STATUS OF EDUCATION
FOR OUT OF SCHOOL ADULTS IN MEXICO

By
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This report is about adult education for the Mexican out-of-school population. The population consists of men and women 15 years old and older (15+) that live and work in Mexican society, but either did not complete primary school, lower or upper secondary school or are illiterate, and never went to school. Their numbers are huge, more than 45 million, in a country that has 103 million inhabitants as of 2003. They represent more than 70% of the 15+ population.

The total out-of-school population would be even larger, if those younger than 15 years old were added, but in Mexico, they are not included in adult education.

Context. A few paragraphs on the Mexican context are necessary to understand the main issues confronting education and training of the out-of-school population.

The establishment of adult education proper in Mexico started very late, in the early 1970s. Before, we had numerous literacy campaigns focused simply in teaching illiterates how to read and write elementary messages in a few months without any follow up and we also had many isolated institutions offering training courses. A turning point came in 1973, with an epochal decision made by President Echeverría, who separated education and training. The responsibility for training was given to the Ministry of Labor, a relatively small ministry in terms of budget, while adult education remained under the Ministry of Education. At that time all faculties were centralized in an all-powerful federal government.

Since its initiation and still today, training has been demand-driven and widely dispersed between public and private sectors all over the country, making it almost impossible to estimate the amount and cost-effectiveness of training in the country.

Adult education, on the other hand, has been supply-driven and provided almost entirely by the federal government. For more than 25 years this offer has consisted of providing adults with essentially the same content they missed in school. If they passed the corresponding exams, they could obtain a primary, lower secondary or upper secondary school certificate. A very important initial catalyst came from the private sector, as established businesses started requiring employees to have at least a lower secondary school certificate. This has practically become a minimum standard today. Given the importance of such credentials for a Mexican (another one is a university degree), adults were motivated to take what was offered.

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1 When mentioning the number of illiterates we are referring to those the Census counts as such, from one question: “Can you read and write a brief message?” If the answer is “no”, they are counted as illiterates. Of course, many illiterates can read simple texts and notices, but the Census does not distinguish between reading and writing.
2 According to the Mexican Constitution, the federal government (through the Ministry of Education) has the sole and exclusive power to set the contents of basic education for all of Mexico.
It was only during the last five years that the government decided to investigate 
what the out-of-school adults know and want to learn as well as employers’ opinions, 
through extensive and detailed surveys. The results of the surveys are only now 
beginning to be taken into account. Educational change is slow.

Funds for adult education have always been extremely scarce, representing no 
more than 1% of the educational budget. From 1970 to 1990 the central priority was to 
increase coverage of the school system and this required most of the available money. 
The largest growth of the school system occurred between 1970 and 1981, when, for 
example, primary school registration increased almost 50%. All of this occurred at a time 
of very high population growth (which now has decreased) and was followed by several 
economic crises up until 1995. The crises lead to a sharp curtailing of funds for social 
programs in real terms.

The current school system serves more than 30 million students, from 
kindergarten to graduate school, while the 45 million adults older than 15 years old have 
been left out. Except for the adult illiterates, all are drop-outs from the regular school 
system, and their numbers have accumulated through the years. It is time to try to change 
the priorities, because this enormous undereducated population has become the most 
serious obstacle to the country’s economical and social development.

This report analyzes fundamental issues raised concerning adult education, 
examining first in some detail the current status, history and achievements. Next the 
results of recent surveys on out-of-school adults and employers are presented, 
highlighting the discrepancies between what adults and employers want and what is 
offered, which could form the basis for future change. Finally, the problem of resources 
is analyzed from different points of view: distribution, effectiveness, resources, unit 
costs, and needs.

The text is arranged into eight distinct parts. At the end of each part there is a 
section of conclusions, issues raised and specific proposals.

Sources of information: Mexican Censuses; National Population Council of 
Mexico projections; Ministry of Public Education Statistics, INEA’s Direction of 
Planning and Direction of operations compilations, the data bases of four surveys and the 
National Center for the Evaluation of Higher Education data on the Metropolitan exams 
(CENEVAL).

The authors acknowledge with gratitude the generosity of INEA for giving them 
free access to all of their data and responding promptly and intelligently to every request. 
The ideas expressed here are of the exclusive responsibility of the authors and do no 
represent any official position of the government of Mexico.

Roger Díaz de Cossío
Alfonso Ramón Bagur
1. INTRODUCTION

This section presents the big picture, based on data from the 1970, 80, 90, and 2000 Mexican censuses, taken in the month of March. The census questionnaire asks how many grades of schooling a person has completed, and if they are currently in school. Based on this, the out-of-school population is estimated by county and state. The evolution of the adult (15 years and older) out-of-school population is then shown from 1970 to 2000, separated into four categories: illiterate adults, those who have not completed primary school, those with incomplete lower secondary educations, and those with incomplete upper secondary.

1.1. How the adult out-of-school population was generated

According to the Mexican 2000 Census, there were 45 million adults\(^3\) 15 years older or older than who had either not completed their upper secondary education (12 grades), lower secondary (9 grades), primary school (6 grades) or were illiterate. This population, known in Spanish as the rezago educativo, is the adult out-of-school population. These numbers represent 72% of the 15+ population, or 45% of the total population in 2000.

There are several causes for the out-of-school population. Among the most important are:

- Mexico started slowly to construct its educational system in the 1920s. Although primary school coverage is currently 94% of the school age population, millions of children were left behind along the way, and became out-of-school adults.
- Thousands and thousands of students abandon primary or secondary schools every year, before finishing their cycles, for economic reasons: their parents cannot afford their education and need them to work. A large proportion of those finishing lower secondary do not continue not only because they have to work, but also because they are not interested in the content offered by the school system. They become out-of-school adults.
- There are, at the present time, about 2 million school-age children (5-14 years old) who cannot be reached by the school system because they live in small, remote villages\(^4\).

1.2. Evolution of adult out-of-school population from 1970

Tables 1.1 and 1.2 show the evolution of the out-of-school adult population over the last 30 years, by levels.

\(^3\) According to the Mexican system an adult is a person 15 years or older. The legal age for working is 16.

\(^4\) 2001 Presidential Report, p. 55
TABLE 1.1. OUT-OF-SCHOOL ADULTS (MILLIONS)

<table>
<thead>
<tr>
<th>Year</th>
<th>Illiterates (1)</th>
<th>Adults without completed primary education (2)</th>
<th>Adults without completed lower secondary Education (3)</th>
<th>Adults without basic compulsory education (^a) (1)+(2)+(3)</th>
<th>Adults without completed upper secondary education (4)</th>
<th>Out-of-school Adults (1)+(2)+(3)+(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>6.69</td>
<td>11.06</td>
<td>4.82</td>
<td>22.58</td>
<td>0.97</td>
<td>23.55</td>
</tr>
<tr>
<td>1990</td>
<td>6.16</td>
<td>11.64</td>
<td>11.92</td>
<td>29.73</td>
<td>7.73</td>
<td>37.45</td>
</tr>
<tr>
<td>2000</td>
<td>5.94</td>
<td>11.72</td>
<td>14.90</td>
<td>32.56</td>
<td>12.73</td>
<td>45.29</td>
</tr>
</tbody>
</table>

Mexican censuses, 1970-2000

TABLE 1.2. OUT-OF-SCHOOL ADULTS AS PERCENTAGE OF THE 15+ POPULATION

<table>
<thead>
<tr>
<th>Year</th>
<th>Illiterates</th>
<th>Adults without completed primary education</th>
<th>Adults without completed lower secondary Education</th>
<th>Adults without basic compulsory education (^a)</th>
<th>Adults without completed upper secondary education</th>
<th>Out-of-school Adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>25.8</td>
<td>42.7</td>
<td>18.6</td>
<td>87.1</td>
<td>3.7</td>
<td>90.8</td>
</tr>
<tr>
<td>1980</td>
<td>17.0</td>
<td>24.9</td>
<td>23.2</td>
<td>65.1</td>
<td>6.2</td>
<td>71.3</td>
</tr>
<tr>
<td>1990</td>
<td>12.4</td>
<td>23.5</td>
<td>24.0</td>
<td>59.9</td>
<td>15.6</td>
<td>75.5</td>
</tr>
<tr>
<td>2000</td>
<td>9.5</td>
<td>18.6</td>
<td>23.7</td>
<td>51.8</td>
<td>20.3</td>
<td>72.1</td>
</tr>
</tbody>
</table>

Mexican censuses, 1970-2000

The out-of-school population grew from 23.55 million in 1970 to 45.29 million in 2000, but as a percentage of the 15+ population, it consistently decreased from 90.8% to 72.1%. This decrease is due in part to the population growth, but also to the government programs to educate the out-of-school adults, as we shall see later. The number of illiterate adults decreased slowly from 6.69 to 5.94 million, and currently comprises 9.5% of the 15+ population. The numbers of adults without completed primary education increased slightly from 11.06 million in 1970 to 11.72 million in 2000\(^6\); but as percentage of the 15+ population, decreased sharply starting in 1990, attributable to the effect of government programs. As soon as an adult obtains a primary school certificate, he or she enters the category of those without completed lower secondary school, and this is clearly shown in corresponding increase in the percentage of lower secondary category (see Tables 1.1 and 1.2). Finally, the numbers for adults who have not completed upper secondary education increase sharply as many more adults complete their lower secondary school. Few government programs exist to meet these growing numbers. This can be seen in Graph 1 which plots the adult out-of-school population by level for the last 30 years.

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5 In Mexico basic compulsory education consists of 9 grades. [Primary (6 grades) plus lower secondary education (3 grades more).]

6 It is generally acknowledged that the 1980 Census had serious failings due to gross undercounts.
The adult population that has either not completed lower or upper secondary education increases rapidly as more and more adults finish their basic 6 or 9 grades of education. The lines for lower and upper secondary rise sharply and indicate strongly the need for increased attention at these levels.

1.3. Conclusions, issues, proposals

1.3.1 The adult out-of-school population with incomplete lower and/or upper secondary education is growing sharply. Measures should be taken to stop its growth in a reasonable time period and decrease the numbers annually. For this to be achieved it will be necessary to: increase the coverage of adult education programs and improve the economic conditions of families so they can let their children stay in school.

1.3.2 Illiterate adults and those with an incomplete primary education will continue to decrease slowly as grade school coverage increases and adult education programs grow.
2. THE ADULT OUT-OF-SCHOOL POPULATION

Mexico is composed by 31 states and one Federal District, the Capital. The situation in each state varies widely and some of this variation is shown is this section where more detail is given on the adult out-of-school population, based on the Mexican 2000 Census. Distributions by state, gender, and age are shown with substantial differences in the numbers for each state.

The year-to-year estimates of out-of-school adults with incomplete lower secondary educations are presented for the years 1999-2002, based on the continuous series produced annually by the National Population Council of Mexico, which corrects the census figures for undercounts, using data estimated yearly in December.

2.1. Geographical distribution

Table 2.1 shows the out-of-school adult population in thousands for selected states and as percentage of the respective 15+ population, ordered by decreasing percentages of out-of-school adults, from 55.4% for the Federal District to 81% for Zacatecas. It can be seen that the population varies widely from the smallest state, Baja California Sur (187.8 thousands) to the most populous, the State of Mexico (5,950 thousands).

<table>
<thead>
<tr>
<th>State</th>
<th>Population of 15 years and older (15+)</th>
<th>Illiterate Adults (1)</th>
<th>Adults with incomplete primary education (2)</th>
<th>Adults with incomplete lower secondary education (3)</th>
<th>Adults with incomplete upper secondary education (4)</th>
<th>Out-of-school Adults (1)+(2)+(3)+(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal District</td>
<td>6,231.2/62.3%</td>
<td>180.9/2.9%</td>
<td>565.7/9.1%</td>
<td>1,288.5/20.7%</td>
<td>1,414.9/22.7%</td>
<td>3,450.0/55.4%</td>
</tr>
<tr>
<td>Baja California Sur</td>
<td>285.0/0.1%</td>
<td>12.0/0.4%</td>
<td>47.4/1.6%</td>
<td>66.7/2.3%</td>
<td>61.7/2.1%</td>
<td>187.8/65.1%</td>
</tr>
<tr>
<td>Nuevo León</td>
<td>2,651.1/0.1%</td>
<td>88.0/3.3%</td>
<td>342.8/12.9%</td>
<td>569.7/21.5%</td>
<td>746.4/28.2%</td>
<td>1,746.9/65.9%</td>
</tr>
<tr>
<td>State of México</td>
<td>8,286.9/0.1%</td>
<td>529.9/6.4%</td>
<td>1,176.4/14.2%</td>
<td>1,994.4/24.1%</td>
<td>2,249.3/27.1%</td>
<td>5,950.0/71.8%</td>
</tr>
<tr>
<td>Chiapas</td>
<td>2,281.6/0.1%</td>
<td>522.6/22.9%</td>
<td>607.5/26.6%</td>
<td>448.4/19.7%</td>
<td>249.2/10.9%</td>
<td>1,827.7/80.1%</td>
</tr>
<tr>
<td>Oaxaca</td>
<td>2,116.7/0.1%</td>
<td>454.4/21.5%</td>
<td>493.8/23.3%</td>
<td>485.4/22.9%</td>
<td>265.1/12.5%</td>
<td>1,698.7/80.2%</td>
</tr>
<tr>
<td>Zacatecas</td>
<td>853.1/0.1%</td>
<td>67.9/9.5%</td>
<td>249.1/18.6%</td>
<td>238.0/27.9%</td>
<td>135.6/15.9%</td>
<td>690.6/81.0%</td>
</tr>
<tr>
<td>Totals for the country</td>
<td>62,842.6/100%</td>
<td>5,942.1/9.5%</td>
<td>11,716.7/18.6%</td>
<td>14,898.7/23.7%</td>
<td>12,734.8/20.3%</td>
<td>45,292.3/72.1%</td>
</tr>
</tbody>
</table>

From Mexican 2000 Census

Different percentages of the 15+ out-of-school population show relative development as measured by the percentage of illiterates. Six states and the Federal District are shown in Table 2.1. The best indexes are for the Federal District (2.9% illiterates, 9.1% with incomplete primary education), but the total number of out-of-school adults is still quite large, more than 3.45 million, the majority of which have not completed their secondary education. Table 2.1 also shows three states (Chiapas, Oaxaca,
and Zacatecas) with more than 80% of the population being out-of-school adults, the largest percentages among the Mexican states. The Chiapas and Oaxaca numbers paint a dismal picture with more than one fifth of their 15+ population being illiterate. Zacatecas, with the same percent of out-of-school adults, has only a third of the other two states (8%).

### 2.2. Distribution by age

Table 2.2 below shows, for each category and age range, the number of persons in thousands and underneath the corresponding percentage of the total for the category. The number and percentage of illiterates increase with age from 10.8% (15 to 24 years) to 26.1% for the 65 years old and older. Most of the illiterate adults (77%) are older than 35, similar to those without a complete primary school education (70%). The trend is reversed for those without completed secondary school educations, where 72% are under 35. The numbers and percentages of those without upper secondary increases sharply because there are no significant government programs directed to them.

**TABLE 2.2. OUT-OF-SCHOOL POPULATION BY AGE AND LEVEL**

<table>
<thead>
<tr>
<th>Age range (years)</th>
<th>15-24</th>
<th>25-34</th>
<th>35-44</th>
<th>45-54</th>
<th>55-64</th>
<th>65+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education Level</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 years and older (15+) ('000)</td>
<td>%</td>
<td>19,063.3</td>
<td>15,294.2</td>
<td>11,547.4</td>
<td>7,430</td>
<td>4,753.4</td>
<td>4,750.3</td>
</tr>
<tr>
<td>Illiterate Adults ('000)</td>
<td>%</td>
<td>645.2</td>
<td>716.2</td>
<td>932.4</td>
<td>1,032.4</td>
<td>1,066.1</td>
<td>1,549.8</td>
</tr>
<tr>
<td>With incomplete primary school ('000)</td>
<td>%</td>
<td>1,671.9</td>
<td>1,835.5</td>
<td>2,323.9</td>
<td>2,201.8</td>
<td>1,799.9</td>
<td>1,883.7</td>
</tr>
<tr>
<td>With incomplete lower secondary school ('000)</td>
<td>%</td>
<td>4,414.8</td>
<td>3,663.7</td>
<td>3,037</td>
<td>1,995.1</td>
<td>1,040.7</td>
<td>777.4</td>
</tr>
<tr>
<td>With incomplete upper secondary school ('000)</td>
<td>%</td>
<td>4,933.9</td>
<td>4,396.9</td>
<td>2,098.6</td>
<td>823.2</td>
<td>297.2</td>
<td>185</td>
</tr>
<tr>
<td>Out-of-school population ('000)</td>
<td>%</td>
<td>11,665.8</td>
<td>10,612.3</td>
<td>8,391.9</td>
<td>6,022.5</td>
<td>4,203.9</td>
<td>4,395.9</td>
</tr>
</tbody>
</table>

Mexican 2000 Census

Since almost half of the adult out-of-school population is younger than 34, efforts should be concentrated on this group for cost-effectiveness. Moreover, younger adults tend to be more willing to enter an education program and have years of useful and productive life ahead to benefit from their investment.
2.3. Distribution by gender

TABLE 2.3. OUT-OF-SCHOOL POPULATION BY GENDER AND LEVEL, 2000

<table>
<thead>
<tr>
<th>Adults</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Persons ('000)</td>
<td>Percentage of 15+</td>
</tr>
<tr>
<td>15 years and older (15+)</td>
<td>62,842.6</td>
<td>30,043.8</td>
</tr>
<tr>
<td>Illiterates</td>
<td>5,942.1</td>
<td>2,233.3</td>
</tr>
<tr>
<td>Without completed primary school</td>
<td>11,716.7</td>
<td>5,646.2</td>
</tr>
<tr>
<td>Without completed lower secondary school</td>
<td>14,898.7</td>
<td>6,945.7</td>
</tr>
<tr>
<td>Without completed upper secondary school</td>
<td>12,734.8</td>
<td>6,413.9</td>
</tr>
<tr>
<td>Out-of-school population</td>
<td>45,292.3</td>
<td>21,239.1</td>
</tr>
</tbody>
</table>

Mexican 2000 Census

There are more women than men in the 15+ population, with a difference of four percentage points. There are many more women than men who are illiterates, with a difference of 24 percentage points. The proportions of the women to men are repeated in the primary school level, where women without primary educations are 4 percent higher than men. For the other levels, the proportions of women are only slightly larger, the differences being only one or two points with respect to the population.

During the last 30 years, the Mexican school system has tended rapidly to equitability with respect to gender, once a pupil enters the first grade of primary school. The differences in registration between the genders are quite small. Once in the system, women do better than men all the way through to university, where more women than men have graduated every year since 1996. This tendency is reflected in the out-of-school adult population, except for adult illiterates, 77% of which tend to be older than 35 years of age. This implies the inequity in the gender of illiterates is related to the age, and came before the deep cultural change took place. The distribution by gender and level of males and females in and out of the school system since 1970 reinforces this conclusion, as seen in the following tables.

TABLE 2.4. DISTRIBUTION BY GENDER

<table>
<thead>
<tr>
<th></th>
<th>Illiterates</th>
<th>Without completed primary school</th>
<th>With completed primary school</th>
<th>With completed secondary school</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>1970</td>
<td>21.8</td>
<td>29.6</td>
<td>40.6</td>
<td>37.3</td>
</tr>
<tr>
<td>1990</td>
<td>9.6</td>
<td>15.0</td>
<td>22.6</td>
<td>22.9</td>
</tr>
<tr>
<td>2000</td>
<td>7.4</td>
<td>11.3</td>
<td>17.9</td>
<td>18.6</td>
</tr>
</tbody>
</table>

2001 Presidential Report
Tables 2.4 show conclusively that by 2000 the genders are equitably represented in the primary school system and in the out-of-school population, except for the illiterates. Soon the equitability will reach the lower secondary system.

2.4. How the out-of-school population changes year-to-year

Censuses are taken every ten years and they serve as milestones for the period. But in order to keep track of developments, it is important to estimate the out-of-school population every year. To do this, another set of statistics is used, those produced yearly by the National Population Council of Mexico (CONAPO), state by state, with projections of population movements, migration (internal and external), births and deaths. They also correct the ten-year census figures for distortions from undercounting.

On this basis, the year-to-year out-of-school population can be estimated in the following manner: starting with the out-of-school population at the end of one year, those incorporated from the school system (I) the following year are added. Then deaths and migrants (DM), and the number of lower secondary school certificates (C) are subtracted. The result is the out-of-school population at the end of the following year. The sum (I-DM-C) results in a net increase or decrease of the adult out-of-school population for the year. These numbers are computed only for the population that did not complete lower secondary school. The following table shows them for years 1999-2002.

**TABLE 2.5. YEAR-TO-YEAR CHANGE IN OUT-OF-SCHOOL POPULATION WITHOUT COMPLETED BASIC EDUCATION (9 GRADES)**

MEXICO, 1999 – 2002

<table>
<thead>
<tr>
<th>Out-of-school population Year 1*</th>
<th>Incorporated from the school system**</th>
<th>Deaths and migrants***</th>
<th>Lower secondary school certificates given****</th>
<th>Net increase (decrease)</th>
<th>Out-of-school population Year 2*</th>
</tr>
</thead>
<tbody>
<tr>
<td>(I)</td>
<td>I</td>
<td>DM</td>
<td>C</td>
<td>(I-DM-C)</td>
<td>(I)+I-DM-C</td>
</tr>
<tr>
<td>1999 34,348,540</td>
<td>+784,880</td>
<td>-353,710</td>
<td>-306,490</td>
<td>=125,680 34,474,220</td>
<td></td>
</tr>
<tr>
<td>2000 34,472,120</td>
<td>+739,870</td>
<td>-414,730</td>
<td>-286,150</td>
<td>=38,990 34,513,110</td>
<td></td>
</tr>
<tr>
<td>2001 34,512,740</td>
<td>+802,970</td>
<td>-412,520</td>
<td>-252,180</td>
<td>=138,270 34,651,010</td>
<td></td>
</tr>
</tbody>
</table>

*CONAPO correction for undercount. **Derived from SEP statistics. ***CONAPO estimates. ****INEA

In 2001, it was estimated that 63,000 more adults were incorporated from the school system than the year before, but due to the initial application of a new model, 34,000 less certificates were given. This explains why the net increase was higher in 2002.

The National Institute for Adult Education (INEA) has estimates of the out-of-school adult population who are lacking complete basic education (9 grades), based on CONAPO series for every state in Mexico. The year-to-year estimates are very useful, because the state-by-state development of the programs can be followed consistently. The results for each state vary widely. In many states the out-of-school population without a completed secondary education is decreasing while in others is increasing. Of the 31 states plus the Federal District, 14 states show decreasing numbers of out-of-school
adults who have not completed lower secondary school: Campeche, Coahuila, Federal District, Durango, Guerrero, Hidalgo, Nayarit, Oaxaca, San Luis Potosí, Sonora, Tabasco, Veracruz, and Yucatán. All others show an increase, as seen in the graph below.

GRAPH 2 NET INCREASE (DECREASE) IN OUT-OF SCHOOL POPULATION WITHOUT LOWER SECONDARY (1999-2002)

INEA, Direction of Planning

Why is there a net decrease in some states and a net increase in others? Unfortunately, there is no simple explanation. Research found that a combination of factors that operate for or against determined whether a state performed well or not in adult education.

Characteristics associated with good performance (decreased population) include:

- A competent and passionate head team.
- Most of the out-of-school adult population is concentrated in few medium-to large-sized cities.
- The state government provides clear and strong support.
- A reasonably efficient school system.
- Low migration into the state
Characteristics associated with poor performance (an increase) include:

- Change of state governments and abrupt change of head team.
- Initiation of new education model.
- Dispersed out-of-school adult population.
- Inefficient school system.
- Lack of support from the state government.
- High migration into the state

In any one state, several of the above factors can operate simultaneously and produce either good or poor results depending on the strength of each at a given time. A bad appointment for the state’s institute of adult education, for example, may cause havoc for a few years. Results are generally not a question of money. The money available usually determines the extent of coverage and is always scarce. Results are rather measured solely on the basis of the number of lower secondary school certificates awarded. INEA has no responsibility for upper secondary.

2.5. Conclusions, issues, proposals

2.5.1 The percentages show the relative social and economical development of out-of-school adult population in each state. There differences are greatest between North and South. Illiteracy is highest in the poorest states. Educational policies should vary accordingly.

2.5.2 Given that young adults aged from 15 to 34 years have stronger learning aspirations, are more in demand in the labor market, and, of course, have many productive years ahead, they should be given priority in the program, while not excluding older people.

2.5.3 All data shows that it is not enough to be efficient and careful in the education of out-of-school adults. It is absolutely necessary to increase the terminal efficiency of the basic school system by creating specific programs for drop-outs younger than 15.

2.5.4 The decentralized adult education system is quite complicated and diverse. Every state has different in political and educational conditions. The higher echelons of each state’s adult education institutes are directly appointed by the governor, which results in widely distinct behaviors.

3. EDUCATIONAL MODELS, CONTENT AND RESULTS

The various educational models that have been used in Mexico to educate out-of-school adults are presented briefly in the following sections. We will start with a comment on the literacy campaigns which were for many years the principal government action “to combat ignorance”, as Jaime Torres Bodet, Secretary of Public Education, said
launching his campaign. Literacy\textsuperscript{7} has been understood in Mexico in a limited manner, as the teaching of reading and writing to an illiterate person, nothing more. In other words, once a person was capable of writing an elementary text, he or she was declared “literate\textsuperscript{8}”.

A brief description is provided of the evolution of the content offered in government programs from 1970 to 2000, followed by a summary of the program’s results in terms of number of certificates given.

3.1. Literacy campaigns

Ever since the nineteenth century there were many voices that said Mexico could not advance with a population 85\% illiterate, but not much was done. Vasconcelos, the first Secretary of Public Education, initiated a literacy campaign in 1921, in which those who knew how had to teach illiterates reading and writing. The government printed booklets that contained an elementary method for doing so. Afterwards, in the 1940’s, Secretary of Public Education, Jaime Torres Bodet, developed a huge literacy campaign in which millions of improved booklets were printed and used all over Mexico. The literacy campaigns continued up until the 1970’s. All of these efforts had poor results, even though they raised awareness on the problem, especially since they occurred while Mexico had a period of large population growth. This is shown in Table 3.1, based on the ten-year census figures from 1930.

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|}
\hline
Year & Illiterates (thousands) & Percent of the 15+ population \\
\hline
1930 & 6,406.9 & 63.7 \\
1940 & 6,234.2 & 53.7 \\
1950* & 8,942.4 & 43.2 \\
1960 & 6,678.0 & 34.5 \\
1970 & 6,693.7 & 25.8 \\
1980 & 6,451.7 & 17.0 \\
1990 & 6,161.7 & 12.4 \\
2000 & 5,942.1 & 9.5 \\
\hline
\end{tabular}
\caption{Mexican Illiterates, 1930-2000}
\end{table}

*In 1950 the figure is for population 6+ years of age.
All other years are for 15+
Mexican censuses, 1930-2000

Table 3.1 shows that the total number of illiterate adults in the country varied little over the past 70 years. It even increased from 1940 to 1970, a period in which millions of dollars were spent in literacy campaigns.

\textsuperscript{7} Alfabetización, in Spanish

\textsuperscript{8} alfabetizado, in Spanish
Research has shown that simple literacy campaigns are not effective. If taught how to write a letter in six months but if their socioeconomic situation has not changed, and the skill cannot be used, due to lack of practice, the adults lose the ability to read and write in the following six months. Many studies have shown that to preserve the ability, either a person has to work the equivalent of three or four grades of primary school, or he applies it in his everyday life.

From 1970 on, the numbers decrease because the adult illiterates had the opportunity of further study in the official programs that started about 1974.

For decades many schools, such as night schools, schools for workers, were established and used the same curricula as the one for children, with scarcely any changes, to teach the adults. Class meeting times were limited to fixed hourly schedules. They continue to the present day.


It was not until the 1970s that the Mexican educational system became conscious of those left behind and began to study ways in which they could be educated. It was a daunting task because by then the number of adults 15 years old or older with less than 9 years of basic education had reached more than an estimated 22 million out-of-school adults.

It was thought that the system could be much more flexible and better adapted to the needs of adults and that learning and accreditation should and could be separated. One person would guide or facilitate learning and another one would administer the exams. On this basis, a so-called open system of education was organized in Mexico. For this, the National Education Law was modified in 1973 and, among other things, ordained the establishment of a national accreditation system. At the same time, new textbooks were commissioned for the first time in Mexico specifically for out-of-school adults. The books were distributed in 1975 and 1976.

All the books produced for the out-of-school adult audience aimed at allowing independent learning on the part of the adult, so they would not need to attend regular classes with a teacher. The books were written by teams of prestigious academics and teachers, profusely illustrated, containing many self-evaluation exercises. Advisors were appointed to guide adults and solve problems at different locations in Mexico. They could also be volunteer workers.

Adults were organized in study circles and soon were taking exams, based on the content in the books. Twelve exams had to be passed in order to obtain either a primary or a lower secondary school certificate.

For illiterates there was an introductory book, based on the assumption that they would continue on to primary education. There was no limit to the number of times the same exam could be taken.

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9 At the time compulsory education was 6 grades. It was raised to 9 grades in 1992.
At the end of 1976, after less than a year with the complete open system in place, the following numbers of out-of-school adults were reported studying: for primary education, 48,900; for lower secondary, 134,500; and the total combined, 183,400.

It was a promising beginning, perhaps, but still far from reaching the huge numbers of out-of-school adults. At the same time, some 180,000 were in night schools and lower secondary schools for workers, and 36,000 were in literacy units.

No one considered the possibility during those years that other knowledge and skills could be taught to adults, things that were of more interest to them. Everyone seemed to believe that out-of-school adults had to learn what they missed when they were children.

3.3. The National Institute for the Education of Adults (INEA)

After 1976, the various services for adults continued, the books for adults were used in larger quantities all over the country, but the results were poor. It was then decided to create an institute especially dedicated to the education of out-of-school adults. Thus, the National Institute for the Education of Adults (INEA), was officially born in September 1981, and immediately established offices in all state capitals. Literacy, primary education and lower secondary education, constituted the backbone of INEA’s program for out-of-school adults 15 years and older. For primary and lower secondary education, the same open system of books and exams was used. During the first few years, literacy was given priority. More materials were produced for this area. In particular, a very famous method for teaching how to read and write called “the generating word” (la palabra generadora) was developed, based on the ideas of the foremost Brazilian educator Paulo Freire.

In 1983, 13,279 grade school certificates and 13,021 lower secondary school certificates were awarded. For the first time, a government program to educate out-of-school adults was taking shape and growing.

Unfortunately, in 1982 Mexico entered upon a deep economic crisis that lasted more than 12 years. This was a period of huge inflation where currency was devalued steeply. The value of a peso in 1994 was more than three thousand times smaller than in 1981. Government budgets for all social services, including education and especially adult education, were reduced sharply in real terms.

In spite of this, INEA continued working, although at a slower pace.

10 INEA’s organization
As mentioned above, INEA established in 1981 offices in all states which were directly dependent from the Federal Government. Each state office was divided into zones, all together almost 500. From each zone study circles or meeting points for the adults were set up. Between 1998 and 2000 the responsibilities for adult education were passed onto the states in accordance with a new law which decentralized basic education. Institutes for adult education were created in almost all states except Nuevo León, Oaxaca and the Federal District which remained as federal offices. The network of zones and meeting points continued.

11 INEA, 1983 Annual Report
In 1984, the books for primary school were completely overhauled. Since the application of PRIAD ten years before, some problems were detected, especially at the introductory level. Many parts were hard for the adults to understand and caused numerous failures. A new set of 12 books was then developed.

During the next four years, these books were adopted by all states and have been used ever since by thousands of out-of-school adults without completed primary education.

It is worth noting that also during this period (1985-1994), work was started in the production of literacy materials directed to Indian out-of-school adults belonging of some of the 56 ethnic groups which represent about 8% of the population and whose mother tongue is not Spanish. This is difficult and slow work because the printed material has to be developed with the aid of persons from each ethnic group. The work continues today, though the results are quantitatively low. The idea, similar to that used with children, is that once a person has learned how to read and write in his mother tongue, he or she can be mainstreamed into primary education in Spanish.

By 1995, INEA declared that since 1981 more than 1,200,000 primary school certificates and close to 1,000,000 lower secondary school certificates had been awarded.12

3.4. New times and new ideas

Education for life and work: 1995-2000

The educational model for out-of-school adults, in place from 1974, was revisited and completely overhauled, starting in 1995. While this was underway, the lower secondary school books for adults, used since 1975, were simplified and converted into study guides. The same open system of instruction based on books, exams and advisors continued, but the orientation and content of instruction was changed.

The most profound change was that, for the first time, adult out-of-school population was not considered, in educational terms, as old children who had to be given what they missed in their childhood. The content of primary and lower secondary education was transformed into an equivalent curricula for adults and subject matter made more relevant.

Another fundamental change was that the new offerings were more flexible. Not every adult had to follow exactly the same set of subjects. A much more open and diverse system was developed, in which the adults could choose from an ample variety of subjects. Of course, some portions of the curriculum -mathematics, Spanish and science- were compulsory requirements for granting a primary or lower secondary school certificate.

Thus, under the main thrusts of flexibility and pertinence, a new model was developed called “education for life and work” (Modelo de educación para la vida y el

12 INEA, 1995 Annual Report
trabajo [MEVYT] in Spanish), more in the direction of a competency-based basic adult curricula.

The model is organized into modules. Every module has a main study book, called “book for the adult” (libro del adulto), where reference is made in the exercises to the other support materials such as other books, articles, leaflets, and even a calculator and a metric tape. The basic focus of all books is constructivist, in the sense that they build on what the adult already knows to learn what he or she still needs to learn.

By the end of 2000, after the work of hundreds of persons, there were 41 modules available for study organized into 8 subject groups as follows:

- Mathematics (11)
- Language and communication (9)
- Science (4)
- Family (3)
- Youth (4)
- Work (4)
- Citizen’s Culture (2)
- Preparation for upper secondary (4)

Books and other materials began to be produced and distributed at the end of 2001. Advisors all over the country had to be retrained as facilitators in the use of the model. Several obstacles had to be surmounted. Adult students were used to being told what to study, in which book, and in what order. With the new model, the student had much more autonomy, and could choose where to begin from a wide variety of topics. This called for a significant change of departure from the traditional learning culture, and people’s usages tend to transform slowly, in spite of specific training and instructions. Another problem was the complicated logistics of distributing all 41 modules to all the regional zones (there are almost 500 in the country), and then to the study circles or meeting locations of out-of-school adults (about 13,000).

The system was well accepted by the adults and some of them flocked to the new and interesting topics. Aguascalientes was one of the first states to adopt the new model. Still, it took many months to be assimilated and generalized. During these initial months, certification decreased.

The old system of four main topics and 12 exams was slowly replaced by the new one in which the adult had to earn 12 modular credits each for a primary or lower secondary school certificate. Eight of the 12 were compulsory and the rest were open choice from any of the others offered. In theory, for the first time, two vocational training courses can be used for credit, but this has not yet been implemented.

**Use of technology in adult education: 2001-2003**

At the end of 2000, with the advent of the new administration, a new Federal Commission was created to promote and develop adult education, called the National
Council of Education for Life and Work (Consejo Nacional de Educacion para la Vida y el Trabajo, CONEVyT). The purpose of the commission was to give priority to adult education. Its operational arm is INEA.

A very ambitious project has been initiated: the installation of Community Plazas at adult meeting locations, providing learning spaces for adults and their facilitators. They have rooms for studying in the traditional manner with printed books but, in addition, they have a space with a minimum of ten computers linked to a local server and the Internet, and another space linked to the Mexican educational satellite system where they can receive educational material and video courses.

The idea for the Plazas is to introduce adults to computer-assisted learning giving them a wealth of options. The project is in its initial stages. The main problem is the retraining of advisors to act as facilitators and making the centers attractive and useful for adults. The educational model has been translated onto a CD format as a first step so that adults can follow the assigned modules in a computer.

At the time of writing this report, 1,814 Plazas had been set up throughout Mexico and 27 in United States. There are two kinds: institutional (1,179), where all expenses are paid by CONEVyT-INEA; and collaborative (635), installed at technical schools with computing equipment shared half time, as well as 38 Plazas which were straight donations from companies.

The community contributes the space (schools, county buildings, churches). For the institutional Plazas, there is a direct one-time investment of US$45,000. For each Plaza, INEA creates two new salaried positions for persons in charge of operations at US$300 per month each and pays operational expenses (power, Internet connection, printed materials, telephone, etc.). Only about 50% of the Plazas have Internet access. So far, INEA has allocated about 19% of its 2002 budget to Community Plazas.

The Plazas have been established in a haphazard manner because they depend on local conditions, the availability of locations, the willingness of communities to participate, and the existence of properly equipped schools at key locations.

The Plazas have been well received because they dignify adult education and are used in the traditional manner, as a place to meet to use the books with facilitators. In some, many regular students use the computers. But there is still much work to be done to convince adults to use the computers to learn and earn credits in a subject. Moreover, even though a portal has been developed (www.conevyt.org.mx), there are not yet sufficient materials available. Online exams are beginning to be tested in the Federal District. The biggest problem has been, and will be for some years, training personnel in a new learning culture.
3.5. INEA’s Results

Quantitative

The results of the work of INEA for the year 2000 are shown in the following table.

<table>
<thead>
<tr>
<th>TABLE 3.2. INEA’S RESULTS, YEAR 2000 (THOUSANDS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults attended</td>
</tr>
<tr>
<td>Primary school</td>
</tr>
<tr>
<td>Lower secondary school</td>
</tr>
</tbody>
</table>

INEA, Direction of Planning

It can be seen that in 2000, INEA reached more than 800,000 adults. The adults took almost 8 million exams of which 5.8 million passed. Nearly 190,000 primary school certificates and a little over 300,000 lower secondary school certificates were awarded.

Qualitative

In Mexico there are at least five different systems offering lower secondary education: technical, general, telesecondary\(^{13}\), worker-oriented and INEA’s programs. For the past eight years, an annual placement exam has been given to all applicants for entrance into upper secondary schools in the metropolitan area of Mexico City. More than a quarter of a million students take the exam on the same day. The exam consists of 128 multiple choice questions on the following topics: verbal ability (27 questions), mathematical ability (21), civics, history, geography, biology, physics, Spanish, chemistry and mathematics (10 questions in the rest of the subjects). Between 3,000 – 5,000 INEA graduates take the exam every year. INEA’s placement results are compared to all the rest in the following graph.

\(^{13}\) Telesecondary is a lower secondary school system for remote and small communities. One teacher per grade is in charge of all subjects. There is TV reception in each classroom where during six hours per day programs are transmitted from the Ministry of Education satellite system, EDUSAT which contain all themes and topics. Every hour there is a 15-minute TV program which is discussed by teacher and students with the help of a book. In this way all subjects are covered in 200 class days. The system has now more than 1.4 million students.
Graph 3 shows the average number of correct answers for 260,000 exams and for 3,200 INEA graduates. It can be seen that INEA’s answers are quite close to the general average for all. They are consistently somewhat better in verbal ability, more or less the same for mathematical ability and civics, and slightly lower, no more than 3 or 4 percentage points, for all other subjects except mathematics and chemistry where they are 10-14% lower. These results are very similar to all the other years the exam has been given. Four years ago one of the INEA graduates was the second best score in 255,000 students. INEA’s lower secondary education system is thus qualitatively equivalent to the others in Mexico.

3.6. Upper secondary

There has been minimal effort in Mexico to reduce the out-of-school adult population that has not completed their upper secondary education. In fact it is only recently in 2001-02, that educational authorities have become aware of the magnitude of the problem. In 2000, there were 12.7 million persons who had not completed upper secondary education, and the numbers are growing fast (see Graph 1). Priority is still placed on lower secondary.
Preparatoria abierta.

In 1975-76, an open system was developed called Open Preparatory\(^{14}\). In the same way as the systems for primary and lower secondary, it was based on a set of books that developed all of the subjects contained in the regular school curricula. The books are sold to the adults, and examination periods are set in centers located mostly in the capital cities. The students had to pass 33 different exams, of which 16 are common to all adults and 17 were devoted to a specific area (humanities, administration and social science, or mathematics and physical science). The whole process was, and still is, extremely hard for the students and few finish and obtain their upper secondary school certification. The main reason for this is that the subject matter is uninteresting, besides being explained in a wordy and flat manner. The system has not been revised since it was established almost 30 years ago. Still, a few thousand students finish each year, as can be seen in the following table for years 2001 and 2002, the two best so far.

**TABLE 3.3. OPEN PREPARATORY RESULTS**

<table>
<thead>
<tr>
<th>Year</th>
<th>Exams requested</th>
<th>Exams taken</th>
<th>Certificates given</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>2,655,550</td>
<td>1,690,683</td>
<td>18,212</td>
</tr>
<tr>
<td>2002</td>
<td>2,796,322</td>
<td>1,810,024</td>
<td>17,370</td>
</tr>
</tbody>
</table>

Dirección General de Bachillerato, SEP.

The figures in Table 3.3 reveal that while demand is high, and people are motivated to register for the exams, many drop out before even taking it, and of those who do take the exams, only one third succeed in being approved for certification. The results do show, however, that there is a huge demand for upper secondary programs for adults.

**Colegio de Bachilleres.**

*Colegio de Bachilleres* is a high school system that offers upper secondary (grades 10-12) throughout the country and, in addition, established “open options” for adults to take their subjects. They study on their own, meeting on Saturday with facilitators for counseling. From 1978 to 2003, only 7,883 certificates were given,\(^{15}\) which does not meet the needs of out-of-school adults.

**SEP - CENEVAL.**

A promising action was recently started for accrediting upper secondary education to out-of-school adult populations. The Secretary of Education issued the Official Rule 286 (*Acuerdo* 286) in October, 2000, which allowed the granting of grades and educational levels through an evaluation system to self-taught persons based on knowledge acquired through life and work.

\(^{14}\) Upper Secondary is called in Spanish *Preparatoria* or *Bachillerato*

\(^{15}\) Bachillerato Abierto, Colegio de Bachilleres
In 2001, an official notice was made to persons older than 25 years old who could receive credit for upper secondary school through a set of evaluations, given three stages, each of which the student had to pass before progressing to the next: first (a) a general exam with 180 multiple questions; then (b) an essay based on one of several texts provided; and finally (c) an oral exam in front of two persons. They had to have a lower secondary school certificate as a pre-requisite.

Although cumbersome, the demand was high. About 8,000 persons registered in the Capital in 2001, and 25,000 registered in many states in 2002. About 34% of the applicants passed the three stages, and more than 11,700 certificates were given. The exams were organized by the National Center for Evaluation of Higher Education (CENEVAL, in Spanish) and the certificates awarded by the Ministry of Public Education (SEP).

The system has to be streamlined but shows promise. It may be generalized to other age groups in the future. Why limited to those 25 years old and older? It also shows that there is an enormous pent-up demand for upper secondary education which has not been satisfied.

3.7. Conclusions, issues, proposals

3.7.1 Simple literacy campaigns are not sufficient for adults to maintain reading and writing abilities.

3.7.2 INEA’s lower secondary studies have the same quality as any other in the school system, as measured by the results of the placement exams for upper secondary.

3.7.3 Even though, after years of effort, the results for lower secondary are substantial, they are still short of those necessary to reduce the out-of-school adult population in absolute terms. For this to occur, at least 200,000 more graduates per year are needed.

3.7.4 It was not until 2001 that a new education model introduced content for adults distinct from the curriculum offered in lower secondary schools. This change is slowly taking hold.

3.7.5 The establishment of Community Plazas is an interesting new development and has had immediate benefits, though it still has a long way to go before adults learn and earn credits using computers and the Internet.

3.7.6 The results for upper secondary are unsatisfactory. First, the content adults have to study is exactly the same as those given to regular adolescents students in school. Secondly, the numerical results are still very far from those needed to decrease the growth of the out-of-school population without completed upper secondary. There appears to be a large demand for an upper secondary school certificate. It is urgent to begin modifying the present system, especially with regard to content, and focus more on post-lower secondary education.
4. TRAINING

Training refers to specific courses or activities taken primarily by out-of-school adults, which are not part of a regular school curriculum or an adult program aimed at lower or upper secondary school certification. Training courses may be given by employers or taken at special institutes sometimes called training schools, which are devoted to the specific skill (beauty parlor services, cooking, carpentry or computing). Students attend from 20 hours to one or two years of evening sessions. Training by itself does not have the social recognition that an education credential has. To promote and legitimize this avenue of adult learning, training should be incorporated into the general adult education curricula.

In 1975, the Mexican Ministry of Public Education proposed that one or two publicly offered training courses be considered part of the out-of-school adult program, but the proposal was rejected. Training fell under the responsibility of the Ministry of Labor because of the ties to established enterprises and workers’ unions. The fact that the majority of the adult out-of-school population was outside of formal employment was not taken into consideration. Ever since, training, an essential part of adult learning, was amputated from adult education.

4.1. Training systems

The Ministry of Education established at the end of the sixties a federal system of training schools called Centers of Preparation for Work (Centros de Formación para el Trabajo, CECATI), where 221 training courses in 52 different fields were offered, such as graphic arts, carpentry, beauty services (manicure, pedicure, hairdressing), food preparation and conservation, tourist services, packing, nursing, first aid and many others. Courses vary from 120 to 600 hours. They do not require any specified previous schooling, other than knowing how to read and write.

There are more than 200 CECATI buildings throughout the country with good installations and workshops. Many private institutions follow the same system. Both the public and private CECATI systems have been growing steadily from roughly 400,000 registrants in 1990 to a million in a ten-year period.

During the 2000-01 school year, a total of 1,099,573 persons older than 15 years old were given training courses, of which 49% was by private institutions.

At the same time, the Ministry of Labor also established a system of training support for regular enterprises, mostly small- to medium- and even micro-enterprises (SMEs), with a network of 72 offices throughout the states and the capital, called Employment Support Program (Programa de apoyo al empleo, before, Calidad Integral y Modernización). It operates in combination with state governments. During the first eight months of 2001, 30,898 training courses were provided to 13,601 enterprises in which 284,016 workers participated (many took more than one course). About 59% were directed towards micro businesses. Training touches many lines of work, from large enterprises, SMEs, the self-employed, to technical students, and so on. The impact of all

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16 Primer Informe de Gobierno. September 2001
of these various training activities has not been evaluated. The whole budget for 2002 totaled about US$16 million, certainly a small amount for the size of the operation.

Mexican enterprises have a legal obligation to register their training plans with the labor authorities. During 2001, almost 14,000 plans were registered to train or retrain more than two million workers.

The Ministry of Labor also has a program to retrain unemployed workers. They offer workers some financial support while taking the courses. During 2001, the program benefited more than 200,000 persons. About a quarter of them attended courses in the regular school system, others took them at enterprises where they could potentially be employed, and some support was given to micro and small businesses.

An overall estimate of people trained comes from a national survey taken in odd years by the statistics institute of Mexico (INEGI) is shown in the following table.

### TABLE 4.1 PEOPLE TRAINED (1995-1999)

<table>
<thead>
<tr>
<th>Year</th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>5,159,174</td>
<td>5,109,234</td>
<td>10,268,408</td>
</tr>
<tr>
<td>1997</td>
<td>5,945,709</td>
<td>5,480,776</td>
<td>11,426,485</td>
</tr>
<tr>
<td>1999</td>
<td>5,869,996</td>
<td>5,484,885</td>
<td>11,354,881</td>
</tr>
</tbody>
</table>

Presidencial Report 2001

The table shows the number of men and women that have taken a training course, including those publicly offered by small academies. It is not clear if the numbers are persons or person-courses. Since the Mexican working force is about 50 million, and 11,354,881 people took courses in 1999, an estimated 0-15% of the working force takes one or more training course per year, some for pleasure and others mandated by their employers.

### 4.2. Training courses taken by out-of-school adults

Of the more than 26,000 adults surveyed by INEA, no more than 12% had taken training courses, women outnumbered men, and more people with incomplete upper secondary education attended than any other level. The courses covered on a wide variety of topics. Men who had not completed basic education were most interested in training courses for trades: carpentry, plumbing, electricity, haircutting, gardening, machine maintenance, fishing, and painting. For women lacking a complete basic education, food processing, cooking and health were the main subjects of training. Training in computer skills was the favorite subject for both women and men who had not completed upper secondary, both women and men followed by trades for men and on-the-job training for women.

In 1997, a search was conducted to identify all the training courses publicly offered in Mexico. A total of 12,282 courses were registered on 303 different topics. Of these, about 30% required a lower secondary school certificate. Many of these courses were offered by small private schools. For women lacking a complete basic education, the most frequent topics chosen were garment making, knitting and embroidering, beauty
parlor services, and cooking; for men of the same education level, carpentry, car maintenance, electricity were selected, and both men and women chose computer skills. Since 1997 computer skills have become one of the most popular courses offered by numerous small establishments.

4.3. Conclusions, issues, proposals

4.3.1 Complete and reliable data on training occurring in Mexico is not available. At most, there is a list of men and women taking training courses every year without specifying content, origin of the course, or duration, and incomplete lists of academies offering training courses.

4.3.2 Training in Mexico is a demand driven activity, widely dispersed and different from the ordinary school curricula. No training course counts as credit for any educational level.

4.3.3 For out-of-school adults, INEA is beginning to consider the possibility of accepting some training activities as part of the requirement for obtaining a primary or secondary school certificate, but so far this has not been implemented.

5. WHAT DO THEY DO, KNOW AND WANT TO LEARN

Adult education has been supply driven from its inception, as noted by the mentions above of the use of content from the regular school system, with no recognition of the adult audience. It was not until recently that the federal government decided to investigate what the out-of-school adult population knew and wanted to learn.

The data in this section was taken from surveys ordered by INEA during the period 1996-2002\textsuperscript{17}, with the purpose of gaining knowledge about the population it served. This research had not been conducted before.

5.1. Surveys

Over the last six years, INEA ordered extensive surveys on the Mexican out-of-school population, trying to answer specifically the questions posed above in the title. There were four surveys, as shown in Table 5.1.

\textsuperscript{17} Los saberes de los mexicanos, 1996, 1997. Reports submitted to INEA by Analítica Consultores, A.C. Corresponding data bases.
### TABLE 5.1. COMPLETED INTERVIEWS

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illiterates</td>
<td>2,245</td>
<td>2,547</td>
<td>4,792</td>
</tr>
<tr>
<td>Without completed primary school (less than 6 grades)</td>
<td>4,385</td>
<td>4,414</td>
<td>8,799</td>
</tr>
<tr>
<td>Without completed lower secondary school (completed 6 grades but less than 9)</td>
<td>4,589</td>
<td>4,750</td>
<td>9,339</td>
</tr>
<tr>
<td>Without completed upper secondary school (completed 9 grades, but less than 12)</td>
<td>1,931</td>
<td>1,972</td>
<td>3,903</td>
</tr>
<tr>
<td>Totals</td>
<td>13,150</td>
<td>13,683</td>
<td>26,833</td>
</tr>
</tbody>
</table>

The core purposes for the surveys were to:

a) Estimate the literacy level, that is, the handling of basic competencies, reading, writing and arithmetic.

b) Find the level of experiential and survival skills\(^{18}\) of the out-of-school population.

c) Explore the themes, topics and subjects adults wanted to learn. We call these learning aspirations.

More than 90% of those surveyed said they wanted a lower or an upper secondary school certificate, if a program was developed according to their interests, needs and available time to study, which was limited because all of them worked long hours.

The information obtained is vast and detailed. The following paragraphs synthesize it, and highlight the more important conclusions.

#### 5.2. Literacy level

Tests for evaluating literacy were not specifically used, because it would have taken too long. Instead, the interviewer showed each person a table with ten sentences, graded by difficulty, for each area: reading, writing and use of arithmetic, such as the one shown (in Spanish).

---

\(^{18}\) A general word used in Spanish for all kinds of skills, from the very elementary such as basket weaving to the more complex such as carpenter or housewife was *saberes*. 

---
TABLE 5.2. ESTIMATING LITERACY LEVELS

<table>
<thead>
<tr>
<th>What do you read?</th>
<th>What do you write?</th>
<th>Do you use arithmetic for?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nothing</td>
<td>Nothing</td>
<td>Nothing</td>
</tr>
<tr>
<td>Ads or symbols</td>
<td>Name and address</td>
<td>Basic operations</td>
</tr>
<tr>
<td>Messages, leaflets</td>
<td>Ads and messages</td>
<td>Home expenditures</td>
</tr>
<tr>
<td>Recipes</td>
<td>Lists and recipes</td>
<td>Measuring and weighing</td>
</tr>
<tr>
<td>Letters</td>
<td>Letters</td>
<td>Computing discounts</td>
</tr>
<tr>
<td>Children’s homework</td>
<td>Job applications</td>
<td>Budgets, children’s homework</td>
</tr>
<tr>
<td>Newspapers and magazines</td>
<td>Reports</td>
<td>Solving problems</td>
</tr>
<tr>
<td>Film subtitles</td>
<td>Complaints</td>
<td>Calculating areas and volumes</td>
</tr>
<tr>
<td>Contracts</td>
<td>Diary, stories</td>
<td>Calculating earnings</td>
</tr>
<tr>
<td>Books</td>
<td>Poems</td>
<td>Rates and interests</td>
</tr>
<tr>
<td>Handbooks and manuals</td>
<td>Books</td>
<td>Estimating taxes</td>
</tr>
</tbody>
</table>

The persons would tick the lines in the three columns and the maximum number for each would be their grade. Thus, if a person ticked 2, 3 and 4 in the reading column, his grade would be 4, and in a similar fashion for the other columns.

This is not a very rigorous test, but it gives an idea of the level of daily handling of reading, writing and arithmetic use. Since the results are only estimates, except for “nothing”, the grades were grouped in three levels, 1-3, 4-6 and 7-10.

The answer “nothing”, grade 0, means that the person does not use the skill in daily life. Level 1-3 means person is able to read ads and messages, to write recipes or lists, and know how to add, subtract and multiply small numbers. Level 7 and above means person is capable of reading books, writing poems, and computing interest rates of and taxes.

The responses reveal the following conclusions:

- One’s literacy level clearly increases with years of education, but not in a strictly linear fashion. Many illiterate adults or persons with only a few grades of primary school develop outstanding abilities to read, write and count, depending on what they do in life. On the other hand, adults with more years of education who do not develop what they learned, tend to forget and lose their competence because their daily life does not demand its use.

- Grades for reading were always higher than grades for writing.

- One’s literacy level decreases with age.

- There are no substantial differences between men and women, except perhaps at the most elementary level of education and in the use of arithmetic, where women are at a disadvantage.

- Any material produced to educate out-of-school adults should take into account that their level of reading, writing and arithmetic is quite rudimentary.

5.3. Skills

*Illiterate adults, lacking a primary or lower secondary education*
This group, consisting of 32.5 million persons older than 15, is the poorest of the poor sector of México. A majority of persons are of Indian ethnicity, and it includes farm hands without land, farm families who eat what they produce, street vendors, domestic servants, occasional construction workers, food sellers, streetcar mechanics, and many others. They live and survive by their skills acquired through life. More than 85% of them work in what is called the informal economy, are not registered and do not pay taxes.

They were asked what they did as a job and what else could they do. From these answers a list of experiential skills was obtained for each person. Most could do more than one thing. Some skills were relatively complex, such as some crafts (masons, carpenters, electricians, drivers, car mechanics); others were really survival skills, very elementary, such as picking specific insects to be sold in the market (chapulinería), or being hired to pray in other person’s wakes or masses (rezandero). Being a housewife was considered one experiential skill which included different abilities (washing, cooking, child nursing). A person could be a housewife and also a merchant selling produce in the market; one then had two skills. Many were agricultural laborers part of the year and masons at other times.

Altogether more than 44,000 skills were collected from the interviews of which about 1,200 were different from each other. Many were similar, of the same kind, such as food preparation of many types (moles, tamales, tacos), or different artisans and artists working on textiles, earthenware, copper, oils, and so on.

All of the skills of adults who were illiterate or who had not completed primary or lower secondary school were grouped into 19 general categories. Men and women possessed the same skills, in equal proportion, such as being a merchant. Other skills, like carpentry and construction work, were performed predominantly by men. The great majority of housewives and domestic workers were women.

Skills of persons without completed upper secondary education

Adults with lower secondary educations, but who have not completed upper secondary, form a distinct group of the out-of-school population. About 12.7 million in 2000, their numbers are growing rapidly. They all have a lower secondary school certificate and more than 80% have not continued their upper secondary education. Half are male and half, female. Their age distribution is as follows: 39% are 15-24 years old; 51% are 25-44; and 10% are 45 or older. As seen by the decrease in numbers with increase in age, most of those in the older age range did not reach lower secondary school.

To obtain a secondary school certificate represents a milestone in their lives whose symbolic value is far beyond the meaning of the things they learned. The attainment of a certificate raises their aspirations and increases their self-esteem, as we shall see later.

Many adults who have incomplete upper secondary educations are merchants or salesmen, white-collar employees in factories and shops, tradespersons such as fishermen, carpenters, electricians, plumbers, or bakers; some work in agriculture. Others are blue-collar workers in factories and assembly plants, construction contractors, artisans
and artists. There are also taxi drivers, some housewives and a few home servants. They were grouped under 9 general skills.

Many skills are practiced at all educational levels, in different proportions, as shown in the following table.

**TABLE 5.3. SKILLS AND EDUCATIONAL LEVELS (PERCENTAGES)**

<table>
<thead>
<tr>
<th></th>
<th>Illiterates</th>
<th>Adults without completed primary</th>
<th>Adults without completed lower secondary</th>
<th>Adults without completed upper secondary</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trades*</td>
<td>20</td>
<td>29</td>
<td>40</td>
<td>11</td>
<td>100</td>
</tr>
<tr>
<td>Services**</td>
<td>35</td>
<td>31</td>
<td>28</td>
<td>6</td>
<td>100</td>
</tr>
<tr>
<td>Merchants***</td>
<td>19</td>
<td>13</td>
<td>27</td>
<td>41</td>
<td>100</td>
</tr>
</tbody>
</table>

*Includes carpenters, plumbers, electricians, bakers, garment confection, beauty parlor services

**Includes servants, drivers and taxi drivers.

***Includes fixed shops and street vendors.

The same skills are practiced by both illiterate adults and those with incomplete upper secondary educations, as can be seen from Table 5.3, except that the proportions vary. Most merchants are likely to have more education. Service jobs, on the other hand, are more likely to be performed by persons with less education.

**5.4. Learning aspirations**

*Illiterates and persons without completed primary or lower secondary*

In the surveys, out-of-school adults were asked, “What do you want to learn?” and, “What else?” More than 35,000 aspirations were obtained from the answers. Some were very explicit and detailed such as “training for beauty parlor services”. Others were more general, like “finish basic education,” for example. Women’s explicit desires and aspirations differed from men’s. Some aspirations, especially the more general ones, were shared by both, as can be seen in the following table on illiterate adults and persons without completed primary or lower secondary education.

**TABLE 5.4. THE EIGHT MOST FREQUENT LEARNING ASPIRATIONS**

<table>
<thead>
<tr>
<th>Illiterate adults and persons with less than a complete primary or lower secondary education</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Women</strong></td>
</tr>
<tr>
<td>Garment confection</td>
</tr>
<tr>
<td>Pastry cooking</td>
</tr>
<tr>
<td>Beauty parlor services</td>
</tr>
<tr>
<td>Basic education</td>
</tr>
<tr>
<td>Knitting and weaving</td>
</tr>
<tr>
<td>Cooking</td>
</tr>
<tr>
<td>Nursing</td>
</tr>
<tr>
<td>Computer skills</td>
</tr>
</tbody>
</table>

Table 5.4 comprises more than 60% of women’s and 50% of men’s wishes. Many desired training in the specific skill. It is interesting to note that both genders wanted to learn computer skills.
Adults having completed less than 9 grades of schooling wanted to learn things that led immediately to an improvement in quality of life or income, except for the request for completing basic education which in Mexico means lower secondary.

The surprising finding was that whether Spanish or Indian mother tongue, rural or urban, reached by INEA or not, young or old, people wanted to learn the same things, though with differences along gender lines. This consistency reflects the fact that Mexico in now fairly well connected by roads and by television which reaches most homes.

**Persons without completed upper secondary**

This is quite a different group with raised expectations and better placed in Mexican society. Their average income is at least three times the minimum wage (which, at the time of this writing, was about $400 US per month). About 40% have used or are using computers in their work.

Of great economical significance is the fact that among those who have a lower secondary school certificate, but have not completed upper secondary, 60% work in the formal economy, have permanent jobs and pay taxes while only 15% of illiterate adults and who have not completed primary or secondary education are in the formal economy.

This former group was asked what work they would like to do. More than 20% wanted to go into higher education. Another 19% of the men and 13% of the women did not want to pursue more education; and 19% of men and 15% of women wanted to go into a specialized trade. (The summarized answers are shown in Appendix Table A7.1.) All this means that once one receives an upper secondary certificate, their horizons and ambitions change, and they are more sure of themselves.

Most of them wanted to obtain an upper secondary school certificate, in order to continue on into higher education or to improve their job prospects, but in a program more in accordance to their aspirations and time available.

In another set of questions, they were asked what they would like to study or learn so that they could gain an upper secondary school certificate. After two surveys, in which they had to list the subjects in order of importance, the synthesized answer is presented in the chart on preferences, as follows:

**TABLE 5.5. PREFERENCES FOR UPPER SECONDARY**

<table>
<thead>
<tr>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer skills</td>
</tr>
<tr>
<td>English</td>
</tr>
<tr>
<td>Human relations</td>
</tr>
<tr>
<td>Training</td>
</tr>
<tr>
<td>Mathematics</td>
</tr>
<tr>
<td>Spanish</td>
</tr>
<tr>
<td>Social Science</td>
</tr>
<tr>
<td>Natural Science</td>
</tr>
</tbody>
</table>

Far and away learning computer skills was the most demanded subject, followed by English. Employers strongly proposed courses in human relations. Many of them wanted a specific training course as part of a package. They all recognized their deficiencies in mathematics and language. History and biology were the most preferred subjects within social and natural sciences, respectively.
A program of study with the subjects relevant to the out-of-school adults, such as those above, directed specifically to those who would like to complete their upper secondary education, is not offered currently in Mexico. CONEVyT has it under consideration.

5.5. Conclusions, issues, proposals

5.5.1 When developing materials for education and training of the adult out-of-school population, it is important to take into account that their level of handling basic competencies such as reading, writing and arithmetic is very elementary.

5.5.2 Out-of-school adults have experiential skills that should be considered when developing study programs.

5.5.3 More than 90% of the adults interviewed expressed their intention to obtain a lower secondary or an upper secondary school certificate but not exactly following the present government offer. The emphases varied: illiterate adults and those without completed basic education insisted on a variety of training courses to choose from besides basic skills; those who had not completed upper secondary insisted on computer skills, training courses, human relations and basic subjects, such as mathematics and science.

5.5.4 Government offer does not match the wishes and learning aspirations of out-of-school adults. The most important change should be the addition of training courses to the choices. Of special interest to most adults were computer skills and English, but also many others should be added to take into account regional differences. All of this should take into account the adults availability of time.

5.5.5 Attaining a lower secondary school certificate greatly increases the probability of finding work in the formal economy.

6. View from the employers

As part of the last INEA survey with adults without completed upper secondary (see Table 5.119), a sample of business firms employing them was included and interviewed for their viewpoints. The types of enterprises were chosen from among those where the adults indicated they had worked. Altogether, 602 enterprises were polled, 200 each in the State of Mexico and Tamaulipas, and 202 in Oaxaca.

6.1. Firms’ features and respondents

In general, the firms sampled had been in operation from 4 to 60 years. Most of them had less than 20 workers; 60% were devoted to commerce and 23% provided services. Those answering the interviews were mostly the owners or persons in charge of

19 Diaz de Cossio, R., and Ramón Bagur, A. (2002); Deseos de aprendizaje de hombres y mujeres que terminaron la secundaria pero no el bachillerato. Report presented by the Institute of Engineering, UNAM to the National Institute for the Education of Adults, 44pp plus 54 pp, annexes
the business: about half of them were women; all of them had lower secondary schooling or better, a few had university degrees and two had no educational background. According to the answers given employees were classified into four general types: 1) owner/person in charge; 2) general employee; 3) specialized employee; and 4) seller.

6.2. Employers’ opinions

Ideal schooling

They were asked which would be the ideal schooling to perform each of the four types of jobs. The majority thought that for all employees and sellers lower secondary (first choice) or upper secondary (second choice) was sufficient. For an owner or person in charge, they agreed that at least upper secondary or more was necessary, while 13% thought that a university degree was required. These opinions were more or less the same in all three states (see Table A9.8).

Knowledge, abilities and skills

In an open question, they were asked what they expected from their employees in regard to knowledge, abilities and skills. They could give two or three answers, which were grouped in order of importance by the percentage of frequency mentioned. They do not form a uniform taxonomy, because the employers gave their answers from different perspectives. Employers looked for:

- 41% Service attitude (facility speaking, clean, well-presented, honest, and responsible).
- 16% Counting ability (able to do arithmetic operations, calculations, and conversions).
- 14% Specific training (beauty parlor services, confection, accounting, or a trade skill, such as carpentry or mechanics).
- 14% Product knowledge (practice with clients, catalogue handling).
- 5% Computer skills (use of computers in different activities).
- 3% Reading and writing (written and oral expression).
- 3% Physical capacity, manual ability (able to handle objects, tolerate sleepless nights, or handyman).
- 2% Creativity, good memory (intelligence and retention).
- 1% Knowledge of English.
- 1% A profession (such as surveyor, psychologist, lawyer).
- 1% No requirements (everything is learned at the job).

Like in all surveys of this type, employers mentioned very few specific subjects or fields of knowledge. For them, the attitude was much more important (41%). In a distant second, they mentioned handling of numbers and product knowledge. Specific trades were also important. There are many characteristics an employer looks for in the employee before reading and writing skills.
What should be taught at school

Clearly employers give maximum importance to courses on human relations and values, personal improvement, before mathematics and language skills. Training and job experience also count. After these, employers look for accounting and administrative skills. These tendencies are similar in all three states.

Different types of employers or owners emphasize different skills. Thus, training has more weight for specialized employees, mathematics have a greater role for sellers. Human relations, personal improvement, training and administration are important for owners and persons in charge. They insist on the importance of these subjects and say they should be taught in school. Currently, there are no courses on these topics in lower secondary school curricula.

6.3. About the employees

Seventy percent of employers (somewhat less in Oaxaca) realize that there is a difference between an employee with only lower secondary education and one with upper secondary. One in three thinks there is no difference. They also clearly note that a worker with finished upper secondary has more skills than one with lower secondary; he tends to analyze the situation more, but is less willing to do hard physical labor.

6.4 Conclusions, issues, proposals

6.4.1 The majority of employers recognize the differences between those with a lower secondary education and those with some upper secondary. Those that have upper secondary are more oriented to administrative jobs than to jobs demanding strong physical activity.

6.4.2 Employers main concerns with employees were negative attitudes and lack of specific job knowledge, which underlines the importance of proper training.

6.4.3 Employers strongly desired that courses be given on human relations and personal improvement. These courses are not regularly offered by the school system.

6.4.4 Specific training was most important for both the employees and employers, since it improves learning of a specific job.

6.4.5 Upper secondary education is desirable, but it is not the most important qualification for employees and sellers. For owners and /or persons in charge, on the other hand, upper secondary or a university degree are worthwhile.

7. **FINANCIAL RESOURCES**

7.1. Insufficient economic resources

There has been a persistent and continuous lack of funding for adult education, which receives about 1% of the total education budget, an insufficient amount, given the size of the problem. The historical tradition is evident in the Table 7.1, which compares INEA’s expenditures with the total federal budget of the Ministry of Public Education (SEP) including state allocations for the last 5 years.
TABLE 7.1 RELATIVE EXPENDITURES

<table>
<thead>
<tr>
<th>Year</th>
<th>INEA</th>
<th>Ministry of Public Education (SEP)</th>
<th>INEA/SEP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current pesos</td>
<td>2002 Constant pesos</td>
<td>Current pesos</td>
</tr>
<tr>
<td>1998</td>
<td>1,371</td>
<td>1,950</td>
<td>155,162</td>
</tr>
<tr>
<td>1999</td>
<td>1,552</td>
<td>1,922</td>
<td>181,300</td>
</tr>
<tr>
<td>2000</td>
<td>1,964</td>
<td>2,196</td>
<td>221,063</td>
</tr>
<tr>
<td>2001</td>
<td>2,240</td>
<td>2,365</td>
<td>251,305</td>
</tr>
<tr>
<td>2002</td>
<td>2,845</td>
<td>2,845</td>
<td>273,753</td>
</tr>
</tbody>
</table>

INEA, Direction of Planning

In 2002, INEA’s total budget, including all expenses for personnel, equipment and state allocations, was a meager 1.04% of the federal education budget. The bulk, 98.96%, was devoted to the public school system, from kindergarten to graduate school. This situation is clearly inequitable, given that there are more undereducated adults (45 million) than students in the school system (32 million). If INEA’s budget were increased two or three times in the next few years, it would be sufficient to start reducing the numbers, in absolute terms, of out-of-school adults. The present situation arose due to a lack of perception of the educational and political authorities.

It can be said that which has been achieved is notable, which the adult education program is, considering the meager funds dedicated to it. One important reason for its relative success is that the Mexican population greatly values education and is grateful for any support offered, whether difficult or irrelevant.

7.2. Unit costs of adult education

In this section, the unit cost per certified lower secondary student is analyzed in the regular school system and the INEA’s, based on information provided by Direction of Planning of INEA and the Ministry of Public Education’s general school system statistics.

The total budget devoted to primary or lower secondary education was divided into the number of graduates to obtain a cost per certificate.

For INEA, the total budget was divided in proportion into its three main programs, literacy, primary and lower secondary education. The national averages are as follows.

TABLE 7.2 UNIT COSTS PER CERTIFICATE

<table>
<thead>
<tr>
<th>Level</th>
<th>School system 2000-2001</th>
<th>INEA 2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>47,863</td>
<td>5,592</td>
</tr>
<tr>
<td>Lower Secondary</td>
<td>39,062</td>
<td>5,357</td>
</tr>
</tbody>
</table>

INEA, Direction of Planning

It can be said that INEA’s system is from eight to ten times more economical than the regular school system per certificate given and produces equivalent results as seen in
Section 3.5. There are several reasons explaining this considerable difference: a) a large proportion of INEA’s adults had studied one or more grades in the regular school system; b) INEA does not pay for the use of the buildings where the adults study (they are homes, schools, churches or official buildings); and c) INEA pays advisors who receive a lower salary level than regular teachers. This payment is on the basis of productivity, by successful exams presented. It is estimated that for every peso spent, INEA generates three or four more from social support.

INEA’s budget is distributed among the Mexican states according to diverse criteria, though more or less in proportion to the out-of-school population without a completed lower secondary education. Unit costs thus vary widely from state-to-state. For example, Nayarit, Yucatán, and Baja California spend more than Mex$20,000 per certificate while Puebla and Veracruz spend less than Mex$3,000\(^{20}\). There are several reasons for this:

- When adult education was decentralized and the responsibility was given to the states, local institutes were created with a different number of higher managerial positions, and this made for variable fixed costs.
- The introduction of the new educational model Education for Life and Work tends to lower the efficiency at first and it takes one or two years to reach previous levels of certification.
- Some state’s school systems are less efficient than others and therefore send a larger cohort of out-of-school adults to INEA every year.
- Some states are also supported by their state governments and demand less federal money.
- The budgetary inheritance makes it very difficult to reduce allocations from year-to-year. For example, if one state received, for any reason, a larger share of the federal money for any reason one year, they receive the same amount the next.

\(^{20}\) INEA, Direction of Planning
7.3. Resources and results

**GRAPH 4. COST VS. NET INCREASE OR DECREASE IN OUT-OF-SCHOOL POPULATION, 2001**

Ordering the states according to the increasing cost of lower secondary school certificate and superimposing the net increase or decrease of adults who are lacking completed lower secondary as shown in the above graph, it can be seen that the positive (increase) or negative (decrease) results have no correlation with the cost of a certificate. For example, Coahuila and DF show substantial improvement at relatively low costs, while the state of Mexico has a large increase in the out-of-school population but larger costs.

In summary, even though the scarce resources are distributed more or less in proportion to the out-of-school adult population, the results measured in terms of costs per adult, certificates given, and overall decrease or increase in the numbers of out-of-
school adults without a completed lower secondary education, bear no clear relationship to each other.

7.4. Goals

Since the fundamental objective of adult education in Mexico is to reduce the number of out-of-school adults every year, future resources should be based on the number of lower secondary school certificates given at the present time. This has been done by the present administration in a very simple exercise shown in Table 7.3. The goal in certificates is translated into money, multiplying by the average cost.

TABLE 7.3. GOALS PROPOSED BY THE PRESENT ADMINISTRATION

<table>
<thead>
<tr>
<th>Year</th>
<th>Out of school population</th>
<th>New adults incorporated</th>
<th>Deaths and migrants</th>
<th>Lower secondary certificates given</th>
<th>Net increase or decrease in out-of-school adults WCLS</th>
<th>Estimated budget*</th>
<th>Increase with respect to 2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>34,651</td>
<td>811</td>
<td>311</td>
<td>300</td>
<td>199</td>
<td>1,609</td>
<td>1.0</td>
</tr>
<tr>
<td>2003</td>
<td>34,850</td>
<td>778</td>
<td>313</td>
<td>540</td>
<td>-75</td>
<td>2,893</td>
<td>1.8</td>
</tr>
<tr>
<td>2004</td>
<td>34,775</td>
<td>789</td>
<td>312</td>
<td>660</td>
<td>-183</td>
<td>3,536</td>
<td>2.2</td>
</tr>
<tr>
<td>2005</td>
<td>34,592</td>
<td>760</td>
<td>310</td>
<td>780</td>
<td>-330</td>
<td>4,178</td>
<td>2.6</td>
</tr>
<tr>
<td>2006</td>
<td>34,262</td>
<td>750</td>
<td>307</td>
<td>900</td>
<td>-457</td>
<td>4,821</td>
<td>3.0</td>
</tr>
</tbody>
</table>

* Budgets do not include Community Plazas investment and the expenditures of central areas.

INEA, Direction of Planning

The budget is expected to be three times larger in 2006 with 900,000 lower secondary school certificates awarded and a yearly reduction to half a million per year of adults who lack completed lower secondary education.

A more aggressive reference is proposed in the following table for the next nine years.

TABLE 7.4. AGGRESSIVE GOALS

<table>
<thead>
<tr>
<th>Year</th>
<th>Out of school population</th>
<th>Incorporations</th>
<th>Deaths and migrants</th>
<th>Lower secondary certificates given</th>
<th>Net increase or decrease in out-of-school adults WCLS</th>
<th>Estimated budget*</th>
<th>Increase with respect to 2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>34,651</td>
<td>811</td>
<td>311</td>
<td>300</td>
<td>199</td>
<td>1,609</td>
<td>1.0</td>
</tr>
<tr>
<td>2003</td>
<td>34,850</td>
<td>778</td>
<td>313</td>
<td>540</td>
<td>-75</td>
<td>2,893</td>
<td>1.8</td>
</tr>
<tr>
<td>2004</td>
<td>34,775</td>
<td>789</td>
<td>312</td>
<td>800</td>
<td>-323</td>
<td>4,286</td>
<td>2.7</td>
</tr>
<tr>
<td>2005</td>
<td>34,592</td>
<td>760</td>
<td>310</td>
<td>1,060</td>
<td>-610</td>
<td>5,678</td>
<td>3.5</td>
</tr>
<tr>
<td>2006</td>
<td>34,262</td>
<td>750</td>
<td>307</td>
<td>1,320</td>
<td>-877</td>
<td>7,071</td>
<td>4.4</td>
</tr>
<tr>
<td>2007</td>
<td>33,385</td>
<td>740</td>
<td>305</td>
<td>1,580</td>
<td>-1,145</td>
<td>8,464</td>
<td>5.3</td>
</tr>
<tr>
<td>2008</td>
<td>32,240</td>
<td>730</td>
<td>302</td>
<td>1,840</td>
<td>-1,412</td>
<td>9,857</td>
<td>6.1</td>
</tr>
<tr>
<td>2009</td>
<td>30,828</td>
<td>720</td>
<td>300</td>
<td>1,970</td>
<td>-1,550</td>
<td>10,553</td>
<td>6.6</td>
</tr>
<tr>
<td>2010</td>
<td>29,278</td>
<td>710</td>
<td>290</td>
<td>2,100</td>
<td>-1,680</td>
<td>11,250</td>
<td>7.0</td>
</tr>
</tbody>
</table>

Author’s proposal
In this scenario, it is assumed that resources can be increased by more than four times by 2006, and seven times by 2010. Were this the case, in the years following there could be a substantial reduction of the out-of-school adult population without a lower secondary education.

No proposal has been made for upper secondary, but a plan has to be launched on this front. One suggestion would be to increase INEA’s responsibilities to include upper secondary with a focus on establishing a lifelong learning environment. At the time of this writing, this is only an idea for the future. But if undertaken, it would require additional funds.

7.4. Financing

Up to now the financing of adult education has been provided by the public sector, specifically, it has been money given by the federal government. Only in the last few years have some state governments directly supported adult education programs to some extent. The private sector provides some small and isolated adult education programs through non-profit organizations.

It is necessary, first, that all three levels of government, federal, state, and county, support adult education. Everyone has to be committed to the idea that the best way to combat poverty is through adult education programs. This requires a series of continuous activities to raise the level of consciousness of the importance of the problem and its impact on socioeconomic development.

An ideal scheme would be for state and county governments to allocate regular yearly budgets to adult education in addition to the yearly federal allocation.

There have been several initiatives with the private sector. During the 1970s and 80s, private enterprises supported and paid some of the costs so that their workers could obtain a lower secondary school certificate. Some of them still continue to collaborate with INEA for this purpose. In general, employers are satisfied with the lower secondary level of certification, as seen above. It is not clear that the private sector firms want their workers to obtain an upper secondary school certificate. All of them, however, both medium and large businesses, invest in specific training courses, but these are not taken into account as part of adult basic education.

There are no fiscal incentives in Mexico for adult education. Enterprises invest in their own training needs; business firms have no motivation to invest in the broader education of their workers.

Official Rule 286, only used until now for upper secondary (see Section 3.6), should be applied to specific groups of workers and unions in a cooperative effort toward completing lower and secondary education.

Financing of adult education in Mexico should be a planned and sustained effort for the next 15 or 20 years. In order to achieve this long-term vision, international support is essential. Of course international funds alone will not solve the problem, but they could provide continuity and consistency through political changes at the federal and state levels.
7.5 Conclusions, issues, proposals

7.5.1 Public expenditures for adult education should be increased until they reach three to five times their present levels, by 2006. Contributions not only from the federal government, but also from state’s and county’s governments, and the private sector would be necessary.

7.5.2 Since the cost of educating an out-of-school adult is considerably less than the corresponding cost of regular students the school system, increasing the number of educated adults will require a small fraction of the total education budget (3% to 7%).

7.5.3 The only way to address the wide diversity of positive and negative results in the states’ adult education programs is to work on them state by state. They all have different political and educational situations, affecting the overall behavior of the state systems. Solutions need to be tailored to each state.

7.5.4 The most essential action to be made is raising the awareness of political and educational authorities on the problem of adult education and its importance for the country’s future. Adult education should be given a priority as high as the one given to the regular school system, since it is an extremely economical solution.

7.5.5 Efforts should be made to solicit the private sector’s contributions to adult education in a substantial and permanent way. For this purpose, fiscal stimuli should be created as well as a marketing campaign to promote the benefits of adult education and training.

8. OTHER RELEVANT ASPECTS

The Mexican system will tend to be demand driven as the offering of contents is diversified for the adults to choose from, but this is far from having been achieved.

Training courses have been demand driven in a very chaotic manner, with all fundamental participants acting independently of each other without any order. On the other hand, more than 80% of illiterates and persons without completed primary or secondary school work and practice their skills in the informal economy. Therefore, a proper adult education system in Mexico should be basic competency-based with added training courses as the adults see fit. The Mexican economy is not generating enough employment and therefore we cannot educate an adult for a specific work position. On top of this, a lifelong learning system has yet to be developed where persons could adjust to society’s demands.

8.1. Effects of certification

The social effect of acquiring a lower secondary certificate in Mexico is stronger than acquiring a high school diploma in the U. S, because millions of people stop studying afterwards, and any job in the formal economy requires one. The upper secondary cycle is viewed as preparation for university studies, rather than preparation for work.
Mexico’s legal working age is 16 years old. Lower secondary school is usually finished at 15. Since 1970, employers required all their employees to have at least a lower secondary education. As of 2003, a majority of employees in the formal economy fulfill this requirement.

Through the three surveys ordered by INEA in 2001 and 200221 with adults who not completed upper secondary, the symbolic effect of obtaining a lower secondary school certificate is shown clearly: their self-esteem rises as well as their incomes. As mentioned in the report:

- The most important finding of this research work has to do with the changes produced in a person when he or she goes from not having to having a lower secondary school certificate. It is not so much the effect on income, which continues to be modest. The changes are in his or her world views and aspirations. After all, ours is a credentialed society. Once the lower secondary school certificate is attained, people do not want to be blue-collar workers or housewives; they do not want to be trained for a trade. They think of becoming white-collar employees or professionals with a degree. At the same time they are perfectly conscious of their limitations is some basic areas which they could not get from lower secondary school. This change is more marked in women than men, although is clear in both.

While adults who had not completed 9 grades of education wanted specific courses to immediately improve their quality of life, those who had completed lower secondary in the surveys raised their aspirations to higher studies (20%), or continuation of their jobs in the formal economy (20%). People in all levels wanted to study computer skills for getting a better job or improving the one they had.

Although those who have completed lower secondary school have a modest place in the economy, there is a tangible improvement in income compared to those without completed basic education. This can be seen in recent surveys.

21 Diaz de Cossío, R., Ramon Bagur, A., (2001) **Mujeres y hombres que terminaron la secundaria pero no el bachillerato.** Report presented by the Institute of Engineering, UNAM to the National Institute for Education of Adults, 34 pp and 64 pp annexes.
TABLE 8.1. INCOME BY MONTHLY MINIMUM WAGES\textsuperscript{22} (PERCENTAGES)

<table>
<thead>
<tr>
<th>Monthly minimum wages</th>
<th>Without lower secondary</th>
<th>With lower secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>1055</td>
<td>3170</td>
</tr>
<tr>
<td>Up to 1</td>
<td>54</td>
<td>30</td>
</tr>
<tr>
<td>1 to 3</td>
<td>34</td>
<td>45</td>
</tr>
<tr>
<td>3 to 5</td>
<td>4</td>
<td>15</td>
</tr>
<tr>
<td>More than 5</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>No answer</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

From Table 8.1, it can be seen that 54% of adults without a lower secondary education have incomes of up to one monthly minimum wage, while for persons with lower secondary this percentage is reduced to 30%, a difference of 14%. On the other hand, 88% of those without a lower secondary education make up to 3 minimum wages monthly, while for those with completed lower secondary the percentage is 75%. At every level those with completed secondary have a higher percentage until at the range of 5 or more minimum wages the advantage is four times (2% vs. 8%).

The most important indicator, however, is that 60% of those having completed lower secondary work in the formal economy, while only 15% do of those without completed basic education. In other words, there is a new taxpayer for every two lower secondary certificates awarded.

8.3. Demand inhibitors

There are four fundamental factors that inhibit the demand for adult education: dispersion, age of the out-of-school population, lack of interest in the content, and extreme poverty.

\textit{Dispersion}

If an out-of-school adult does not have a community center close to where he or she lives or works, it is unlikely that they will attend. Adults fitting this description make up the poorest sector of the population; they own no cars or individual vehicles for transport. While the majority of adults with completed primary educations live in marginal zones of cities (about 100 in Mexico), and in large numbers in smaller communities, illiterate adults and those without completed primary school live mostly very small communities. Many of them are Indian communities and farms workers. There are many thousands of micro communities (500 inhabitants or less) that have no

\textsuperscript{22} The Federal Government sets yearly a minimum wage which in theory is the least a firm can pay its employees. There are three regions with different minimum wages. In surveys the income range is asked and afterwards is transformed to multiples of monthly minimum wages. In 2003 the monthly minimum wage is US115. A 4-person family can live modestly in Mexico City with 3 minimum wages.
educational services at all. INEA has some 500 regional offices and 13,000 meetings points. If new regional offices were placed in each county (there are 2,443) and more meeting locations established, the number of adults reached could grow four or more times.

*Age*

The older one is, the more difficult it is to go into formal or informal educational programs. One’s life is established, most likely one is working, married and has children. There is also a shame factor to be in front of younger students and facilitators. Of the 45.3 million out-of-school adults, 51% (or 23 million) are older than 34 years of age (Mexican 2000 Census). Of these, 6.7 million are illiterate and 8.2 million have not completed primary education. A large majority of illiterate adults are older than 35 (77%), and 70% of those without completed primary. Age limitations suggest that at best, about half of the out-of-school population could be educated, though services have to be offered to all.

*Lack of interest*

INEA, for the first time in 2000, started offering a more flexible model somewhat more relevant to an adult’s life. This flexibility is just beginning to take hold, and is only for literacy, primary and lower secondary adult education. Upper secondary education continues to use a curriculum almost identical to that of the regular school system, the so-called open preparatory program, and has proven to be very unsatisfactory. Of the 12.7 million people without completed upper secondary, 83% finished lower secondary and did not continue, mostly due to work, but 20% mentioned their lack of interest in continuing was due to the upper secondary subject matter.

*Extreme poverty*

Given the extreme poverty of target population, most do not have the resources to even transport themselves to a meeting point. Poverty and extreme poverty are huge demand inhibitors.

8.4. Strengths and weaknesses

*Strengths*

The strength of the Mexican adult education system lies in its acceptance by the population. After more than 20 years of effort, the system INEA constructed benefits from a positive image among the families, communities, and population it serves. A recent external evaluation confirmed this impression, after interviewing with a statistically representative sample of adults who had not completed basic education23. The final conclusion was:

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In general there is great satisfaction among the students with services provided by the Institute. Also, the results from an economic and social standpoint are favorable, since they declared improvement in their economies and job performance since they were incorporated to INEA’s system, which as a consequence produced better expectations in their personal lives.

According to participating adults, the Education for Life and Work model improved their incomes and their jobs.

Adults who participated in the Open Preparatory model for upper secondary school, however, indicated that it was difficult and not very interesting.

Weaknesses

Lack of coordination and limited resources are two of the great weaknesses of the Mexican adult education system.

The first is presented below, and the second, scarce economical resources, is due mainly to lack of awareness on the part of educational and political authorities of the importance of the adult education problem (treated in detail in Part 7).

Lack of coordination. While INEA has the legal mission to provide literacy, primary education and lower secondary education to out-of-school adults, and is the largest provider, there are many services devoted to adults, each with its own program and budget.

Some of them fall under the federal Ministry of Public Education, such as:

- **Dirección General del Bachillerato** (for upper secondary). The program of Open Preparatory is located there. The Undersecretariat for Higher Education and Scientific Research provides oversight.

- **Dirección General de Métodos y Materiales Educativos** (Educational methods and materials). They manage a program of open secondary for adults with its own materials, different from INEA’s. It is overseen by the Undersecretariat of Basic Education.

- **Dirección General de Centros de Capacitación para el Trabajo**. They offer a large number of training courses and are overseen by the Undersecretariat for Technological Education.

Others come under the state secretaries of education:

- They provide many isolated services, such as night schools for workers and cultural missions.

Still others come under other federal ministries:

- Secretary of Labor. Provides training and supervision for the private sector.

- Secretary of Social Development. Provides monetary assistance to millions of selected poor families compelling them to leave their children in school. There is no program for the education of the parents.
The effect of so many different efforts for adults is to dilute and even repeat them, especially lower secondary programs.

8.5 Conclusions, issues, proposals

8.5.1 Lower secondary education should continue to be a fundamental priority of the Mexican adult education system.

8.5.2 As programs expand the number of meeting points, and content becomes more attractive and pertinent, some of the effects of dispersion will be diminished.

8.5.3 Efforts towards better coordination should be strongly pursued, especially between INEA-CONEVyT and CECATI, so that training courses given by CECATI can be given credit towards a lower or upper secondary school certificate.

8.5.4 INEA should be given legal faculties to initiate a strong post-lower secondary project and also the authority to conduct the changes in contents for upper secondary, following the same philosophy underpinning the model Education for Life and Work. This would have the additional advantage of setting the bases for the beginning of a lifelong learning system.

8.5.5 An ideal adult education system for Mexico would consist of competency-based basic skills with additional training courses as needed.