rounded assessment system, in which formative tests allow the teacher to diagnose whether learning has occurred and, if not, what specific aspects have prevented learning from taking place. These assessments should test students’ understanding of specific concepts and/or their ability to apply effectively the skills that are being acquired. Based on the results of the tests, students can, for example, be more readily grouped into those who have learned the material and those who require further support. The design of diagnostic tests must be closely linked to the curriculum. Several countries have made important progress in the use of formative assessments for student learning (see Box 2.5).

#### **Box 2.5. Selection of formative assessment techniques**

**Community of Learners Network:** In Niamo, Canada, the education institutions that are part of the Community of Learners Network educators design broad inquiry questions that encompass a range of learning intentions and present them to the students. Background knowledge of relevant topics is developed through direct instruction using varied media and a series of information-gathering collaborative processes such as research, ‘Jigsaw’, Literature Circles, Information circles, field experiences and guest presentations. A prominent feature of this phase is a series of ‘circle meetings’ where students’ learning is co-constructed and facilitated in small groups. Reflective writing and representations of evolving conceptual understanding using mind maps follow the small group meetings. After this phase the students are coached to articulate their own inquiry questions that fit within the larger inquiry question. As they pursue their individual inquiries, they often facilitate learning experiences for their classmates.

**The Traffic lights:** Teachers working with the King’s-Medway-Oxfordshire Formative Assessment Project in England created the “traffic light” technique. At points when teachers want to be sure that students understand a concept, they ask students to hold up a green, amber or red sign to indicate whether they understand, think they understand but are not quite sure, or do not understand. They spend more time with students showing amber and red while providing appropriate extension work for those showing green’.

### Box 2.5. Selection of formative assessment techniques (continued)

**Skills or competency matrices:** The Beatenberg Institute in Switzerland, the ImPULS School and the Logdeburg School in Germany have taken similar approaches, by developing ‘skills matrices’ or ‘competence matrices’ which are grids with a list of skills in a subject or field on one axis and a scale of proficiency. These matrices are supporting both students and teachers in the setting of goals, and reflection reflecting on and review of achievements and progress and as such are a valuable tool for increasing student autonomy the self-efficacy of students.

**Logs and portfolios:** The working journal is the main organisation tool at the Reosch school, Switzerland. Beyond its use as a weekly schedule. It contains the pupil’s personal data, information on the Reosch diploma, and numerous organisation tools for the classes, *e.g.*, an assessment sheet for the pupil’s work habits, social and learning behaviour, and a list for tasks and achievement tests. E-portfolios are used at Olds school, Alberta, Canada to document student learning throughout their four years at the school. Students begin their e-portfolios in Grade 9 and continue to add to their learning portfolio throughout the remaining three years at the school.

*Source :* OECD (2005), ‘Formative Assessment: Improving Learning in Secondary Schools’, *Policy Brief*, November 2005; OECD Publishing; OECD Innovative Learning Environments Inventory database, [www.oecd.org/edu/cei/inventorycases.htm](http://www.oecd.org/edu/cei/inventorycases.htm).

In the midterm, the core strategy for improving current and future teachers’ skills in assessment should be the implementation of a whole new approach to assessment in teacher education institutions and continuous professional development. During their studies current and future teachers should be assessed, both for formative and summative purposes, in the same way they will be expected to assess their students: using rubrics, complex tasks, marking criteria based on performance levels, explicit expected learning outcomes, and so on. This requires considerable investment in teacher education programmes on how to give feedback and how to assign marks in a criterion-referenced approach (Santiago *et al.*, 2012; see also Chapter 3).

To encourage the use of formative assessments and free-up the necessary time, Puebla should consider reducing the number of bi-monthly summative testing events and reporting episodes to, for instance, a maximum of three per year. Also, the scope of the new *cartilla de evaluación* could be enlarged to include descriptions of student performance, such as an explanation of the meaning of the marks awarded, and use these descriptions to explain student performance to the students themselves, stressing next steps in learning and how their performance may be improved. Numerical marks should eventually be replaced with level descriptions and assessments should be aligned with curricular standards.

As federal authorities consider ways of adapting the reformed curriculum to the needs of learners from indigenous backgrounds, Puebla could take the lead in the design of local curriculum inserts linked to appropriate assessment items for both formative and summative purposes. For example, the introduction of matching diagnostic tests could help scaffold the learning of those at greatest disadvantage, which is key to achieve equity.

### Recommendation 3: Foster a more efficient distribution of resources

#### *The Puebla context*

As in many OECD countries and most states in Mexico, most schools across Puebla tend to work as single entities and sharing resources is not a common practice. For instance, while about 65% of primary schools (including 83% of indigenous schools) and 43% of lower secondary schools (including 65% of *Telesecundarias*) did not have a library in 2005 (Ruiz Cuéllar, 2007), no common solution has emerged to respond structurally to this rather specific and basic need. In spite of this, Puebla has introduced innovative types of schools, such as the *Centros Escolares*, the *Bachilleratos Digitales* (see Chapter 4) or the *Centros Integrales de Servicios* (Multi-Service Centers, CIS hereafter), which aim at establishing synergies among education levels and/or services within SEP and with other Secretaries. However, these do not provide holistic services to students and its impact has not been evaluated yet. In the case of *Centros Escolares*, which are long established and are oversubscribed, Puebla is currently considering its expansion.

Some initiatives adopted recently have the potential to generate an improving spill-over effect in basic education. For instance, the Under-Secretariat for Planning, Evaluation and Innovation (*Subsecretaría de Planeación, Evaluación e Innovación*) has undertaken an inventory of the various programmes in which schools participate in order to eventually improve the matching to schools and reduce the bureaucratic burden. Participation in the federal Quality Schools Programme (*Programa Escuelas de Calidad*) has been beneficial and Puebla will roll-out of support for leadership, management and school improvement planning to all schools, not only the 3097 schools which are part of the Programme.

#### *The international context*

A growing number of countries are devoting resources to integrate services, particularly for very young children and their families. Studies of these approaches generally indicate that they can go some way to redressing an imbalance of equity which arises from the child's family background and the extent to which parents have been fully involved in engaging with their child and developing their learning – through reading to and with them, engaging in play, outdoors and in, providing interesting experiences of the outside world and generally ensuring that they take a full role in their child's education.

The concept of integrating services seems to have originated in the Full Service School approach which emerged in United States in the last decades of the 20<sup>th</sup> century and was adopted in some other countries as community schools. Although programmes vary considerably, almost all address issues to promote quality in education, such as attention to basic skills, improving parental involvement in schooling and team teaching, together with some provision of health and social services.

In the Netherlands, 'extended schools' (*brede scholen*) mostly support disadvantage students with their problems at school or in their home setting, and offer them additional activities (e.g. culture, sport) and services (e.g., health, social services). The concept of the community school comes from an initiative by local stakeholders such as municipalities, school boards and welfare services and the number is gradually growing across the country (OECD, 2012b).

## *Strategies for action*

### *3A. Create expert learning teams to support schools, introduce schemes to share learning resources across schools and consider the integration of services*

Many schools in Puebla lack both expert personnel to support schools and the kinds of learning resources that can stimulate students. Puebla may want to develop a strategy to consolidate expert learning support teams and deploy them temporarily across regions to respond to school needs. Puebla could centralise some ATPs or teachers, already in the system, to create these peripatetic teams. In the short term, teams could include teaching assistants and/or teachers with special expertise, such as student learning support in art or music, who would be deployed to schools for a week or two as needed. In the longer term, larger and more comprehensive teams might be created, comprising support teachers, teachers with specific specialities, such as sport, arts or sciences, and learning auxiliaries, accompanied by a nutritionist and an educational psychologist. Other specialists could be added according to need and other professionals (*i.e.* counsellors, liaisons for integrated services) could also be considered to provide more holistic support.

Expert learning teams should be locally deployed for shorter or longer stretches of time to basic schools according to prioritised need. Personnel in these teams would work in communities alongside parents and in schools and classrooms alongside class teachers. Particularly they would provide intensive support to those students with learning difficulties and their teachers. Such peripatetic teams might also bring the relevant learning resources with them, which would allow for an equitable sharing of state or municipal resources in times of financial constraint.

Due to the importance of the early years and the limited available resources, a branch of this service could be exclusively specialised on supporting the early years. Another branch of this group could be specialised in supporting multi-grade schools as proposed in Recommendation 1A. Teachers and specialists in such teams may provide teachers at pre-school and the first years of primary and multi-grade schools with practice-based staff development on providing opportunities for children to learn through play and on supporting early literacy and numeracy.

#### *Schemes to share learning resources*

In response to the apparent shortages in school libraries and educational materials in many of Puebla's schools, the use of mobile libraries, including not only books, but other materials, such as science or sports equipment, musical instruments, and/ or art supplies, should be considered. Also mobile computer laboratories with Internet access and specialist teachers could be introduced, along the lines of the *Vasconceles* project in the state of Veracruz. Puebla has already some interesting initiatives, such as the *Tráiler de la Ciencia* from the *Consejo de Ciencia y Tecnología del Estado de Puebla*.<sup>14</sup> For the very youngest children, 'story sacks' could be created and lent to families for a few days.

Organisation and management of such strategies for supporting learning should ideally be undertaken locally, in the first instance along state guidelines, but with room for the development of innovative and creative ideas. Expanded CORDEs could be a locus, with an appropriately-qualified manager tasked with leading and developing the strategy for the region in coordination with school leaders. As with all such projects and programmes, evaluation strategies and success criteria should be created alongside the development of the project, with a state-wide perspective and with the clear purpose of

determining impact and value-for-money, reporting to decision-makers at local and state levels and in due course spreading good practice where it is found.

### *Consider the integration of services*

Puebla authorities could look for ways to introduce more integrated support for children and families, giving priority to those from indigenous backgrounds and in remote areas. Education services cannot, on their own, address problems of barriers to learning and the underachievement of young people. When students, particularly the very youngest children, suffer from the influences of extreme poverty, combined in some instances with social isolation, a concerted effort is required among different services to redress the equity balance. For instance, Puebla could encourage CIS directors to suggest ways to optimise their collective resources and propose joint working plans, and link grants to collective results.

### **3B. Undertake a review of Centros Escolares and consider other groupings of schools**

The state should draw on the success of the *Centros Escolares* with a view to exploiting the concept and creating links and synergies among schools to suit different purposes according to local needs. As a first step Puebla may want to undertake a review of the *Centros* in order to identify the benefits, impact and costs of this arrangement. On the basis of such analysis, the state can modernise and expand the use of existing centres where necessary and potentially propose its expansion or the creation of new arrangements.

Other types of groupings of schools can also be explored. Puebla can identify schools across the state where educational provision might be integrated in an all-through school context. In its simplest form and inspired by the *Centro Escolar* management model, basic education schools in remote communities might be placed under a single management structure, in the hands of a well-qualified school leader(s), with shared priorities and development strategies. The potential for sharing of scant resources in these newly centralised schools would allow students to benefit from economies of scale. Such centralised schools, in both remote and urban areas, could be used to provide digital access to all students in the area, until all individual schools are so equipped, and other social services, such as health, nutrition and child-care, could be provided or co-ordinated. Creative ways to share resources and infrastructure with other institutions in the region, as suggested in Recommendation 3C in Chapter 5, could be an output of such a study.

Where practical, lower secondary schools could be linked to local upper secondary establishments or potentially with a *Bachillerato Digital*. The aim would be to ease transitions, improving the exchange of information on pupils, linking aspects of the curriculum and promoting the notion that pupils are tracked and monitored for performance, guidance and development across their educational career.

### **3C. Rationalise the number of programmes and secure funding for schools, particularly the most disadvantaged ones**

Puebla should continue the efforts to rationalise the number of programmes, which amount to over 140 and represent most of the administrative tasks performed by principals and supervisors. While ultimately federal authorities should change the way funds are distributed to schools as well as increase school autonomy and tighten

accountability (see Chapter 1 and 5), in the meanwhile Puebla authorities should continue to explore ways of ensuring that all schools, particularly the disadvantaged ones, receive adequate funding.

In the short run, Puebla should support targeted schools in screening the programmes available that could be more suitable to them and in dealing with bureaucratic procedures throughout the process. The state could use school-level information to identify schools that will benefit from participating in programmes and support these specific schools in gaining access to these programmes. Although this might reduce the inequities associated with distributing resources through programmes, it will not reduce the related bureaucratic burden and inefficiencies.

Puebla could use the inventory of programmes to rationalise and simplify them and to foster a better matching to schools' needs within the federal limitations. The number of programmes could be reduced to one or two and these should be flexible enough to allow schools to choose their specific focus. More flexibility at the school level should be accompanied by a greater leadership and management capacity as well as accountability in schools. The PEC has already laid the ground work towards a single programme and it aims to achieve greater school autonomy and more involvement of parents and school councils, although it would be convenient to refine its methodology and objectives.<sup>15</sup> The EIMLE is another potential programme that can be enlarged and improved.

Eventually, programmes should be replaced by a funding formula linked to the number and ages of pupils, while providing safeguards for small and challenging schools. This has the greatest potential to begin to reduce economic inequities in the provision of education as shown in the Netherlands, Chile or the Montgomery schools in the United States (OECD, 2010a; OECD, 2012b).

#### **Recommendation 4: Restructure school supervision, support and evaluation systems**

##### *The Puebla context*

Recent initiatives in Puebla are laying the groundwork for the establishment of a much more evidence-based approach to policy formulation than has previously been the norm in Mexico and many individual states. Student tests results provide limited information about schools' performance and few mechanisms exist to effectively evaluate the overall quality of school provision and the value-added provided. Lack of solid evidence can distort and reduce the impact of public intervention (OECD, 2010a).

Some recently-adopted strategies have the potential to be a force for improvement. For example the authorities are increasingly collecting and analysing school-level data, including on student performance. Mechanisms to measure school performance taking into account socio-economic conditions are under consideration but still at a very early stage. In addition, the territorial administrative structure is under reconsideration in order to better serve schools and allow school leaders to focus on evaluation and improvement rather than administrative issues (Proyecto Educativo, 2012). At the national level, the recent decision to reinforce the independence of the INEE is a step ahead to strengthen the evaluation system.

Shifting to a system of school supervision, support and evaluation for improvement is a challenge of sheer magnitude. To start with, overcoming the lack of educational vision among some personnel in leadership roles across the system at all levels, including



supervisors, school principals and teachers, would require some radical changes. Also, a school evaluation system, in the internationally accepted definition, has not been established yet and the current approach to school evaluation does not focus adequately on student outcomes, overall achievements and learning experiences. Mexico has taken some steps, but the recommended self-evaluation materials produced have not been backed by a staff development programme and there is, as yet, no external evaluation system of any note (OECD, 2011a; Santiago *et al.*, 2012). In turn there is no state-wide school evaluation to inform educational policy priorities and the resource allocation to areas of greatest need or impact.

School support strategies tend to be fragmented, of very varied quality and weakly co-ordinated and integrated, with some exceptions. Supervisors are overburdened with administrative duties, in some cases related with their SNTE roles (Proyecto Educativo, 2012). Also, many of them have been more than 40 or even 50 years in service (See Recommendation 4 in Chapter 3) and may prefer to focus on administrative duties as they do not have the knowledge, experience or capacity to support improvement in schools. As a result, the 815 supervisors working in Puebla represent a high-cost service that might not provide sufficient support to educational improvement. In addition, other support personnel (*i.e.* ATPs, superintendents and subject advisers) might not effectively support teachers and school principals.

### ***The international context***

To function efficiently and fairly, stimulate improvement and have the capacity to direct resources to areas of greatest need, high performing systems make sound evidence-based judgments about the quality of current educational provision at national or regional level and use that to inform policy and determine priorities (Santiago *et al.* 2012). What is required is a detailed view of the quality of education and the extent of support required, deriving from a reliable summary analysis of the levels of student outcomes and the quality of the learning process across all schools. Otherwise, policy decisions run the risk of being short-term ‘fixes’ which leave schools no better off than previously, and often worse. Research helps in offering a general picture and in pointing to potential improvement pathways, but can only provide an overview of the quality of education.

Many countries have developed their own school evaluation systems and, for example, Scotland has a well-established comprehensive approach to quality improvement (see Box 2.6). Indicators and standards can illustrate quality and form the language of discussion for school self-evaluation (See Chapter 4, Recommendation 1). Also, the development of an effective evaluation and assessment framework involves considerable investment in developing competencies and skills for evaluation and assessment at all levels (Santiago *et al.*, 2012).

### **Box 2.6. The comprehensive approach to quality improvement in Scotland (United Kingdom)**

Scotland has long experience in the development and use of a comprehensive approach to quality improvement in schools and other educational establishments. The approach is based on a number of fundamental principles: a) that parents and the community have a right to be informed about the quality of the school their child attends; b) that improvement is most likely to happen when schools themselves take responsibility for the quality of their work; and c) that there should be a common language through which all players can more readily discuss what quality is and how it might be improved. The Scottish approach considers three main elements:

Schools undertake self-evaluation, using national guidance and ensuring that evaluations of the quality of learning and teaching in the school are laid alongside school performance data and the views of staff, parents and students in the judgment of quality and the decisions about priorities for improvement.

The local authorities – the employers of the teachers and the body responsible for schools and their improvement – undertake a challenge and support role, by which they ensure, through regular contact, that the school’s self-evaluation is accurate and the school is improving and taking action where it is not.

An external evaluation system, in which national inspectors of education engage in inspection once every few years which uses the school’s self-evaluation as a starting point, verifies its accuracy through first-level evidence which mirrors the school’s procedures for self-evaluation and reports objectively on the quality of education across a number of key quantitative and qualitative indicators.

## ***Strategies for action***

### ***4A. Redefine supervisor’s tasks to focus on student learning and transfer administrative tasks to existing or new professional administrators***

In aiming to modernise the supervisory service and ensure that it contributes successfully to supporting schools and eventually to engaging in consistent, transparent and evidence-based school evaluations of high quality, Puebla should consider a threefold strategy to focus the role of supervisors on improvement, select to ensure high-quality and train them.

First, supervisors should move towards supporting improvement and evaluative tasks to support schools teams effectively. In order to create the conditions and space necessary to allow for this change of focus and for support agents to amend the balance of their activities, there should be a separation of the administrative and evaluative roles of supervisors. Consideration should be given to *rebranding the service*, even renaming supervisors to demonstrate the focus of the new function (*education improvement officers*, for example). These tasks and new roles should be clearly defined and reflected in the supervision guide Puebla is currently preparing and in the mid-term be the basis of a set of supervision standards as discussed in Recommendation 1B in Chapter 3.

Also, candidates who meet strict criteria to ensure high-quality should be selected. Puebla authorities should find ways of ensuring that all those in support and challenge roles, which include supervisors, do not stay in post beyond their capacity to fulfil their professional duties and responsibilities to a high level of quality. Supervisors’ roles

should be redefined, and recruitment procedures tightened and made more transparent to ensure that only the best educationists with appropriate skills are appointed to the post. In the new service, supervisors should have a promotion and management structure, with performance standards which depend more on the outcomes of their work with schools, evaluated in a variety of ways through one central, cross-sectoral state department or agency. See also Recommendation 4 in Chapter 3.

If the supervisor's role moves towards support, improvement and evaluation, attention will have to be placed on how the administrative requirements of the system are to be filled. In addition to putting forward more efficient and less bureaucratic funding arrangements, Puebla should consider releasing supervisors workload by transferring most administrative tasks to existing or new professional administrators:

- *Transform CORDES into effective administration, resource and staff development hubs to absorb more local administrative tasks.* Some existing supervisors could be reallocated as full-time administrators if they are unable or unwilling to take on the more demanding tasks of a re-envisioned supervisor/education improvement officer role. Most inspection or evaluation agencies across the world have associated teams of personnel whose function is to provide administrative support. In addition, local authorities in many countries engage administrators to support schools and provide guidance on compliance with legislation or at national or local level.
- *Undertake a feasibility study into creating a professional administrator post within schools or groups of schools.* Examples of such arrangements are to be found in other countries, notably in the United Kingdom, where the concept of the school or area 'bursar' is prevalent and releases time for leaders and teachers to focus on the professional duties their jobs entail. Some supervisors might consider reallocating to this high-level administrative position.
- *Revise who could best support schools in key dimensions and clarify the distribution of responsibilities accordingly.* For example, CAPCEE as a source of small, professional teams which could address issues relating to school infrastructure, buildings and maintenance (see Chapter 2).

#### **4B. Introduce evaluation and reporting on quality at school and local levels**

Puebla authorities should sustain and extend their recent strategies to see schools as entities which are greater than the sum of the individual teachers working there. Creating strategies to evaluate school performance as a separate notion from teacher performance, such as reporting qualitatively on individual schools, using assessment data and eventually the evidence of learning and teaching observations in a holistic school context, will support the development of joint responsibility for school performance (Santiago *et al.*, 2012). Supervisors' tasks should reinforce the whole-school aspects of their work with schools.

Therefore authorities in Puebla should maintain and expand their strategies to evaluate school performance separately from individual teacher performance, and use assessment data to encourage collective responsibility for school performance. Recent reforms in education in Mexico have focused on the teacher as an individual, but research shows that teachers develop skills and improve their teaching practices by working with their colleagues in school.

Accountability for the quality of educational provision is a concomitant of modern education systems. All levels – school, local and State (and indeed national), require to be able to demonstrate, to themselves and to their communities, that the quality of their provision is as high as it can be, and that the extremely high cost of education services to the public purse is providing a worthwhile return. Schools should be able to assume responsibility for their own development, and every school should be able to demonstrate to itself, its parents, the community and governing authorities how it has used the resources at its disposition, where its strengths lie, and where there is room for improvement.

The notion of self-evaluation has already gained a foothold in the state’s work on staff development in management and leadership through the PEC. This idea could be expanded by using self-evaluation materials, such as those already distributed by the federal SEP. In 2010, the federal SEP recommended that state education authorities draw up and implement a strategic plan for using the *System for School Self-evaluation for Quality Management* in all state education establishments. The first steps towards effective self-evaluation lie in appropriate staff development for school principals, other staff, and, ultimately, teachers.

Self-evaluation in individual schools should be complemented by a system of external school evaluations. These should be carried out by competent personnel at the local level in the first instance and be based on a broad set of indicators and standards, going beyond the narrow context of the results of pupils’ performances in a specific type of test such as ENLACE to inform schools about the quality of its own self-evaluation and to formulate recommendations for improvement. These reports on individual schools will allow area superintendents to produce a summary report on overall strengths, areas of need and aspects for development and improvement, which could be used for accountability or decision-making purposes. External evaluation systems also facilitate spreading of good practice, such in the case of Victoria in Australia (see Box 2.7).

### **Box 2.7. School evaluation in Victoria, Australia**

Australian states and territories have a variety of school evaluation systems, which derive from their particular circumstances and traditions. There are two main forms of evaluation, school self-evaluation and school external performance review, in a sequence of activities that begins with self-evaluation and proceeds through a planning, reporting and review process which both satisfies external requirements and is an engine of school improvement.

Victoria organises its school improvement process in networks of around 20-25 schools, each network being the responsibility of a network leader who reports to the Regional Director. Planning operates on the basis of a four-year strategic plan at both network and school levels allied to one-year implementation plans and annual reporting to the school community. Principals are responsible for undertaking school self-evaluation which drives the planning process and focuses on the relationship between school practices and student outcomes, while regional network leaders appraise principals against performance targets. The state Government commissions external organisations to undertake reviews.

### Box 2.7. School evaluation in Victoria, Australia (continued)

Reviewers are drawn from former principals, officials or academics and must satisfy criteria covering knowledge of the Victorian education environment, expertise in school improvement and data analysis, interpersonal and communication skills and high ethical standards. They are then subject to an accreditation process and must participate in ongoing professional development. The review process, including the quality of reports, is itself subject to evaluation by stakeholders and officials from the Victorian Department of Education and Early Childhood Development.

External school reviews can be one of four, increasingly intensive, types: negotiated; continuous improvement; diagnostic; and extended diagnostic. The nature of the review in any particular school is dictated by an assessment of risk as indicated by evidence of levels of performance. Reviews are designed to go beyond the conclusions of the self-evaluation process to provide a holistic evaluation of a school's performance and capacity to improve. They seek to promote internal accountabilities and see the school and the School Council as the main audience.

Source: Santiago *et al.*, (2011) *OECD Reviews of Evaluation and Assessment in Education: Australia*, OECD Publishing.

#### 4C. Develop a state agency or unit with an evaluation and assessment function

Puebla should consider the creation of a state-level evaluation agency or an evaluation institute to take responsibility for school-level evaluation procedures, including external school evaluation. The state evaluation agency should not simply replicate what INEE already does but should be much more closely involved with the evaluation of individual teachers and schools and provide support to schools in their self-evaluation and internal appraisal activities. State evaluation agencies, modelled on the national INEE model, exist already in other Mexican states such as Chiapas, State of Mexico and Sonora.

Given the dimensions of the Mexican education system, the possibilities for the central level to develop richer evaluation processes are limited and evaluations are likely to be restricted to standardised student assessments and collections of data. The management of education sub-systems by the state authorities offers the potential for closer monitoring of school practices than a fully centralised system would allow, while also providing opportunities to recognise regional realities and constraints. However, state agencies should be inserted in a strategic plan which clarifies the role of each administrative level in the evaluation and assessment framework (Santiago *et al.*, 2012), which should be developed in collaboration between the federal SEP, INEE and SEP-Puebla.

In many systems of education, evaluation agencies serve a counterbalancing audit function in terms of policy direction and help keep the current political administration well-focused on those activities which do contribute positively to improvement within an effective, efficient and economical framework. They also help to make all the processes of education more transparent. The main tasks of the evaluation agency should be to:

- *Report on the quality of education across the state* and engage in specific data analysis, including state-wide student, teacher and school performance, and analysis of assessment information against socio-economic indicators. These reports would then be

used at the local and school levels to identify priorities and staff-development needs (Santiago et al. 2012).

- *Collect information on grade repetition and drop-out rates* or undertake research on such issues as the nature and impact of teacher commissions on student performance, the quality of staff development, and the role and functions of ATPs or subject advisers.
- *Disseminate information.* For example, as most OECD countries with evaluation or inspection agencies, Puebla could consider developing a state-wide education Intranet that would be a repository of evaluations and assessments that is freely accessible to all.

The state evaluation agency could also facilitate the improvement of competencies for the evaluation of state educational authorities and staff in their supervision structures. In collaboration with higher education institutions and teacher education programmes, professional development opportunities should be provided for educational administration staff at different levels, including the state authorities, municipalities, heads of sector and supervisors. The development of an effective evaluation and assessment framework involves considerable investment in developing competencies and skills for evaluation and assessment at all levels (Santiago *et al.*, 2012). Each level understands their role as not only collecting data – both quantitative and qualitative – from lower levels of the administration, but also to provide analysis, feedback and support back to the school and classroom level, with a view to improving practices.

## Notes

1. As mentioned in Chapter 1, the *Telesecundarias* system – attended by one out of five students – was created in the 1960's to enhance access to education to rural or isolated areas in Mexico, although it was also expanded to urban areas. Instruction is delivered through specialised television broadcasts as well as printed and digital materials, and is complemented by a facilitator specially trained for this education modality (Santiago *et al.*, 2012).
2. Primary students attend school either in the morning or in the afternoon for a minimum of four hours for 200 days per year – a minimum of 800 hours per year, which is close to the OECD average of 774 hours of compulsory instruction time (students aged 7-8) and of 821 hours (students aged 9-11). Lower secondary students aged 12-14 spend 1 167 hours per year in school, well above the OECD average of 899 hours of compulsory instruction time (OECD, 2012a).
3. In 2012 the ratio of pupils per teacher in pre-primary school in Puebla was 21.9, compared to 25.4 pupils per teacher and teachers' aides in Mexico though much higher than the OECD average of 12.3 pupils per teacher. In the same year the average student-teacher ratio for primary schools in Puebla was 30 compared to an average of 28.1 in Mexico, and compared to a much lower average of 15.8 across OECD countries. For lower secondary school, the student-teacher ratio in Puebla is much lower than the average of Mexico, 17.3 compared to 32.7 respectively, and just above the OECD average of 13.7 (Proyecto Educativo, 2012; OECD, 2012a).

4. For details on the content and goals of the RIEB, see the OECD Review of Evaluation and Assessment in Mexico Santiago *et al.*, 2012).
5. Some of the actions include *i)* support for schools with low scores on ENLACE and *Multigrado* schools; *ii)* the creation of tutoring networks of principals, teachers and students; *iii)* special attention paid to the adaptation of curricular contents to local needs; *iv)* professional development for teachers, including a 20-hours training workshop to help them implementing a competency-based curriculum; *v)* support for students in transition between levels of schooling, over- aged students, those from migrant families and out-of-school children and adolescents; *iv)* and strengthening of the learning communities within schools (Proyecto Educativo, 2012).
6. The content of the programmes should be linked to the academic curricula and different instructional methods should be explored (Lauer *et al.*, 2006). The duration of the programmes should depend on the specific achievement targets, as longer programmes are more costly and do not necessarily lead to higher student achievement. Programmes that offer small group instruction, particularly one-on-one tutoring, are more effective for at-risk students.
7. For young children, mixed age groups allow learning (playing) within their zones of proximal development; provides them with models to emulate; and, with additional sources of care and emotional support. For older children and adolescents, mixed age groups facilitate development of their capacities to nurture and lead; expands their understanding through teaching; and, fosters creativity in older children.
8. A recent research study using PISA data suggests that parental habits and attitudes towards intellectually engaging activities, and towards books and academic achievement, shape their child’s attitudes towards reading, school and learning, and ultimately school performance as well (OECD, 2012c). Also, the analysis suggest that reading books to children when they are just beginning primary school has a positive impact on reading performance and talking about social and political issues, or about books, films and television programmes with adolescent children is related to better reading performance at school. Moreover, parental involvement in their child’s school is associated with greater student engagement in school, including participating in activities such as meetings with teachers or school principals or volunteer work at school.
9. The concept is known to many young people through the *Harry Potter* school experiences, which are influenced no doubt by a long-standing United Kingdom schooling tradition. This kind of support has greatest relevance in the lower secondary school stage and during school transitions. The ultimate aim is to ensure that every student is known to at least one adult in the school and who will support his or her development and help each raise his or her expectations.
10. The new format has recently been introduced for the reporting system. Further explanation of the system is available in the OECD Review of Evaluation and Assessment in Mexico (Santiago *et al.*, 2012).
11. As Wiggins (1998) puts it: “Safeguarding the core premise that assessment should improve performance, not just audit it, requires that assessment embody and demand self-adjustment based on good feedback... the moment when the student understands why some part of his or her work is a mistake is entirely different from the moment when the student perceives that the teacher does not like that part of the work. The best feedback is highly specific, directly revealing or highly descriptive of what

actually resulted, clear to the performer, and available or offered in terms of specific targets and standards.”

12. Federal-SEP promoted in 2012 new accreditation and promotion rules for Basic Education (ACUERDO 648) aiming at reducing grade repetition, particularly in primary education.
13. Learning support teachers could fulfil a number of functions. First, working flexibly alongside with a student or with a small group of students within or outside the classroom to reinforce their learning; supporting those who have missed work because of long absence or who have been confronted with a particular learning or personal challenge. Second, they can also work with students who easily grasped a learning issue and need to be set more challenging tasks. Teachers may also substitute for the classroom teacher while he or she is on training. Also, support teachers may also be a key contact for the school principal, supervisors, parents and the expert learning teams (suggested in Recommendation 3C). Finally, such learning support teachers might, through experience and / or through a more formalised additional teaching qualification, fulfil a consultancy role for class teachers, helping to diagnose learning barriers, advising on suitable resources or suggesting alternative tasks for students.
14. Consejo de Ciencia y Tecnología del Estado de Puebla, [www.concytep.pue.gob.mx](http://www.concytep.pue.gob.mx).
15. Evaluations of this programme have been positive overall, although some deficiencies at the operational level and limitations in the attainment of objectives have been identified. For example, schools still deal with a great amount of bureaucratic burdens, and capacity- building for better instructional leadership does not always takes place. In this important step, supervisors also still need to become pedagogic allies of the school director.



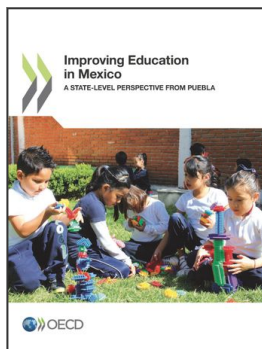
## References

- Akkerman, Y., *et al.* (2011), *Overcoming School Failure: Policies that Work, Background Report for the Netherlands*, Ministry of Education, Culture and Science, Den Haag.
- Black P. and D. Wiliam. (1998), *Inside the Black Box, Raising Standards Through Classroom Assessment*, King’s College, Institute of Education, London,
- Cárdenas Denham, S. (2011). "Escuelas de doble turno en México Una estimación de diferencias asociadas con su implementación". *Revista Mexicana de Investigación Educativa*, num. Julio-Septiembre, pp. 801-827.
- Childress, S., and Thomas, D. (2009), *Leading For Equity: The Pursuit of Excellence in Montgomery county Public Schools*, Harvard Education Press, Cambridge, Massachussets.
- Consejo Nacional de Población (CONAPO) (2010), *Índice de Marginación por Entidad Federativa y Municipio 2010*, CONAPO, Mexico D.F.
- Cooper, H., K. Charlton, J. Valentine and L. Muhlenbruck (2000), “Making the most of Summer school: A meta-analytic and narrative review”, *Monographs of the Society for Research in Child Development*, Serial 260, 65/1, pp. 1–118.
- Cunha and Heckman (2007), Cunha, F., and J. Heckman (2007), “The Evolution of Inequality, Heterogeneity and Uncertainty in Labor Earnings in the U.S. Economy”, *NBER Working Paper No. 13526*, National Bureau of Economic Research, Cambridge. [www.nber.org/papers/w13526](http://www.nber.org/papers/w13526).
- Cunha, F. and J. Heckman (2008), *The Technology for the Formation of Skills*. Presentation, [www.earlychildhoodrc.org/events/presentations/cunha.pdf](http://www.earlychildhoodrc.org/events/presentations/cunha.pdf).
- Dumont, H., D. Istance and F. Benavides (eds.) (2010), *The Nature of Learning: Using Research to Inspire Practice*, Educational Research and Innovation, OECD Publishing, <http://dx.doi.org/10.1787/9789264086487-en>
- ENLACE, SEP (Evaluación nacional de Logro Académico en Centros Escolares, Secretaría de Educación Pública), [www.enlace.sep.gob.mx](http://www.enlace.sep.gob.mx).
- Gray, P. (2008). The Value of Age-Mixed Play, Capitalizing on Children's 'Natural Ways of Learning' *Education Week, Vol 27*, pp. 26-32.
- Greek Ministry of Education (forthcoming), *Overcoming School Failure: Policies that Work, National Report Greece*, [www.oecd.org/edu/equity](http://www.oecd.org/edu/equity).
- Hargreaves, A. and Shirley D., (2009), *The Fourth Way: The Inspiring Future for Educational Change*, Corwin.
- Heckman, J. (2011), ‘The Economics of Inequality: The Value of Early Childhood Education’, in *American Education*, Spring 2011,

- [www.aft.org/pdfs/americaneducator/spring2011/Heckman.pdf](http://www.aft.org/pdfs/americaneducator/spring2011/Heckman.pdf), accessed 24 November 2012
- Horgan, G. (2009), “‘That child is smart because he’s rich’: the impact of poverty on young children’s experiences of school”, *International Journal of Inclusive Education*, 13/4.
- IFIIE (Institute for Teacher Training and Educational Research and Innovation) (2011), *Overcoming School Failure: Policies that Work*, Spanish National Report, Ministerio de Educacion, Spain, [www.oecd.org/edu/equity](http://www.oecd.org/edu/equity).
- INEE, (2010), Instituto Nacional para la Evaluación de la Educación, México en PISA 2009, INEE, Mexico, D.F., [http://www.inee.edu.mx/images/stories/Publicaciones/Estudios\\_internacionales/PISA\\_2009/Completo/pisa2009.pdf](http://www.inee.edu.mx/images/stories/Publicaciones/Estudios_internacionales/PISA_2009/Completo/pisa2009.pdf).
- Irish Ministry of Education and Skills (2012), *Overcoming School Failure: Policies that Work*, National Report Ireland, [www.oecd.org/edu/equity](http://www.oecd.org/edu/equity).
- Jacob, B. and Lefgren, L. (2009), “The Effect of Grade Retention on High School Completion”, *American Economic Journal of Applied Economics*, American Economic Association, 1/3, pp. 33-58.
- Kupiainen, Hautamaki and Karjalainen (2009), *The Finish Education System and PISA*, Ministry of Education Publications, Finland.
- Lauer, P., M. Akiba, S. Wilkerson, H. Apthorp, D. Snow and M. Martin-Glenn (2006), “Out-of-school-time programs: A meta-analysis of effects for at-risk students”, *Review of Educational Research*, 76/2, pp. 275-313.
- MacBeath, J., et al. (2005), *Responding to Challenging Circumstances Evaluation of the Schools Facing Exceptionally Challenging Circumstances*, Faculty of Education, University of Cambridge.
- Mahoney, J., H. Lord and E. Carryl (2005), “An Ecological Analysis of After-School Program Participation and the Development of Academic Performance and Motivational Attributes for Disadvantaged Children”, *Child Development*, 76/4, pp. 811 – 825.
- Matsudaira, J. (2008), “Mandatory Summer School and Student Achievement”, *Journal of Econometrics*, 142/2, pp. 829-850.
- McEwan, P., J. (2008), “Evaluating Multigrade school reform in Latin America”, *Comparative Education*, 44/4, November 2008, pp. 465–483. Routledge, [www.wellesley.edu/Economics/mcewan/PDF/evaluating.pdf](http://www.wellesley.edu/Economics/mcewan/PDF/evaluating.pdf), accessed 24 November 2012.
- McKinsey and Company (2010), *How the world’s most improved school systems keep getting better*, [http://www.mckinsey.com/client\\_service/social\\_sector/latest\\_thinking/worlds\\_most\\_improved\\_schools](http://www.mckinsey.com/client_service/social_sector/latest_thinking/worlds_most_improved_schools).
- Moisan, C. (2011), « Comment en finir avec l’échec scolaire: les mesures efficaces », *Projet de rapport national de base de la France*.
- Muskens, G. (2009), *Inclusion and education in European countries*, INTMEAS.

- Nusche, D. (2009), “What Works in Migrant Education?: A Review of Evidence and Policy Options”, *OECD Education Working Papers*, No. 22, OECD, Paris.
- OECD Innovative Learning Environments Inventory database, [www.oecd.org/edu/ceri/inventorycases.htm](http://www.oecd.org/edu/ceri/inventorycases.htm), accessed 13 December 2012
- OECD (2005), *Formative Assessment: Improving Learning in Secondary Classrooms*, OECD Publishing, <http://dx.doi.org/10.1787/9789264007413-en>.
- OECD (2007), "Improving Learning through Formative Assessment", in OECD, *Education Policy Analysis 2006: Focus on Higher Education*, OECD Publishing, <http://dx.doi.org/10.1787/epa-2006-5-en>.
- OECD (2008), *Innovating to Learn, Learning to Innovate*, OECD Publishing.
- OECD (2009), *Creating Effective Teaching and Learning Environments: First Results from TALIS*, OECD Publishing, <http://dx.doi.org/10.1787/9789264068780-en>.
- OECD (2010a), *Improving Schools: Strategies for Action in Mexico*, OECD Publishing, <http://dx.doi.org/10.1787/9789264087040-en>.
- OECD (2010b), *Closing the Gap for Immigrant Students: Policies, Practice and Performance*, OECD Reviews of Migrant Education, OECD Publishing, <http://dx.doi.org/10.1787/9789264075788-en>.
- OECD (2011a), *Establishing a Framework for Evaluation and Teacher Incentives: Considerations for Mexico*, OECD Publishing.
- OECD (2011b), *Against the Odds: Disadvantaged Students Who Succeed in School*, PISA, OECD Publishing, <http://dx.doi.org/10.1787/9789264090873-en>.
- OECD (2012a), *Education at a Glance 2012: OECD Indicators*, OECD Publishing, <http://dx.doi.org/10.1787/eag-2012-en>.
- OECD (2012b), *Equity and Quality in Education: Supporting Disadvantaged Students and Schools*, OECD Publishing, <http://dx.doi.org/10.1787/9789264130852-en>.
- OECD (2012c), *Let's Read Them a Story! The Parent Factor in Education*, PISA, OECD Publishing, <http://dx.doi.org/10.1787/9789264176232-en>.
- Picaroni, B. (2009), *La Evaluación en las Aulas de Primaria: Usos Formativos, Calificaciones y Comunicación con los Padres*, Partnership for Educational Revitalization in the Americas (PREAL), Santiago de Chile, [www.ucu.edu.uy/Default.aspx?tabid=1267](http://www.ucu.edu.uy/Default.aspx?tabid=1267).
- Proyecto Educativo SC (2012), Background Report on Education in the State of Puebla and Annexes, Puebla.
- Instituto Nacional para la Evaluación de la Educación (INEE) (2010), *Panorama Educativo de México 2010 Indicadores del Sistema Educativo Nacional Educación Básica Media Superior*, Mexico, [www.inee.edu.mx/images/panorama2010/portada1.pdf](http://www.inee.edu.mx/images/panorama2010/portada1.pdf).
- Psacharopoulos, G., Rojas, C. & Velez, E. (1992) ‘Achievement Evaluation of Colombia's Escuela Nueva: Is Multigrade the Answer?’, *Policy Research Working Papers*, WPS 896, April 1992, Washington, World Bank.
- Ravela, P. (2009), “Consignas, Devoluciones y Calificaciones: los Problemas de la Evaluación en las Aulas de Educación Primaria en América Latina”, Páginas de

- Educación, Vol. 2, Universidad Católica del Uruguay, Montevideo, pp. 49-89, [www.ucu.edu.uy/Default.aspx?tabid=1267](http://www.ucu.edu.uy/Default.aspx?tabid=1267).
- Ravela, P. (2010), ¿Qué Pueden Aportar las Evaluaciones Estandarizadas a la Evaluación en el Aula?, Document No. 47, Partnership for Educational Revitalization in the Americas (PREAL), Santiago de Chile, [www.ucu.edu.uy/Default.aspx?tabid=1267](http://www.ucu.edu.uy/Default.aspx?tabid=1267).
- Ruiz Cuéllar, G. (2007), “Docentes, Infraestructura y Equipamiento de las Escuelas”, in *La Calidad de la Educación Básica en México 2006*, Instituto Nacional para la Evaluación de la Educación, Mexico.
- Santiago, P., G. Donaldson, J. Herman and C. Shewbridge. (2011), *OECD Reviews of Evaluation and Assessment in Education: Australia 2011*, OECD Publishing. <http://dx.doi.org/10.1787/9789264116672-en>.
- Santiago P., I. McGregor, D. Nusche, P. Ravela and D. Toledo, (2012), *OECD Reviews of Evaluation and Assessment in Education: Mexico 2012*, OECD Publishing. doi: <http://dx.doi.org/10.1787/9789264172647-en>.
- Sauvageot, C. and Dias da Gracia, P. (2007), *Using Indicators in Planning for Rural People: A Practical Guide*, UNESCO Institute of Educational Planning.
- Schneider *et al.* in Dumont, H., D. Istance and F. Benavides (2010), *The Nature of Learning: Using Research to Inspire Practice*, OECD, Paris.
- Secretaría de Educación Pública and Consejo Nacional de Participación Social en la Educación (2012) Participación Social en la Educación. Indicadores del Ciclo Funcional de los Consejos Escolares de Participación Social. Ciclo Escolar 2011 – 2012, SEP.
- Tamez-Guerra, R. and F. Martínez-Rizo (2012). Las Reformas que necesita la Educación Mexicana. Propuesta en busca de Consensos.
- Tuttle, C. C., Teh, B.-r., Nichols-Barrer, I., Gill, B. P., & Gleason, P. (2010). *Student characteristics and achievement in 22 KIPP middle schools*. Washington, DC: Mathematica Policy
- UNESCO-IBE (United Nations Educational, Scientific and Cultural Organization – International Bureau of Education) (2010), World Data on Education VII Ed. 2010/11: Mexico, [www.ibe.unesco.org/fileadmin/user\\_upload/Publications/WDE/2010/pdf-versions/Mexico.pdf](http://www.ibe.unesco.org/fileadmin/user_upload/Publications/WDE/2010/pdf-versions/Mexico.pdf).
- Wiggins, G. (1998), *Educative Assessment – Designing Assessments to Inform and Improve Student Performance*, Joey-Bass, San Francisco.
- William D. (2010), "The role of formative assessment in effective learning environments", in Dumont, H., D. Istance and F. Benavides(eds.) (2010), *The Nature of Learning: Using Research to Inspire Practice*, Educational Research and Innovation, OECD, Paris.
- Woessmann, L. (2008), “Efficiency and equity of European education and training policies”, *Int Tax Public Finance*, 15/1, pp 199-230.



**From:**  
**Improving Education in Mexico**  
A State-level Perspective from Puebla

**Access the complete publication at:**  
<https://doi.org/10.1787/9789264200197-en>

**Please cite this chapter as:**

OECD (2013), “Strengthening schools and student learning in Puebla”, in *Improving Education in Mexico: A State-level Perspective from Puebla*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/9789264200197-6-en>

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area. Extracts from publications may be subject to additional disclaimers, which are set out in the complete version of the publication, available at the link provided.

The use of this work, whether digital or print, is governed by the Terms and Conditions to be found at <http://www.oecd.org/termsandconditions>.