

## Factors that Affect Educational Equity in Rural Schools in Mexico

## Factores que afectan a la equidad educativa en escuelas rurales de México

Diego Juárez Bolaños and Carlos Rafael Rodríguez Solera

Universidad Iberoamericana, Mexico City, Mexico

### Abstract

Educational equity is one of the main problems in Mexico, with a major impact on the rural population. Throughout the first half of the twentieth century, the main obstacle faced by rural children was lack of access to schools. The expansion of basic education coverage in the second half of the twentieth century helped to reduce the gap between rural and urban areas in access to education. The main educational equity issues facing the rural population in the twenty-first century include lower retention rates for children attending rural schools, meaning that fewer of these students complete basic education, and the fact that inequality is expressed in lower levels of educational achievement among rural students. Education research over the past two decades has helped to elucidate the main factors behind why rural children have lower retention rates and display lower achievement, which prevent them from fully exercising their right to quality education. This paper organizes these results, aiming to identify alternatives to improve educational equity in rural areas.

**Keywords:** educational equity, rural education, education research

---

#### Post to:

Diego Juárez Bolaños  
Instituto de Investigaciones para el Desarrollo de la Educación, Universidad  
Iberoamericana, Mexico City  
Prolongación Paseo de la Reforma 880, Lomas de Santa Fe, C.P. 01219,  
Mexico City, Mexico  
Email: [diego.juarez@ibero.mx](mailto:diego.juarez@ibero.mx)

This paper is based on Estudio sobre los principales resultados y recomendaciones de la investigación educativa en el eje de equidad, financed by the Mexican Instituto Nacional de Evaluación Educativa in 2014.

The authors would like to thank Azul Valdivieso Martínez and Florencia Mercado Vivanco for their collaboration with the collection, systematization and analysis of data for this study, in addition to Josefina Díaz Páez for her help in proofreading the text.

---

© 2016 PEL, <http://www.pensamientoeducativo.org> - <http://www.pel.cl>

ISSN: 0719-0409      DDI: 203.262, Santiago, Chile  
doi: 10.7764/PEL.53.2.2016.8

## Resumen

---

Uno de los principales problemas de México es la falta de equidad educativa que afecta a la población rural. Durante la primera mitad del siglo XX, el principal obstáculo que enfrentaban los niños del medio rural era la falta de acceso a las escuelas. La expansión de la cobertura de la educación básica durante la segunda mitad del siglo XX permitió reducir la brecha en el acceso a la educación que existía entre localidades rurales y urbanas. Los principales problemas de equidad educativa que enfrenta la población rural en el siglo XXI son una menor permanencia en el sistema educativo de las niñas y los niños que asisten a escuelas rurales, lo cual les impide completar su educación básica, y el hecho de que la inequidad se expresa en los bajos niveles de logro educativo que tienen los alumnos rurales. La investigación educativa de las dos últimas décadas permite identificar los principales factores que provocan los problemas de permanencia y logro que impiden a niños y niñas rurales ejercer de manera plena su derecho a recibir una educación de calidad. Este artículo sistematiza dichos resultados, que pueden conducir a identificar alternativas para mejorar la equidad educativa en el medio rural.

*Palabras clave:* equidad educativa, educación rural, investigación educativa

When the Public Education Secretariat (SEP) was created in Mexico in 1921, one of the main challenges addressed by the new authority was to provide education to millions of rural inhabitants spread between thousands of localities across the country. With the expansion in education provision driven by policy throughout the 20th century, the lack of access to primary and secondary schools ceased to be the main educational problem in rural areas and the difficulties faced by rural children to remain at school to complete their basic education began to gain more importance, in addition to their lower levels of educational achievement compared to the student population in urban areas.

Based on the results of educational research in Mexico over the last 20 years, this article identifies factors to explain why rural children and young people spend less time in classrooms and, when they do attend school, why they learn less than their city-dwelling peers.

This work has been done using documentary research, the purpose of which is to make an analytical study of the knowledge accumulated in written documents. The selection criteria for the texts consulted were the period and methodological quality of the material. Only papers written in the last two decades (1994-2015) are included in the study. As regards the quality, texts were chosen that met the following criteria:

- Articles published in refereed scientific journals.
- Books or chapters of books from known publishers or published by government and academic institutions.
- Papers published by expert researchers on the topics included in the study.

Around 40 texts were analyzed to build the data on which the study is based. We sought to identify three specific themes in these documents:

- a. The diagnoses that have been made by researchers on basic education in rural areas.
- b. Discussions about the nature and causes of educational deficiencies affecting the rural population, according to the various authors consulted.
- c. Proposals arising from educational research to promote the effective exercise of the right to education in rural areas.

Based on a review of the documents, categories of analysis were proposed, which will be described below. Labels were then assigned to the texts consulted based on the categories of analysis and bibliographic records were established to organize the diagnoses and the recommendations generated by the research. A bibliographic database was created based on these records using the Zotero program. As the final product, the results and recommendations on educational equity from the research were analyzed and organized.

This article is structured in three large sections. In the first, there is a conceptual discussion of the subject of equity in order to establish the criteria used to study the educational inequalities observed in rural areas. The second section includes a diagnosis of the main problems of educational equity faced by the rural population of Mexico and, lastly, there is a discussion of the causes of educational inequalities in rural areas, based on the results of educational research.

### Discussion of the concept of equity in education

One of the most important challenges in the sociology of education is to establish whether the educational inequalities observed in a society are attributable to the efforts and capacities of individuals or to social circumstances of origins that are beyond their control: «School systems usually impose criteria of discrimination based on individual efforts and merits, in such a way that part of the inequality could be attributed to these factors and not to the social circumstances of origin» (Solís, 2010, p. 606). This is a fundamental distinction because educational inequalities that emerge as a result of individual efforts or aptitudes could be considered to be fair, but differences due to social circumstances, such as ethnicity, social class, or gender, are usually judged to be unfair (Solís, 2010).

From a sociological perspective, it can be considered that there is a situation of educational equity when the inequalities can be attributed exclusively to individual merits and not the inequality of educational opportunities, which would occur when the results are linked to the social class of origin or any other circumstances beyond the control of the individual.

Equality of opportunities is, therefore, a fundamental condition for the existence of educational equity in a society. According to Rawls (2002), in the case of education, what should be promoted is «equitative equality of opportunity», for which policies should be established that allow equal education opportunities for all regardless of the income of families, their cultural origin, or any other factor related to social heritage.

[...] assuming that there is an innate distribution of skills, those who have the same level of talent and ability and the same disposition to make use of those gifts should have the same perspectives of success regardless of their social class of origin (Rawls, 2002, p. 75).

The principle, according to which educational equity is where there are equal opportunities that allow school performance to be decoupled from the social affiliation of individuals, is put forward by Walzer (1993), among others, who argues that, in a fair society, inequalities that exist in a social sphere should be prevented from «contaminating» other areas. Therefore, educational inequalities must be independent of the inequalities observed in other areas, such as those of an economic or cultural origin.

Although various authors accept that equality of opportunities is a basic principle for equity in education, there is a broad debate on the way in which equality of opportunities in education can be understood.

In this paper we cannot present the rich discussion that exists on the subject<sup>1</sup>, but we should point out that the concept of equity that guides this study is in agreement with the proposal made by Farrell (2007), according to which four aspects should be identified that would establish to what extent children from groups of different socioeconomic status or distinct social or cultural origin can access the educational system, remain there until they complete their studies, achieve an adequate level of educational attainment, and, lastly, benefit from the education received in their adult life, which would indicate how equitable a school system is. According to Farrell, the key aspects to consider are the following:

1. Equality of access: knowing the probability that children from different social groups can enter the school system, or a particular level or section of the system.
2. Equality of survival: knowing the probability of children from different social groups remaining in the school system until the end of a complete cycle (e.g. primary, secondary or high school education).
3. Equality of output: knowing the probability of children from different social groups learning the same things to the same levels, at a defined point in the education system.

<sup>1</sup> For an extensive analysis of this topic, see Bolívar (2005).

4. Equality of outcomes: knowing the probability of children from different social groups living relatively similar lives as a consequence of the education they received (Farrell, 2007, p. 136).

In this paper, we analyze educational equity in rural areas considering the first three aspects (equality of access, retention, and achievement) proposed by Farrell. The fourth point, concerning the consequences of receiving a certain type and level of education, is not addressed in the text because no data or research results were found that allowed this aspect to be analyzed.

One of the most commonly-used approaches to establish the extent to which the right to education is met is the four. As (4-A) framework proposed by Tomaševski (2001) which, according to the presentation on this by Schmelkes (2014, p. 11), implies that children have *accessibility* (or availability) to the educational service, for which there must be schools located close to where children live and these schools must have well-trained teachers and sufficient infrastructure, furniture, and equipment. Furthermore, existing schools should be *accessible*, which means that there should be no economic, physical, legal, or administrative barriers and no student should be discriminated against on the basis of gender, race, language, socioeconomic status, religion, or origin. The other criterion is that education should be *adapted* to the specific characteristics of the students, must be meaningful, pertinent, and relevant, and should consider the cultural and socioeconomic characteristics and individual abilities of the students. Finally, this approach suggests that education should be *acceptable*, that is, that students should feel comfortable at school and should perceive that they are learning and that what they learn coincides with their interests and will be useful to them in life.

Based on Tomaševski's (2001) proposal, the findings of the educational research that are discussed later in this text were characterized and classified in order to identify the factors that, according to the studies consulted, would be causing the problems of educational equity seen in the rural population.

### **Diagnosis of problems of educational equity in the rural population**

Schooling for primary school students who live in rural Mexico is done through three systems: first, through regular primary schools, which may depend on state or federal authorities. Secondly, indigenous schools, of which 91% are in rural localities (Instituto Nacional para la Evaluación de la Educación [INEE], 2015, p. 66). These schools serve the 6.6% of the Mexican population that speaks any of the 60 languages in the country (Instituto Nacional de Estadística y Geografía [INEGI], 2009). A third alternative is through community primary schools, which depends on the National Council for Educational Development (CONAFE), a government agency that began providing educational services in rural populations in 1973 and has assumed the responsibility of taking basic education to small localities, usually those with less than 100 inhabitants, where there are between 5 and 29 children of school age who do not have an available school within a 5-kilometer radius. This is the only system that has been created exclusively to serve rural populations and it does so through a pedagogical methodology designed to serve multigrade groups.<sup>2</sup>

To gain an idea of the size of the population covered by these three systems, suffice it to say that, in 2012, rural schools served a third of children aged from 3 to 14 at the ages of attending pre-school, primary, and secondary school, and a quarter of young people aged from 15 to 17 at the age of attending higher secondary education.

---

<sup>2</sup> Multigrade schools are those where, due to the reduced number of students, the teacher's work is done with girls and boys of different academic grades at the same time and in the same space. This is how around 44,000 rural schools in Mexico work.

Table 1  
*Mexico. School Attendance in Rural and Urban Areas by Regulatory Age Group (2012)*

Population	3 to 5	6 to 11	12 to 14	15 to 17
Rural <sup>a</sup>	1,224,514 31.3%	3,545,722 31.9%	1,640,128 30.8%	1,006,579 24.6%
Urban	2,694,264 68.7%	7,576,613 68.1%	3,692,964 69.2%	3,094,013 75.4%
Total	3,918,778	11,122,335	5,333,092	4,100,592

Source: Prepared by the authors with data from INEE (2014a, p. 97).

<sup>a</sup> According to INEGI, a population is considered to be rural when it has fewer than 2,500 inhabitants.

To understand this distribution of enrollment, one should consider the demographic changes that have taken place in the country since the mid-20th century. Whereas in 1950, 57.4% of the population was rural, in 2010 the population distribution by the size of locality had been completely reversed and 7 out of 10 people in the country lived in an urban locality (García & Colocía, 2010). Therefore, between 3 and 14 years of age, the proportion of children that attend school in rural areas is almost identical to the way in which the total population is distributed in the country: 3 out of 10 people live in rural areas and 3 out of 10 students of the national education system attend systems that serve the rural population. In the case of the population of age to attend higher secondary education, the proportion of students is lower due to the difficulties faced by rural young people to remain in the education system, which will be discussed later.

Analysis of the situation regarding educational equity in rural areas, based on Farrell's proposal, allows us to identify that the rural population faces three fundamental problems that prevent them from fully exercising their right to receive education of the quality established by the current legislation.

### Problems of Access to Education

During the first half of the 20th century, the main problem of educational equity faced by the rural population in Mexico was their lack of access to schools, a situation that was common to most of the countries in Latin America, which were focusing their efforts on expanding coverage of primary education and combating the illiteracy that affected the rural population (Filgueira, 1978).

The difficulties of access to education that affected the rural population during this period still have repercussions on the educational backwardness of part of the Mexican population. One study on this topic revealed that, in 2010, 66.2% of people older than 50 had an educational backwardness. Among the rural population, this gap, called «historic educational backwardness» in the study, affected 91.3% of that age group (Narro, Martuscelli, & Barraza, 2012).

With the expansion of educational opportunities that took place in Mexico in the second half of the 20th century, inhabitants of rural areas had greater access to primary education, as can be seen in the evolution of the school attendance rate<sup>3</sup> in 1970-2010.

<sup>3</sup> The school attendance rate, or school enrolment rate, is the percentage of people of school age that attends some formal educational establishment, regardless of the level of education that they study. In operational terms, it is the ratio between the population attending the formal education system in each age group and the total population of that age group, multiplied by 100. Source: [http://www.siteal.iipe-oei.org/glosario\\_indicadores\\_acceso](http://www.siteal.iipe-oei.org/glosario_indicadores_acceso)

Table 2  
*School attendance rate of the population aged 6 to 11 in Mexico in 1970-2010*

Population	Year					
	1970	1990	1995	2000	2005	2010
Rural	56.9	82.4	93.2	92.9	95.1	95.3
Urban	70.6	92.9	97.3	96	96.9	96.1
Difference	13.7	10.5	4.1	3.1	1.8	0.8

Source: Authors' own calculations based on microdata from the Mexican population censuses from: Minnesota Population Center. Integrated Public Use Microdata Series, International: Version 6.3 [Machine-readable database]. Minneapolis: University of Minnesota, 2014.

However, as can be seen, in 1970 43% of children aged from 6 to 11 (the legal age to attend primary education) in rural areas still did not have access to a school. At that time, there was a gap of almost 14 percentage points compared with the urban population, which was gradually reduced to less than 1% in 2010. Although the data display a marked increase in the rural population's access to primary education in the last year for which data exists, nearly 5% of the children were not in school, which means that 169,043 children were not receiving primary education.

According to INEE, coverage continued to increase and, in 2012, the attendance rate for primary education was 99% in urban areas and 98.1% in rural areas, so the difference in access between the two populations was minimal. There were also no significant differences between the two populations regarding preschool: in 2012, 72.1% of rural children between 3 and 5 years old attended an educational establishment compared with 73.5% urban children of the same age. However, the differences are more marked in the population aged from 12 to 14, that is, those who should be attending secondary school: while 90.7% of adolescents in rural areas attended secondary school, that figure was 94.7% in urban populations. In higher secondary education, which has been compulsory in Mexico since 2013, the gap is even bigger. Only 58.7% of the rural population aged from 15 to 17 attended school, compared with 76.2% of the urban population of the same age group (INEE, 2014a, p. 24).

Therefore, the problem posed by Farrell on the probability of children from different social groups being able to enter the school system, it can be said that, although only 7 out of 10 children receive pre-school education in rural areas, the situation is almost identical to that in urban areas. In primary education, school coverage is virtually universal<sup>4</sup> and there are no significant differences between the urban and rural populations, but the inequalities between the rural and urban populations begin to appear in access to secondary education.

So, while the «current legislation states that all children must attend school, regardless of the context in which they live» (INEE, 2014b, p. 95), the type of locality determines the possibility of studying secondary or higher secondary education. This occurs in a nation that established educational equity in its laws and which should better serve the poorest and most marginalized populations, many of whom live in rural areas.

### Problems of retention in education

Since the second half of the 20th century, the rural population's access to basic education has increased steadily, but one significant problem has been retaining students from rural localities at school.

In rural areas there are more serious problems of over-age students, that is, students who are more than two years older than the average age expected to study a certain grade. 12.6% of students in rural

<sup>4</sup> The only exception to this is seen in the case of the children of migrant agricultural laborers. Schmelkes (2013) estimates that there is a population of approximately 350,000 migrant children in Mexico, of whom only 10% attend school. This figure agrees with that published by a group of researchers from the Universidad Nacional Autónoma de México, who confirmed that less than 10% of the children of migrant agricultural laborers attended school, based on Unicef data (Chehaibar, Alcántara, Athié, Canales, Díaz, Ducoing, Inclán, Márquez, Pontón, Valle, Ruiz, & Zorrilla, J. F 2013, p. 24).

community primary schools have this problem, compared with 2.9% of children in general primary schools in urban areas. In secondary education, while 2.7% of students in general (urban) schools are over-age, 8.9% of students in distance secondary education and 20.1% of community (rural) secondary schools were studying a grade not corresponding to their age (INEE, 2014b, p. 268). According to the National Council for Evaluation of Social Development Policy (CONEVAL, 2014), in 2012, 32.4% of the rural population had problems of educational backwardness<sup>5</sup>, while this only affected 15.3% of the urban population.

The problems of school desertion, over-age students, and educational backwardness, which are more serious in rural areas, mean that, despite the improvements in access to education, people who live in rural areas continue to face problems to fully exercise their right to education.

Table 3  
*Percentage of the rural and urban population of 18 years of age with 9 or more cumulative years of schooling in Mexico in 1970-2010*

Population	Year					
	1970	1990	1995	2000	2005	2010
Rural	3.9	25.8	29.9	38.7	59.7	68.6
Urban	21.6	65.0	65.0	71.9	78.3	84.0
Difference	17.7	39.2	35.1	33.2	18.6	15.4

Source: Authors' own calculations based on microdata from the Mexican population censuses from: Minnesota Population Center. Integrated Public Use Microdata Series, International: Version 6.3 [Machine-readable database]. Minneapolis: University of Minnesota, 2014.

If we take the proportion of people who have reached the age of legal majority (18 years of age) having finished basic education, it can be observed that, in Farrell's terms, the probability of the students remaining at school until they reach the end of basic cycle is lower for inhabitants of rural areas.

### Problems of educational achievement

According to Farrell, one fundamental aspect in the study of educational equity is knowing the probability of children from different social groups learning the same things at the same levels, at a defined point in the educational system, which he calls «equality of output».

In the case of the rural environment, the assessments done based on standardized tests show low levels of educational achievement among the student population. Students in Mexican rural schools, both mixed and indigenous, are those who obtain the lowest results on standardized tests of learning applied by national and international institutions (INEE, 2006, 2013b, 2013c; Organization for Economic Cooperation and Development [OECD], 2005, 2008, 2015).

For example, according to the results of the Educational Quality and Achievement Exams (EXCALE), in 2009 20% of sixth grade primary students who attended rural public schools had a level of Spanish «below the basic», double the rate observed in urban public schools (10%). In mathematics, 16% of rural students were at that level, compared to 10% in urban schools (INEE, 2014a, pp. 88-89).

The results of these tests, applied for more than 15 years, have not been used by Mexican education authorities for pedagogical reasons, but only as a means of control and classification. A clear example

<sup>5</sup> The Compulsory Schooling Standard of the Mexican State (NEOEM) states that the population with any of the following criteria are considered to be educationally deprived: a) they are from 3 to 15 years of age, do not have compulsory basic education and do not attend a formal educational center; b) they were born before 1982 and do not have the level of education that was compulsory at the time that they should have studied (complete primary education); c) they were born in 1982 or later and do not have the compulsory level of education (complete secondary education). Source <http://www.coneval.gob.mx/Medicion/Paginas/Medici%C3%B3n/Avances-Rezago-educativo.aspx>

of this is that the latest pedagogical proposal to improve rural primary education, called the Multigrade Educational Proposal (Propuesta Educativa Multigrado) (SEP, 2005), has not been promoted by the educational authorities since the middle of the last decade. Moreover, the latest update of the CONAFE multigrade educational model was done at the beginning of the 1990s. Therefore, there is a plenty of diagnostic information about the problems of rural education, but insufficient concrete measures have been developed to address the problems identified in recent years.

As stated by INEE (2014b), the inequalities in the living conditions of the population and their contexts are concomitant with the conditions of educational provision, in the sense that when the context is poor, educational provision is also poor, so it is to be expected that learning outcomes are also unequal:

According to the Educational Quality and Achievement Exams (EXCALE), rural and community preschool students (and probably indigenous students too, although no information is available on their performance) show a lower percentage of children who reach the basic level. The same is true, now including indigenous schools, in the case primary level learning; it is clear that the primary school is not managing to graduate all of its students as being functionally literate, and that this failure is more acute among those living in rural areas (INEE, 2014a, p. 119).

In short, with the expansion of coverage of basic education in rural areas that took place in Mexico starting in the second half of the 20th century, the problem of access of this population to school has lower importance in preschool and primary education, where attendance rates are very similar to those in urban areas. The gaps in access increase starting from secondary school and particularly in higher secondary education, where there are major differences in access to education between those who live in urban and rural areas. However, the problems of educational equity suffered by the inhabitants of rural areas consist mainly of lower retention in the education system and, therefore, lower probabilities of completing compulsory education. On the other hand, this is also expressed in lower levels of educational attainment. Below, we seek to identify the analyses that would enable us to understand why these problems of educational equity occur in the rural population and what alternatives there are to resolve them.

### **Discussion on the causes of educational inequality in the rural population**

Review of the available results of research on educational inequality in rural areas enables the identification of a series of factors that create the conditions of inequality in exercising the right to education with which the rural population is faced. These factors are outlined below.

#### **Factors that explain the problems of access and retention**

**Lack of education provision.** To explain why there are significant differences between students in rural and urban areas in terms of access to and retention in education, mainly at the higher secondary level, a first factor to consider is whether there is sufficient educational provision to serve the entire rural student population, since, according to the 4 As (4-A) approach of Tomaševski (2001), educational equity implies the presence of schools of all compulsory levels in appropriate places; located close to where children and young people live (availability).

According to the available information, in rural areas one of the main problems faced by students at the higher secondary level is the lack of schools, because only 3.3% of rural localities have a school of that level (own calculations from INEE, 2014a, p. 31). As a result, a large proportion of rural young people who enter secondary education have to travel to urban areas where the schools are located, and it is possible that when these schools are not close to their homes, young people opt to desert of education due to the lack of schools close to the places where they live.

**Contextual conditions.** Although only 30% of the national population lives in rural areas, in 2012 69.5% of the population below the minimum standard of welfare lived in rural localities. In that year, 62.8% of the rural population were earning less than the minimum standard of welfare, and this proportion increased to 74.5% in the case of the indigenous population (CONEVAL, 2014).



In addition to the low income of families, children in rural areas are affected by the poor conditions prevailing in these areas. Many of the students that attend rural primary schools live in deprived socioeconomic conditions: 80% of the community primary schools served by CONAFE are located in populations with a high or very high degree of marginalization (INEE, 2013a, p. 76). Given that marginalization rates refer to the prevailing conditions in geographical areas, people living in deprived areas are affected by collective deficiencies, regardless of their income. If there is no school in a community, it affects everyone equally, even those who have a better economic position.

In an effort to separate and assess the weight of the various factors in inequalities of educational opportunities, Solís (2010) reveals that the mere fact of living in a rural or urban area explains 10.6% of the differences in the levels of schooling.

This suggests that, even putting aside the differences of class, certain contextual factors associated with living in rural areas, such as the reduced availability of educational services and the increased use of child and youth labor in agricultural activities, have significant negative effects on schooling (Solís, 2010, p. 613).

According to the INEE (2014a), one of the main factors influencing the low retention of children in the school system and the low accessibility of rural young people to higher secondary education is related to their participation in work, both in terms of domestic and non-domestic activities.

Minors who work long hours (20 or more hours per week) form one of the sub-populations that are at greatest risk of not completing compulsory education. On the one hand, in relative terms, their school attendance is the lowest of the sub-populations analyzed [...]. For example, their attendance rate is lower than that of the poorest children or those who have an uneducated head of household. On the other hand, children that execute extensive labor activities and attend school have fewer opportunities to allocate time and dedication to their schooling compared with their peers who do not work or who do so for few hours (INEE, 2014a, p. 27).

According to the source cited, «the rate of non-attendance of children who work extensively is greater in rural areas than urban areas» (INEE, 2014a, p. 29), and one of the reasons that could explain why rural young people attend higher secondary education less frequently is related to their possible incorporation in labor activities, since the available data show that «the proportion of children who work extensively and do not attend school increases with age» (INEE, 2014a, p. 29); for example, the non-attendance rate of young people from 15 to 17 years of age who work 20 or more hours a week is double that of those from 12 to 14 years of age (INEE, 2014a, p. 29):

[...] the need to contribute to their own self-reproduction and that of the rural family causes adolescents to enter agricultural and rural activities at an early age. This fact is ignored by the educational system, for which work becomes a distraction and a cause of desertion of school [...], the conditions in which rural adolescence happens are different from those in urban areas (Pacheco, 2006, p.281).

According to Pacheco (2006), another factor that contributes to school desertion is that, in the case of women, they stop studying when they form a couple or have children; this author underlines that adolescents who live in rural areas in Mexico start their reproductive life at an earlier age than urban adolescents.

### Factors that explain the problems of educational attainment

**Inequality of materials.** One problem revealed by the research papers consulted is that rural schools have insufficient infrastructure, furniture, and equipment for teaching. An example is the availability of technological resources. INEE (2014b, p. 190) shows that 83.6% of general secondary (urban) schools have at least one computer, while that percentage declines to 67% in distance secondary schools and 14.7% in community secondary schools, two formats that serve the rural population. In primary schools there are also significant differences: while 52.2% of general primary schools in urban areas have at least one computer available, only 1.3% of community schools served by CONAFE have one. Similarly, there are inequalities in access to internet in schools in urban and rural areas: 59% of general primary schools have access to the internet, while only 1.4% of community primary schools do. The literature shows that obtaining certain material resources for the school depends on the negotiating skill of the various social groups with the political system and in general, this negotiating skill is lower in more vulnerable groups.

Muñoz Izquierdo (1996) and Latapí (2009) agree that the resources assigned to the poorest sectors have been of lower quality than those received by the most privileged groups: poor education for the poor.

### **Characteristics and conditions of teachers' work**

Another problem highlighted by the literature is the difficulty of schools to obtain teachers who are trained to teach. In this regard, Rosas (2003), Ezpeleta and Weiss (2000), Fuenlabrada and Weiss (2006), and SEP (2006) show that teacher training is deficient and insufficient to address the particular characteristics that teachers in rural schools must face.

Since the last quarter of the 20th century, the working conditions of rural teachers have deteriorated. Rosas (2003, p. 273) mentions that rural teachers «are those who work in the worst conditions compared with the rest of the teaching profession in the country».

In relation to the working conditions of teachers, the studies indicate that it is difficult for «the schools frequented by low-income students [...] to attract and retain the best trained teachers and those who have acquired greater experience by practicing their profession» (Muñoz Izquierdo, 2009, p. 37). Thus, teachers avoid working in the difficult social and infrastructure conditions of rural areas.

A study conducted by the SEP (2006, p. 45) revealed that there is continuous mobility of teachers. The reasons for this include the following: the need for teachers to be closer to their place of origin, generally in urban areas; the desire to improve their personal and family life; the lack of support or incentives to stay at a school for more than one school year; the desire to develop in other fields of work; and the generalized view that rural or multigrade schools are a workspace for recently graduated teachers, or are places of «transit» or «punishment».

Assignments of teachers to communities depends more on political criteria, personal relationships, and participation in union associations than in the capacity or vocation of teachers (Ezpeleta, 1997, Ezpeleta & Weiss, 2000; Fuenlabrada & Weiss, 2006, SEP, 2006). Therefore, teachers with more experience and better relationships manage to be moved to schools in urban centers.

**Lack of a minimum standard.** In the case of Mexico, since the beginning of the 1990s various researchers have pointed to the importance of schools operating to a «minimum standard» (Latapí, 2009, p. 280). However, a large proportion of rural schools do not meet this minimum standard<sup>6</sup>, so the Public Education Secretariat itself states that it is difficult to improve results in the multigrade rural context if they only cover just over half of the school calendar and there is continuous rotation of teachers, who even change schools during the same school year (SEP, 2006:35).

Ezpeleta and Weiss (2000) calculated that the absences of rural teachers varied between 30 and 100 days in a school year (200 days). This is due to several reasons. On the one hand, remote rural schools «constitute the compulsory destinations for beginning teachers with little seniority or who are being “punished”» (Ezpeleta, 1997). On the other hand, teachers who work at rural schools, especially multigrade schools, have to execute the work of school directors in addition to attending to a group of students, which means that they must attend meetings with supervisors and for the delivery of school documentation (SEP, 2006, p. 37). They also assist the union during working days to seek changes in assignment, trying to work in increasingly less remote schools. They also attend refresher workshops, take part in demonstrations and union meetings, prepare school competitions, and take part in various academic, artistic, and sporting competitions with their students. Stoppages for holidays extend beyond those marked on the school calendar and it is common for rural teachers to arrive at their schools on Tuesdays and leave on Thursdays: «The regular operation of the educational service is difficult when it comes to unitary schools, because when the teacher is absent all of the children are left without classes» (SEP, 2006, pp. 37-38).

---

<sup>6</sup> The minimum standard is characterized by the following features: that all schools accomplish with the days established in the school calendar, that the groups have teaching staff for every day of the school year, that the teaching staff start their activities punctually, that the study materials are available to every one of the students and are used systematically, and that the time at school is used fundamentally for learning activities, among other aspects (Diario Oficial de la Federación [DOF], 2013).

Ezpeleta and Weiss (2000, p. 305) state:

The tendency towards escapism refers not only to the difficult living conditions in villages and the personal situations of teachers, but to the content of an extremely demanding task, for which they have not been trained and which, as a consequence, provides little satisfaction [...]. The teachers learn that [...] teaching in the classroom is not subject to accountability.

In many of the multigrade schools in the country, the five hours of daily work are not fulfilled, but rather, because of various reasons (child labor, absence of teachers, transportation difficulties in localities) between two and a half and three hours of classes are given each day on average (SEP, 2006, p. 44). Ezpeleta and Weiss (2000, p. 287) estimate that 250 hours of classes a year are given in rural schools instead of the 800 hours that are officially stipulated.

**Pedagogical aspects.** For more than 30 years various researchers (García, 1979, p. 60; Latapí, 1995, p. 115; Muñoz Izquierdo, 1979, p. 93) have drawn attention to the poor quality of educational services received by the rural population of Mexico compared to the services received by residents of urban areas.

With respect to pedagogical aspects, the research papers show that teachers in training have worked without any specific multigrade methodology in primary schools (Ezpeleta, 1997; Ezpeleta & Weiss, 2000; Fuenlabrada & Weiss, 2006; SEP, 2006). The study plans and programs, textbooks, teaching materials, and teaching strategies presented for regular schools have had to be applied and contextualized by multigrade teachers and students according to their own characteristics.

In the assessment about the Program to Reduce Educational Backwardness, conducted in marginalized rural communities, Ezpeleta and Weiss (2000) commented that:

[...] in the schools observed, the teachers focus on what they consider to be basic: reading, writing, counting, doing math; where reading is above all deciphering and writing is above all copying and answering questionnaires [...]. In mathematics, they teach students to memorize the order of the numbers and their symbols [...]. To add, subtract, multiply and divide they teach the steps to follow and when the children fail to understand, the way of supporting them seems to be by repetition of procedures and exercises (p. 278).

As regards the use of time in the classroom, Ezpeleta and Weiss (2000, p. 287) mention that «the simultaneous attention of six or three grades is expressed for the students in waiting times for work (up to half an hour or more) and to obtain help (up to half an hour), or by doing routine tasks for longer than is necessary (sometimes for an hour or more).

With regard to curriculum design, Muñoz Izquierdo (2009) states that «the curricula have not been designed based on the needs of disadvantaged sectors of society» and the marginalized groups in society «receive little attention when the curricula are designed centrally by national authorities» (p. 34).

**Problems related to management.** In relation to school management, in his study of preschools Martínez (2006, p. 274) identifies that one of the problems found is the lack of support on the part of the educational system. In rural areas it is common for educators to say that there is no one to help them improve their work. The distance of the communities and the lack of access or resources to make visits make it difficult for sector heads and supervisors to monitor and attend these kindergartens and they instead request that the educators approach them.

Ezpeleta and Weiss (2000) document that school supervisors develop administrative functions above all and not functions of pedagogical support for teachers, and they state that «the burden of work and, in many cases, the size of the areas for which they are responsible, place specific limits on the presence of the supervisor at schools». They also indicate that «the union constitution of the position places limits on their role of supervision of the service» (p. 310).

In this regard, Martínez (2006, p. 224) mentions that educators at rural preschools must «implement teaching activities and, at the same time, cover the management activities of the kindergarten without there necessarily being any type of training or education to do these activities efficiently [...]. This causes frequent situations that lead to a deficient education service».

## Discussion

Various authors (Blanco, 2006; López, 2005; Reimers, 2002; Tedesco, 2004) have addressed educational equity in América Latina. López describes how this concept «challenged» the term of equality, which had been inserted into the discourse and educational policies in various countries: «Homogeneous educational provision was present in the dynamics of formation of the nation states in the region, as a cohesive practice that had a high impact on the processes of social integration» (López, 2005, p. 65). However, this vision falls into crisis when emphasis is placed on the recognition of social diversity and the inequality of income and opportunities of populations.

During the 1990s, the term equity made a bigger impact on the social sciences in order to «broaden» the term equality. Thus, López (2005, p. 75) underlines that educational equity should be based on access to a basic set of knowledge and equality of opportunities to extend education».

The papers reviewed in this article agreed on the approaches made by other Latin American authors: educational inequality is reflected by problems of access, retention, achievement, and outcomes. However, in this work has also been included the causes of such inequalities, such as the fact that rural education receives fewer resources and lower quality materials. Rural schools are assigned teachers, directors, and supervisors with a lower level of training, teachers who are being «punished» or who have little experience. Furthermore, there is no system of incentives in rural schools to attract and retain the best trained and most experienced teachers. Providing adequate educational infrastructure is also a pending task for the state. So, in the case of children in rural areas, the principle of equal treatment is not being fulfilled, and even less so regarding the mandate of positive discrimination prescribed in the current legislation.

In order to counteract the educational inequality described, the researchers reviewed agree that more and better quality resources should be allocated to rural schools and that educational actions should be reinforced by various policies of health, food, labor, and economics, which seek to provide greater equality in terms of income and social welfare. While the Mexican state focuses its efforts solely on what takes place within classrooms, it will neglect aspects related to the teaching and learning processes, which do not necessarily take place in schools, but are related to social contexts, where social equity should be the goal to aim for government actions.

The literature consulted shows that the education provided to children in rural areas faces problems of access, retention, and achievement that prevent the full exercise of their right to education. Unequal assignation of educational opportunities that favors the most underprivileged would allow their backwardness to be counterbalanced, would raise the education level of society in general, and would be a preferable situation to equal distribution under which the same resources are distributed to all without considering the socioeconomic conditions.

In our review of the literature, we were unable to find any texts that address two of the issues related to themes of educational equity. We refer to equality in outcomes, that is, the probability that children from different social groups will live relatively similar lives as a result of the education they received (Farrell, 2007); and the term acceptability proposed by Tomaševski (2001), according to which students should feel comfortable at school and should perceive that they are learning and that what they learn coincides with their interests and will be useful to them in life.

Thus, we infer that studies on equity have been focused on aspects of educational provision, in addition to demonstrating the need to conduct studies and produce data concerning the ideas, interests, perceptions, and trajectories of students, as well as impact of education in generating greater opportunities for personal development among students.

Among the limitations of this study, we acknowledge the difficulty that we had in extensively reviewing documents that had not been digitized. Meanwhile, the possibility of accessing doctoral theses was reduced, which displays an aspect on which educational institutions for postgraduate students could work: the need to create more efficient channels for the dissemination of the doctoral research conducted within them.

The original article was received on October 22<sup>nd</sup>, 2015

The revised article was received on January 8<sup>th</sup>, 2016

The article was accepted on January 26<sup>th</sup>, 2016

## References

- Blanco, R. (2006). La equidad y la inclusión social: uno de los desafíos de la educación y la escuela. *Revista Electrónica Iberoamericana sobre Calidad, Eficacia y Cambio en Educación*, 4(3), 1-15. Retrieved from <http://www.redalyc.org/articulo.oa?id=55140302>
- Bolívar, A. (2005). Equidad educativa y teorías de la justicia. *Revista Iberoamericana sobre Calidad, Eficacia y Cambio en Educación*, 3(2). Retrieved from <http://www.redalyc.org/pdf/551/55103205.pdf>
- Chehaibar, L. M., Alcántara, A., Athié, M. J., Canales, A., Díaz, A., Ducoing, P., Inclán, C., Márquez, A., Pontón, C., Valle, A., Ruiz, E. & Zorrilla, J. F. (2013). Diagnóstico de la educación. In J. Narro, J. Martuscelli & E. Barzana (Coords.), *Plan de diez años para desarrollar el sistema educativo nacional* (pp. 21-58). México, D.F.: Dirección General de Publicaciones y Fomento Editorial, UNAM.
- Consejo Nacional de Evaluación de la Política de Desarrollo Social (Coneval) (2014). *Consideraciones para el Proceso Presupuestario 2015*. Mexico: Consejo Nacional de Evaluación de la Política de Desarrollo Social.
- Diario Oficial de la Federación (DOF) (December 28, 2013). *Acuerdo número 706 por el que se emiten las Reglas de Operación del Programa de Fortalecimiento de la Calidad en Educación Básica*. México: Secretaría de Gobernación.
- Ezpeleta, J. (1997). Algunos desafíos para la gestión de las escuelas multigrado. *Revista Iberoamericana de Educación*, 15, 101-120.
- Ezpeleta J., & Weiss, E. (2000). *Cambiar la escuela rural. Evaluación cualitativa del Programa para Abatir el Rezago Educativo*. Mexico: Departamento de Investigaciones Educativas/CIVESTAV/Instituto Politécnico Nacional.
- Farrell, J. (2007). Changing conceptions of equality of education: Forty years of comparative evidence. In R. F. Arnove, & C. A. Torres (Eds.), *Comparative education: The dialectic of the global and the local* (pp. 149-177). United States: Rowman & Littlefield Publishers.
- Filgueira, C. (1978). Expansión educacional y estratificación social en América Latina (1960-1970). *Perspectivas: Revista Trimestral de Educación de la UNESCO*, 8(3), 370-383.
- Fuenlabrada, I., & Weiss, E. (Eds.). (2006). *Prácticas escolares y docentes en las escuelas primarias multigrado*. Mexico: Consejo Nacional de Fomento Educativo.
- García, R. (1979). La escuela rural en el fortalecimiento de la economía campesina. *Revista de Educación e Investigación CIIDET*, 3, 58-63.
- García, M., & Colocía, G. (2010). *Situación Demográfica de México 1910-2010*. Mexico: UNFPA/ United Nations Population Fund.
- Instituto Nacional de Estadística y Geografía (INEGI) (2009). *Perfil sociodemográfico de la población que habla lengua indígena*. Aguascalientes: INEGI.
- Instituto Nacional para la Evaluación de la Educación (INEE) (2006). *El aprendizaje del español y las matemáticas en la educación básica en México. Sexto de Primaria y Tercero de Secundaria*. Mexico: INEE.
- Instituto Nacional para la Evaluación de la Educación (INEE) (2013a). *El aprendizaje en sexto de primaria en México. Informe sobre los resultados del Excale 06, aplicación 2009. Español, matemáticas, ciencias naturales y educación cívica*. Mexico: INEE.
- Instituto Nacional para la Evaluación de la Educación (INEE) (2013b). *México en PISA 2012*. Mexico: INEE.
- Instituto Nacional para la Evaluación de la Educación (INEE) (2013c). *Panorama Educativo de México 2012. Educación Básica y Media superior*. Mexico: INEE.
- Instituto Nacional para la Evaluación de la Educación (INEE) (2014a). *El Derecho a una educación de calidad. Informe 2014*. Mexico: INEE.
- Instituto Nacional para la Evaluación de la Educación (INEE) (2014b). *Panorama Educativo de México 2013. Educación Básica y Media superior*. Mexico: INEE.
- Instituto Nacional para la Evaluación de la Educación (INEE) (2015). *Panorama Educativo de México 2014. Educación Básica y Media superior*. Mexico: INEE.
- Latapí, P. (1995). El claroscuro de la política educativa neoliberal. Entrevista de Lourdes de Quevedo. *Revista Pedagógica*, 10(5), 112-119.
- Latapí, P. (2009). El derecho a la educación. Su alcance, exigibilidad y relevancia para la política educativa. *Revista Mexicana de Investigación Educativa*, 14(40), 255-287.
- López, N. (2005). *Equidad educativa y desigualdad social. Desafíos de la educación en el nuevo escenario latinoamericano*. Buenos Aires: Instituto Internacional de Planeamiento de la Educación – Unesco.

- Martínez, J. (2006). La calidad educativa en los jardines de niños en zonas rurales. In L. Rosas (Coord.), *La educación rural en México en el siglo XXI* (pp. 203-251). Mexico: Centro de Estudios Educativos/Crefal/Fundación Ayuda en Acción.
- Muñoz Izquierdo, C. (1979). *El problema de la educación en México: ¿laberinto sin salida?* Mexico: Centro de Estudios Educativos, A.C.
- Muñoz Izquierdo, C. (1996). *Origen y consecuencias de las desigualdades educativas. Investigaciones realizadas en América Latina sobre el problema*. Mexico: Fondo de Cultura Económica.
- Muñoz Izquierdo, C. (2009). Construcción del conocimiento sobre la etiología del rezago educativo y sus implicaciones para la orientación de las políticas públicas: la experiencia de México. *Revista Iberoamericana sobre Calidad, Eficacia y Cambio en Educación*, 7(4), 29-45.
- Narro, J., Martuscelli, J., & Barzana, E. (Coords.). (2012). *Plan de diez años para desarrollar el sistema educativo nacional*. Mexico: Dirección General de Publicaciones y Fomento Editorial, UNAM.
- Organization for Economic Co-operation and Development (OECD) (2005). *Education at a glance*. USA: OECD Publishing.
- Organization for Economic Co-operation and Development (OECD) (2008). *Informe PISA 2006. Competencias científicas para el mundo del mañana*. Spain: Santillana.
- Organization for Economic Co-operation and Development (OECD) (2015). *Database - PISA 2012. Interactive Data Selection. Results*. Retrieved from <http://pisa2012.acer.edu.au/>
- Pacheco, L. (2006). Los retos de la educación de los adolescentes rurales en México. In L. Rosas (Ed.), *La educación rural en México* (pp. 279-306). Mexico: Centro de Estudios Educativos/Crefal/Fundación Ayuda en Acción.
- Rawls, J. (2002). *Teoría de la justicia*. Mexico: Fondo de Cultura Económica.
- Reimers, F. (Coord.). (2002). *Distintas escuelas, diferentes oportunidades. Los retos para la igualdad de oportunidades en Latinoamérica*. Madrid: La Muralla.
- Rosas, L. (2003). *Aprender a ser maestro rural. Un análisis de su formación y de su concepción pedagógica*. Mexico: Centro de Estudios Educativos.
- Schmelkes, S. (2013). Educación y pueblos indígenas: problemas de medición. *Revista Internacional de Estadística y Geografía*, 1, 5-13.
- Schmelkes, S. (2014). El derecho a la educación. In *El derecho a una educación de calidad. Informe 2014*. Mexico, D.F.: Instituto Nacional de Evaluación Educativa.
- Secretaría de Educación Pública (SEP) (2006). *Retos y necesidades en las escuelas multigrado*. Mexico: SEP/ Secretaría de Educación Pública, Subsecretaría de Educación Básica/ Dirección General de Desarrollo de la Gestión e Innovación Educativa.
- Solís, P. (2010). La desigualdad de oportunidades y las brechas de escolaridad. In A. Arnaut, & S. Giorguli (Eds.), *Los grandes problemas de México: VII Educación* (pp. 599-621). Mexico City: Colmex.
- Tedesco, J. C. (2004). Igualdad de oportunidades y política educativa. In J. García-Huidobro (Ed.), *Políticas educativas y calidad. Reflexiones del Seminario Internacional* (pp. 21-31). Santiago, Chile: Fundación Ford/ Universidad Alberto Hurtado/ UNICEF/ UNESCO.
- Tomaševski, K. (2001). *Los derechos económicos, sociales y culturales. Informe anual de la Relatora Especial sobre el derecho a la educación, presentado de conformidad con la resolución 2000/9 de la Comisión de Derechos Humanos*. New York: United Nations.
- Walzer, M. (1993). *Las esferas de la justicia: una defensa al pluralismo y la igualdad*. Mexico: Fondo de Cultura Económica.