Chapter 4. Towards an education and skills system that fosters inclusiveness and employability in Paraguay

Paraguay has made substantial progress in various dimensions of its education system in recent years as highlighted in Volume I of the Multidimensional Review of Paraguay. However, major challenges remain and reforms are unfinished. Access to the education system has expanded markedly, but is still a challenge in pre-primary and secondary education and for some socioeconomic groups. Schooling has improved, but learning outcomes are poor. And the relevance of the education and skills provided by the system is questionable, as illustrated by the problematic transition from school to work, with many young people leaving the education system too early to enter inactivity or informality. This chapter analyses these challenges in depth, and provides recommendations to improve the education and skills system in Paraguay in order to foster inclusiveness and employability.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Transforming the education and skills system in Paraguay is vital to foster inclusiveness and better access to good quality jobs. Education is widely recognised as a critical area of public policy to support an equitable society and good quality opportunities for all. It is also a key driver of social mobility, enabling citizens to participate in society and the economy, and ensuring that future generations have access to better opportunities and increased well-being. More developed and cohesive societies have higher levels of education and more educated individuals report higher levels of self-confidence, civic participation and health. In addition, access to good quality jobs is strongly associated with the level of education of individuals and with the overall available pool of skills (OECD/CAF/ECLAC, 2016; OECD/CAF/ECLAC, 2014; OECD/Hanushek/Woessman, 2015). In sum, education and development go hand in hand, and Paraguay's success in achieving its main development objectives, as set out in the National Development Plan (*Plan Nacional de Desarollo* – PND) 2030, will heavily depend on its capacity to improve the education and skills system.

Paraguay has made substantial progress in various dimensions of its education system in recent years, but significant challenges remain. Volume I of this Multidimensional Review (MDCR) of Paraguay highlights that education outcomes have improved but reforms are unfinished, as illustrated by international comparisons with both OECD countries and with countries of a similar level of development. Access to the education system has expanded markedly, particularly at the primary level, but still remains a challenge in pre-primary and secondary education. And socioeconomic status is still a predictor of progression once within the education system, strongly determining enrolment and completion rates. Learning outcomes remain poor, reflecting the low quality of education, and are directly linked to deficiencies in teaching, inadequate resources, and poor management. And the pertinence of education is limited, as illustrated by the problematic transition from school to work, with many young people leaving the education system too early to enter inactivity or informality. This is also observed from the demand side, where a large number of firms claim that they struggle to find workers with the skills they need. In a country with a prevailing demographic bonus and in a global economy where knowledge and skills are keys to success, overcoming these challenges and strengthening education must be a priority in the public policy agenda.

This chapter analyses these challenges in depth, and provides recommendations to improve the education and skills system in Paraguay in order to foster inclusiveness and employability. It is structured as follows. First, it analyses the political momentum and the opportunity to reach a national agreement to transform education, where the expertise brought by international organisations can be of critical relevance. Second, it reviews the main education challenges in the country in terms of access and learning outcomes. Third, it analyses the transition from school to work. And fourth, it presents the main conclusions and provides a summary of the policy recommendations that are detailed throughout the chapter. The structure reflects a lifecycle approach, and university education is intentionally left aside to focus on previous levels of education and earlier stages of life, where a large share of the inequalities and the transitions to the labour market are already prevalent.

Major education challenges in Paraguay must be faced with strong political commitment and ambition

Improving education is at the core of Paraguay's ambition to become a knowledge economy with equal opportunities for all by 2030, as set out in its PND. Paraguay's PND

was adopted in 2014 and established three key priorities: (i) poverty reduction and social development; (ii) inclusive economic growth; and (iii) inserting Paraguay into the world. Education appears as a cross-cutting dimension to support these three priorities, and specific education targets are included in the plan. The PND provides a mid-term horizon focusing on the development and implementation of education policies that go beyond the duration of a particular political cycle.

The ambition to transform Paraguay's education system and make it a driver of inclusion, economic progress and greater well-being for all is reflected in the current quest to develop a National Plan for the Transformation of the Education Sector for 2030 (*Plan Nacional para la Transformación Educativa 2030*, or PNTE following its acronym). The aim is to reach a national agreement on education that sets key strategic policy objectives with a well-established, mid-term horizon. This must be the result of a collaborative effort that guarantees that all actors in society have a voice in the discussion and in the definition of priorities, and that national and international expertise is mobilised in order to guarantee analytical rigour and that lessons learned and best practices are taken into account (MH, 2017) (Box 4.1).

Box 4.1. Towards a national agreement on education: the *Plan Nacional para la Transformación Educativa 2030*

The Ministry of Finance, the Ministry of Education and Science, and the planning authority (*Secretaría Técnica de Planificación* – STP), are currently engaged in a joint effort to promote the design of an ambitious *Plan Nacional para la Transformacion Educativa 2030* (PNTE). The funding comes from the *Fondo para la Excelencia de la Educación y la Investigación* (FEEI), which is a fund for education and research that is financed by royalties obtained from the hydroenergy plant of Itaipú. The main motivation behind this process is the acknowledgement that the education system must be transformed in order to achieve greater development and inclusion for all.

The discussion to develop a PNTE takes the National Development Plan 2030 as the framework of reference, and thus must be aligned with its priority areas. The PNTE also builds on the objectives of the previously adopted *Estrategia de Educación* 2024, which inspired the *Agenda Educativa* 2013-2018 that was embraced by the Cartes administration. These will be taken into account in the design of the PNTE, which ultimately aims to integrate the priorities of the existing national commitments on education.

The end goal is to develop an education plan that sets out priority areas and specific objectives for the mid-term horizon of 2030. A more concrete outcome of this process will be the development of a roadmap covering 2018-24 to guide the implementation of the PNTE in its first years, where specific targets and policy proposals will be included.

One of the main features of this PNTE is that it is intended to emerge from a participatory process where all relevant stakeholders and actors in society can have a role in the definition of the main priorities and objectives. To guarantee this, the process will constitute *mesas de trabajo*, i.e. working groups where discussions will be held among various actors, including civil society, academia, education experts, and international organisations, to come up with proposals to feed the PNTE. Another tool to incorporate citizens in the discussions will be a digital platform to carry out online consultations. Finally, regional fora are being planned to bring the discussions to the rural areas of the country.

The ongoing process should lead to the final signature of the PNTE 2030 as a national agreement on education by early 2019.

The global development agenda grants education a prominent role, and national efforts should be aligned with this broader international framework. The United Nations (UN) Sustainable Development Goals (SDG) set, as part of 'Goal 4', the goal of ensuring inclusive and quality education for all and promoting lifelong learning by 2030. This Goal includes various specific targets on areas related to equal opportunities in access to the education system and effective learning outcomes. On a regional scale, the *Metas Educativas 2021* (Education Targets 2021) signed in 2010 by the Organization of American States, the UN Economic Commission for Latin America and the Caribbean (UN-ECLAC) and the Iberoamerican General Secretariat (*Secretaria General Iberoamericana*) also represent a relevant background of reference to assess the progress achieved in recent years and the pending educational challenges for the 2030 milestone.

The national discussion on education, which is an ongoing process, is fertile ground for bringing to the table analytical support, policy recommendations and best practices from domestic and international experience and research. The focus of this chapter on education and skills will provide substantive content to the discussions around the process of defining the PNTE, and will provide input for the roadmap 2018-2023. The areas of focus of the PNTE are the financing of education, teachers' career and training, school management, early childhood education and care, and teaching and learning in primary and secondary education. The focus of this chapter is very much aligned with most of these topics – the financing of education is left aside – and adds the education-to-work transition as a fundamental dimension so that education can foster inclusion. In this respect, the chapter is intended to support the ongoing PNTE definition process as well as the subsequent stages to reach the 2030 landmark.

Expanding access to the education system and improving learning outcomes for all are key objectives to promote inclusion and equal opportunities

Access to the education system has improved but critical challenges remain for certain levels of education and socioeconomic groups

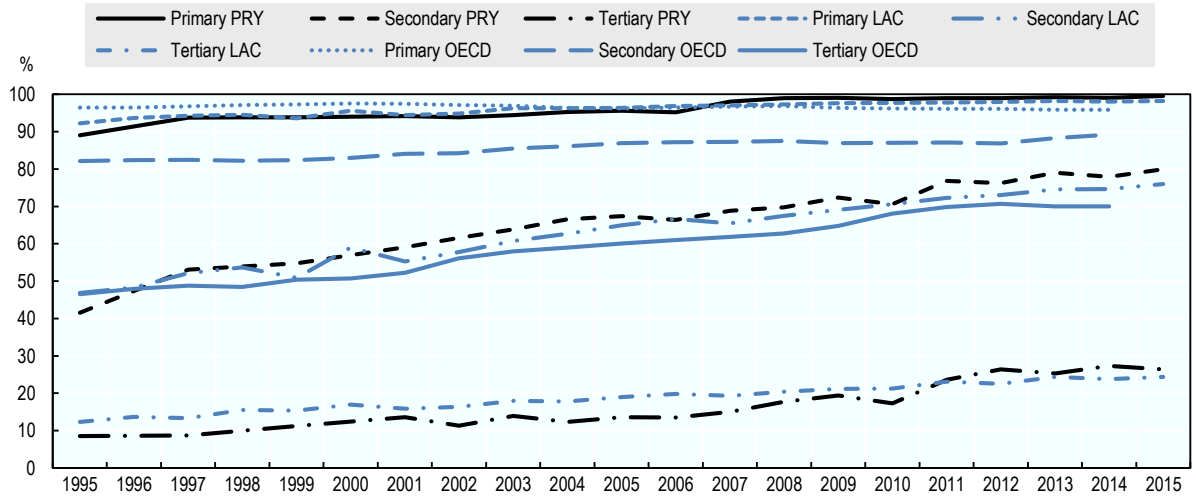
One of the greatest educational achievements in recent decades in Paraguay has been the broad expansion of access to the education system, supported by strong political will and the corresponding institutional transformations. Law 1264/98, which in 1998 established the current structure of the education system, was bolstered in 2010 by a law that made education free and compulsory until 14 years of age, with the mandatory age for entry lowered to pre-school level (age 5) in 2011. These landmarks define the formal education system in Paraguay today, which is structured as follows. First, initial education (*educación inicial*) from ages 0-5, which includes all pre-primary education and corresponds to level 0 of the International Standard Classification of Education (ISCED). Only the year of pre-school (age 5) is compulsory at this level. Second, basic education (*educación escolar básica*), which is compulsory and comprises three three-year cycles from ages 6 to 14: the first-two (*primer ciclo* and *segundo ciclo*) make up primary education, and are equivalent to level ISCED 1; the third one (*tercer ciclo*), corresponds to lower secondary education and is equivalent to level ISCED 2. Third, a three-year cycle from ages 15-17 known as middle education (*educación media*), which corresponds

to upper secondary education (ISCED level 3). Finally, higher education with its different modalities (Elías, Walder and Sosa, 2016).

Access to the education system has improved for all levels of education, as shown by increasing enrolment rates. Efforts to expand access have paid off and enrolment in primary school is virtually universal today, on par with Latin America and Caribbean (LAC) and OECD levels. Access to secondary education has also been largely expanded and net enrolment rates reached almost 80% in 2015. While this places the country close to LAC levels of secondary enrolment, it is still below OECD levels (85% in 2014). Exclusion from the education system takes a toll particularly in remote areas and among disadvantaged groups. Enrolment rates in tertiary education have caught up with LAC levels, but remain poor when compared with OECD standards (Figure 4.1).

Years of education of the population in Paraguay have expanded as a result of the increases in coverage. The population aged 25-65 had on average 9.3 years of education in 2015, up from a level of 7.8 years in 2005. A focus on younger cohorts illustrates the significant progress achieved in recent years: the population aged 21-30 accumulated on average 11.4 years of education in 2015, up from an average of 9.5 years of education in 2005; and those aged 10-20 had on average 7.7 years of education in 2015, versus 6.7 in 2005 (CEDLAS and World Bank).

Figure 4.1. Enrolment rates by level of education in Paraguay, Latin America and the OECD



Note: Enrolment rates are net for all education levels and geographic areas, except for tertiary enrolment rates in the OECD which are gross. LAC includes the benchmark countries defined in MDCR Volume I: Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico, Peru and Uruguay.
Source: Authors' calculations based on CEDLAS and World Bank (2017) for Paraguay and Latin America, and based on World Development Indicators for the OECD.

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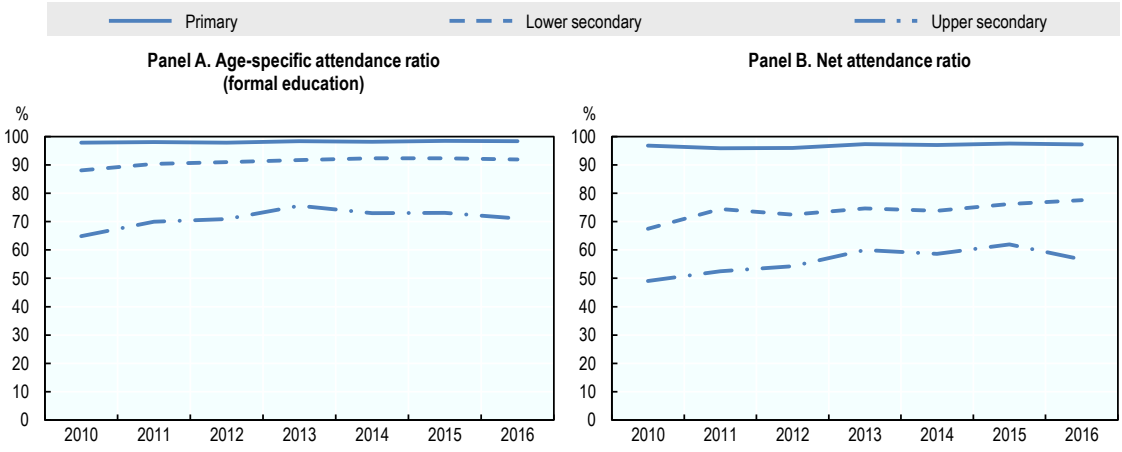
After having achieved virtually universal enrolment in primary education, the challenges of expanding access in secondary school are still pressing. Limitations in the availability of administrative data restrict a more granular analysis in terms of enrolment, but estimations from survey data show that, despite progress, gaps in school attendance are relevant both in lower secondary (third grade of *educación escolar básica*) and upper

secondary (*educación media*). In particular, age-specific attendance ratios for lower secondary education reached a level of 92% in 2015, but net attendance ratios, i.e. the share of children aged 12-14 who attend lower secondary education, were at 78% for that same year. The gaps seem higher for upper secondary: age-specific attendance ratios remained relatively stable in recent years at around 70%, while net attendance ratios show that in 2015 only 57% of the population aged 15-17 were attending the level of education that corresponds to that age (i.e. upper secondary or *educación media*) (Figure 4.2).

Figure 4.2. Age-specific and net attendance ratios in Paraguay, by level of education



Note: Panel A represents the estimated share of children who are attending formal education (at any level and grade) grouped by the cycle that corresponds to their age as of 31 March on the year of the survey: primary (6 to 11), lower secondary (12 to 14) and upper secondary (15 to 17). Panel B represents the share of children who are attending the cycle corresponding to their age (irrespective of the grade).
Source: *Multi-dimensional Review of Paraguay. Vol I: Initial Assessment* (OECD, 2018). Authors' calculation based on the Permanent Household Survey of Paraguay (DGEEC, 2017).

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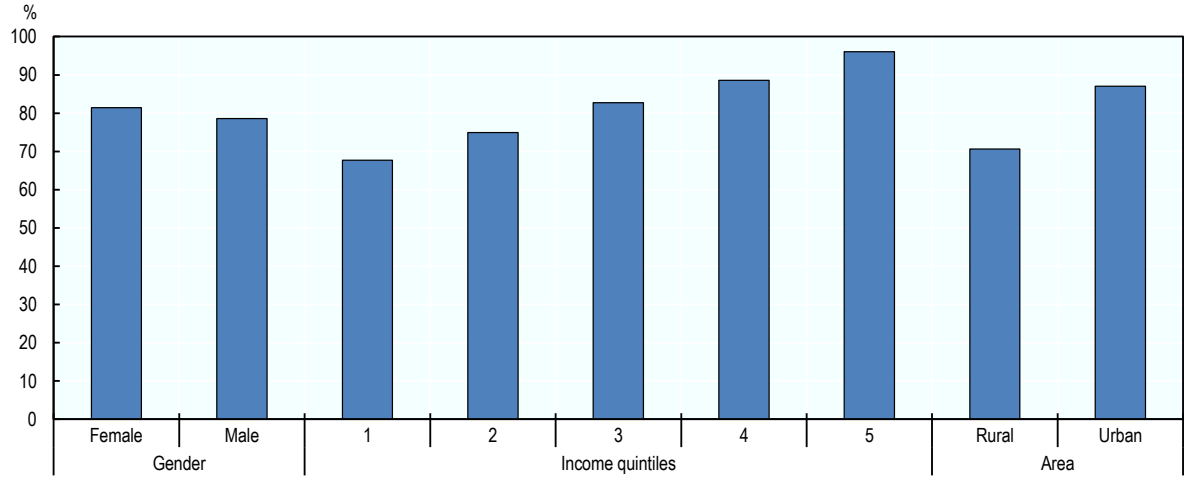
Access to pre-primary education (*educación inicial*) is also a challenge in the country. Though coverage is relatively large for pre-school (age 5), with a net enrolment rate of 77% in 2012 (Elías et al, 2014) access to pre-primary education in ages 0-4 is insufficient. Recent comparable data is scarce, but figures from 2012 present gross enrolment rates in pre-primary education (ages 0 to 5) of around 38% in Paraguay, well below the LAC average of 71% for that same year (World Bank, 2018a). Pre-primary education in Paraguay includes four levels: *maternal, pre jardín, jardín and preescolar*. The *Plan Nacional de Desarrollo Integral de la Primera Infancia 2011-2020* includes specific measures to support early childhood care that include participation in education programmes. In addition, the *Plan Nacional de Educacion 2024* sets the target of reaching universal pre-school coverage by 2024. However, progress has been limited in this respect, particularly in rural areas and indigenous communities. In fact, only around half of teachers in pre-primary education have the right qualifications. Lack of continuity in policies for early childhood, the predominance of a sectoral, non-integrated approach, scarce school and financial resources, weak infrastructure, and poor statistics can be highlighted as the main barriers to the expansion of quality pre-primary education in the country (Elias et al., 2014).

Striking inequalities persist in access to the education system, particularly at the secondary level, and mainly linked to socioeconomic status and geographical location. While access to primary education is widespread, inequalities appear at the secondary level around various dimensions. Income is a relevant predictor of access to secondary education: 96% of those in the richest quintile were enrolled in this education level in 2015, but only 67.7% of those belonging to the poorest quintile were. Likewise, net enrolment rates in urban areas are significantly larger (87% in 2015) than in rural areas (70%), and this has an impact on indigenous communities, which live largely on rural areas (Elías et al. 2016) (Figure 4.3). These disparities in access to the education system suggest that, instead of being a mechanism of social mobility, it can lead to a perpetuation of socioeconomic inequities in the country (PREAL, 2013).

Figure 4.3. Enrolment rates in secondary education by gender, income groups and geographic area



Source: Authors' elaboration based on CEDLAS and World Bank (2017).

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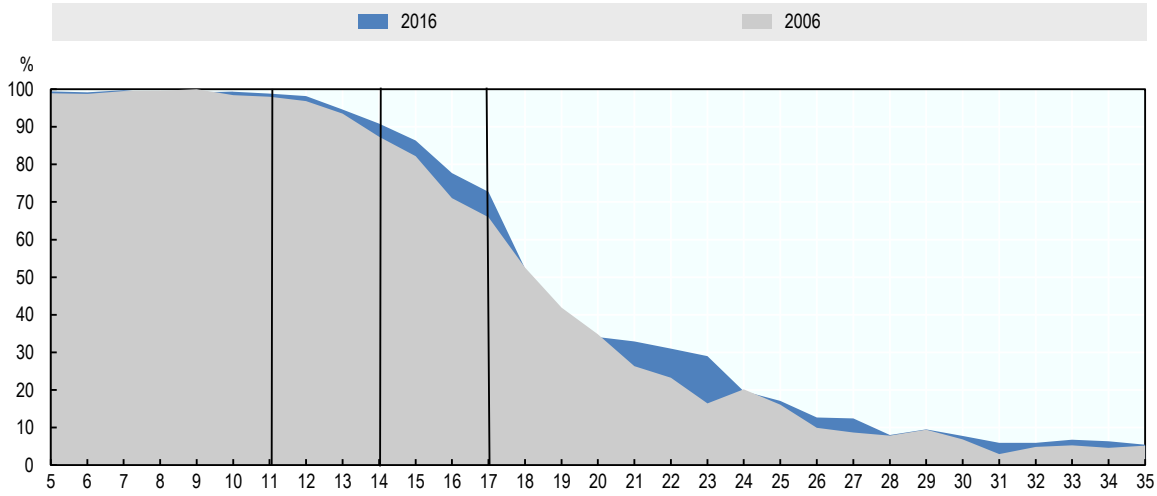
The large expansion in access must be accompanied by better progression within the education system, with higher completion rates across all levels of education

While more students enter the education system in Paraguay today, challenges remain regarding their progression once in it and their success in completing full grades. Students may stay in school longer now than a decade ago but many students drop out after the age of 11 (the official age for finalising primary education). Indeed, almost 99% of the population were attending school at age 11 in 2016. However, this figure starts to fall sharply after that age, when many begin to drop out of school. In 2016, 10% of 14-year-olds (the last official age of compulsory education) no longer attended school, and as many as 14%, 23% and 28% of those aged 15, 16 and 17, respectively, were not attending school. Overall, pupils tend to drop out during the transition from the second to the third cycle of "educación escolar básica" (i.e. the transition from primary to lower secondary, at ages around 12). However, drop-out rates accelerate during the transition from *educación escolar básica* to *educación media* (i.e. the transition from lower secondary to

upper secondary, at ages around 15). After this level, at least half of the population aged 18 or older has left the education system (Figure 4.4).

Figure 4.4. Percentage of the population in the education system by age



Source: Own elaboration based on household survey (EPH 2006 and 2016) (DGEEC, 2017).

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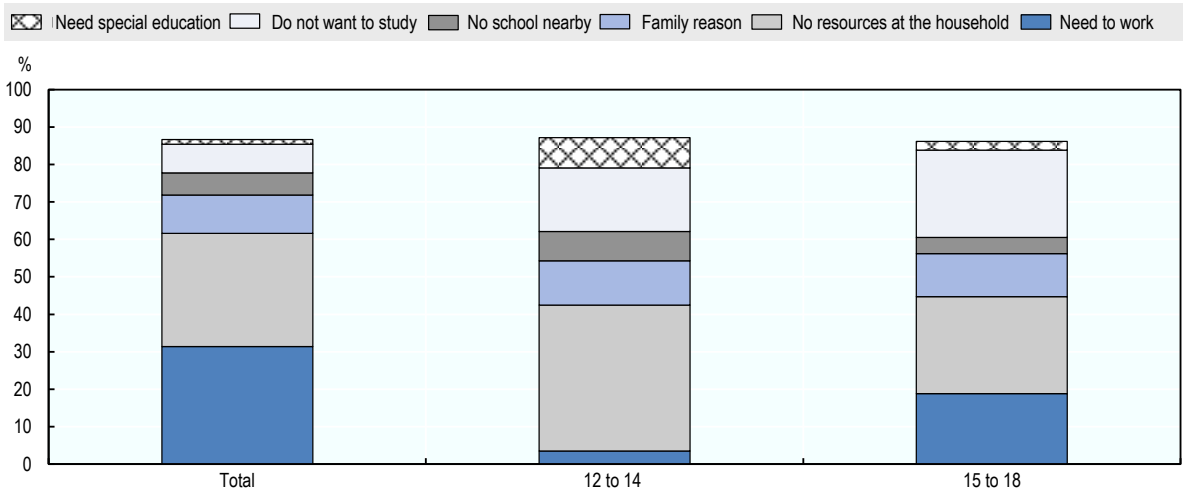
Most dropouts between ages 5 and 18 are linked to the household's lack of economic resources and the need to work. On average, two out of three Paraguayans aged 5-18 who were not attending school in 2016 claimed that this was explained by economic issues. In particular, 30% of drop-outs say they do not have enough resources at the household, while 31% declare that they must work. Geographical reasons (i.e. the lack of a local school) only explain around 5% of drop-outs, while family issues and lack of motivation were cited in 10% and 7% of dropouts respectively (DGEEC, 2017). What causes students to drop out of school varies across age and gender. Between ages 12-14 the main reason is the lack of resources in the family, while between ages 15-18 it is the need to work. Economic drivers are more prevalent among men than among women, with the latter dropping out also due to "family reasons" or household work (Figure 4.5). The drivers of drop-out and other forms of school exclusion (such as repetition and over-age schooling) are, however, more complex and rooted in the weaknesses of the education system, and usually go beyond the direct causes mentioned by families. In particular, in addition to economic barriers, there are social and cultural factors regarding the perception of the right to education, as well as material and pedagogic factors or political, financial and technical barriers that limit the inclusiveness of schools and of the education system overall (UNICEF, 2012).

These dropout results suggest that the journey across the education system is a tortuous one for many, and in fact over-age attendance is significant at some levels. In 2014, around 16% of students were attending primary education (first and second cycle of *educación escolar básica*) with two or more years of over-age, and more than 17% of students were attending secondary education (third cycle of *educación escolar básica*) with two or more years of over-age (Elias, Walder and Sosa, 2016). In particular, these

phenomena affect rural areas and men, who are more likely to drop out when they are attending school with over-age.

Figure 4.5. Main reasons for dropout for different age groups, 2016



Source: Own elaboration based on household survey (EPH 2006) (DGEEC, 2017).

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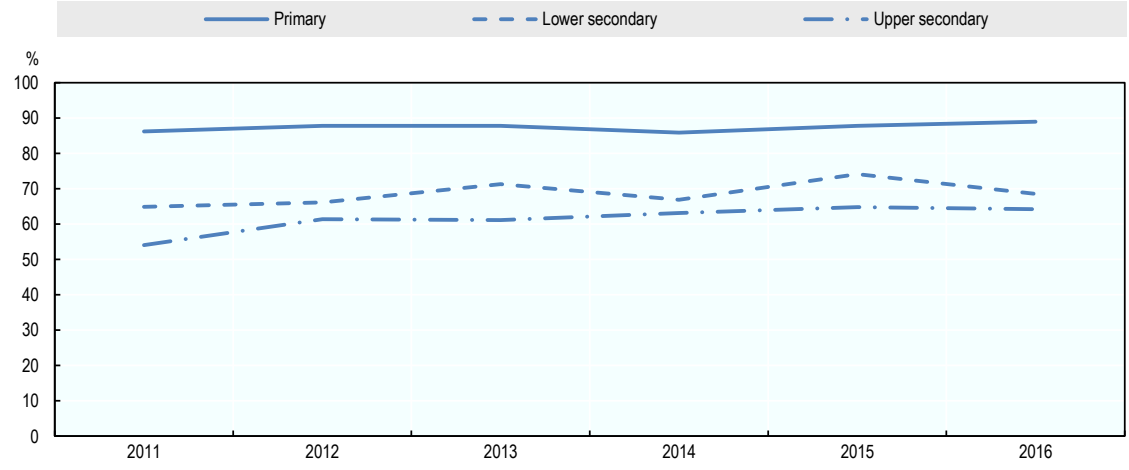
Figure 4.6. Completion rates for primary, lower-secondary and upper secondary school in Paraguay



Note: Completion rates are calculated following UNESCO's definition (i.e. percentage of a cohort of children or young people aged 3-5 years above the intended age for the last grade of each level of education who have completed that grade).
Source: Own elaboration based on household surveys (EPH, 2011-2016) (DGEEC, 2017).

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The barriers faced by students to access the education system and to progress once in it translate into relatively unsatisfactory completion rates, despite progress in recent years. Completion rates reach levels of almost 90% for primary education, but around 32% and 35% do not complete lower-secondary and upper-secondary respectively, according to 2016 data (Figure 4.6). Inequalities in completion rates are also significant: only 84.4% of children from the poorest quintile complete primary education, relative to 99.2% of the richest quintile. And primary completion rates in urban areas reach a level of 96.2%, compared to 89.3% in rural areas (CEDLAS and World Bank, 2018).

Learning must be improved: more students spend longer periods at school, but their performance suggests they do not learn enough

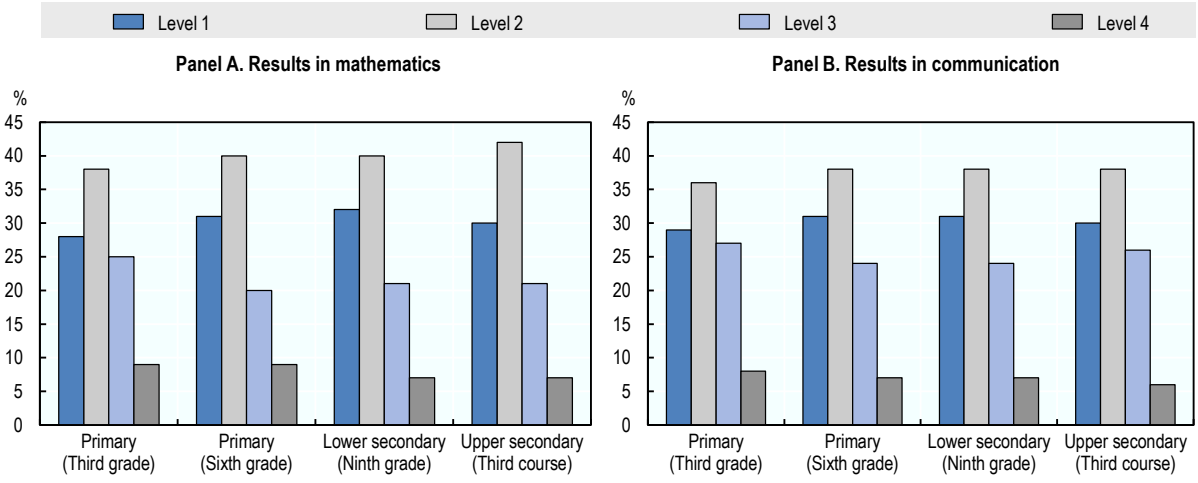
Schooling has significantly improved in Paraguay but the quality of the education system remains a core challenge. More people access the education system today, and the average years of education of the population have increased. However, this has not been accompanied by more and better learning, and schooling without learning represents a failed promise and a waste of public resources (World Bank, 2018b). Efforts to bring children to school must be strengthened by policies to improve the quality of the education system and support better learning processes. This is true not only in Paraguay but in the LAC region as a whole. After decades where the emphasis was placed on expanding education coverage, the main challenge today is to turn the educational path into a meaningful experience that will improve social and economic inclusion.

Student performance faces significant challenges and has experienced little improvement in recent years, highlighting the gaps in quality of the Paraguayan education system. The *Sistema Nacional de Evaluación del Proceso Educativo* (SNEPE) is a sample based test that measures student performance in the areas of mathematics and communication in Spanish and in Guaraní. Results from the 2015 SNEPE show that almost a third of students in all the grades where the test is performed (3rd, 6th and 9th grade of *educación escolar básica* – i.e. primary and lower secondary; and the third grade of *educación media* - i.e. last level of upper secondary) have the most basic skill level (Level 1, which includes the recognition of concepts, objects, elements and basic calculations). Only between 7-9% of students had Level 4 skills, i.e. the highest level, which entails the solution of complex problems without explicit data. In communication in Spanish, including reading and linguistic comprehension, the results are as follows: between 29-31%, depending on the grade, had Level 1 results (which involves the literal, fragmented or superficial understanding of a text), and only between 6-8% of students, depending on the grade, performed to Level 4 (intertextual understanding of the text) (Figure 4.7). Relative to the previous SNEPE, which was conducted in 2010, there has been little improvement, and not for all levels. As an example, at the end of lower secondary (9th grade) there were more students performing at Level 1 of mathematics in 2015 (32%) than in 2010 (24%). The tests for communication for 6th and 9th grade show a slight improvement in results, while the test for communication in 3rd grade and for mathematics in 3rd and 6th grades experienced a more significant improvement (MEC, 2018).

Accumulating more years of education does not necessarily improve learning or test results. Results from LAC countries participating in the OECD Programme for International Student Assessment (PISA) 2015, namely Argentina, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Mexico, Peru and Uruguay, illustrate this. Results from these countries vary significantly, but on average fifteen-year-olds performed 92 points lower than OECD students in mathematics, 69 points lower in

reading and 78 points lower in science, which is equivalent to approximately two years of schooling, two-and-a-half years of schooling and three years of schooling lower than their OECD peers, respectively (OECD/CAF/ECLAC, 2018). That is, while the average years of education of a 15-year-old in these countries have come close to converging with the OECD average, it could be argued that a year of schooling at a school in a LAC country is still not the same as studying for one year at a school in an OECD country, as the knowledge transmitted or learned in one year in the former is less than in the latter.

Figure 4.7. Results of students in national evaluation tests, by grade and by level of performance, 2015



Source: Authors' elaboration based on MEC (2018).

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International evaluations confirm that learning in Paraguay faces significant challenges also when compared with countries of a similar level of development. UNESCO's Third Regional Comparative and Explanatory Study (TERCE) showed that 83% of Paraguayan children in grade 3 scored at level 2 or lower in mathematics, and 77% scored in level 2 or lower in reading (UNESCO, 2015). This is significantly worse than the best performer in the LAC region, Chile, where less than 40% of students performed at level 2 or lower in both tests. TERCE only covers LAC countries. Comparisons beyond the LAC region are difficult until the first results from the participation of Paraguay in PISA for development are released in late 2018. However, LAC countries participating in both tests are ranked in a similar order: the highest in PISA, Chile, scores 67 points below the OECD average (OECD, 2015). This gives an idea of the gap in students' performance between Paraguay and OECD countries. Altinok et al. (2018) developed a database of harmonised learning outcomes based on existing international and regional student assessments. This makes it possible to draw comparisons between countries and over time (1965-2015). This dataset shows that Paraguay has a mean score for primary education, for the average over 1960-2015, of 412 points, corresponding to a very low level of skills (meaning that students have very basic skills in mathematics, science and reading). This places the country well below Argentina (439), Brazil (441), Costa Rica (477), Chile (460), Colombia (432), Ecuador (435), Mexico (453), Panama (421), Peru (425) or

Uruguay (474), and only above Bolivia, the Dominican Republic or Venezuela among those LAC countries available in the dataset.

Disadvantaged groups or students in remote areas score lowest on learning outcomes. Results from the SNEPE show that in mathematics and communication in Spanish, students from private schools perform better than those in public schools, though the opposite occurs for the test in communication in Guarani, the main indigenous language in Paraguay and an official language of Paraguay along with Spanish. Likewise, students from urban areas tend to perform better than those in rural areas in mathematics and communication in Spanish (albeit to a lesser degree than the urban/rural difference in guaraní), while rural students perform better in the guaraní communication test (MEC, 2018).

Low quality of teaching drives the poor learning outcomes in the country

Learning outcomes are influenced by multiple school-related factors, mainly linked to the quality of teaching, the availability and effective use of school resources, and the existing capacities for school management and governance of the education system. Learning is poor across many countries, but mainly in low-income and middle-income ones. The reasons behind this "learning crisis" are mainly linked to: (i) the fact that many children arrive at school unprepared; (ii) the lack of skills and/or motivation among many teachers, preventing them from teaching effectively; (iii) the lack – or ineffective use of – resources to improve teaching practices and learning environments; and (iv) poor management and governance of schools and of the education system as a whole (World Bank, 2018b). Paraguay faces significant challenges in all these areas and, as already presented, many children arrive to school unprepared or in poor conditions for effective learning. Learning is ultimately determined by a complex array of factors that go beyond the boundaries of the school but, among the school-related factors, the quality of teaching is probably the single most important factor determining the quality of learning. Consequently, this section's focus is on exploring ways to improve teaching.

Teaching must be improved to achieve better learning outcomes

The overall number of teachers in Paraguay is relatively high, as shown by the comparatively low ratio of students per teacher, though with significant variations between regions. Pupil/teacher ratios for primary and secondary education are similar or below those of many LAC countries and other benchmark countries (Figure 4.8). While this is positive news, low ratios can also be the result of inefficiencies in the distribution of teaching resources (i.e. there can be schools with too few students in certain areas and a reallocation could make sense), and they can hide discrepancies between schools in rural areas and urban areas. This is the case in the Central department, where the ratio pupil/teacher remains above what is desirable (Elías et al. 2014).

Qualifications are low for a large share of teachers which represents a significant barrier to effective learning. In fact, in 2012 only 59% of teachers in pre-primary education (*educación inicial*) had the qualifications that are mandated to teach at that level (up from 49% in 2004), and only 49% had the qualifications to teach in pre-school (i.e. the last year of pre-primary education), up from 32% in 2004, with a big discrepancy between the urban (63%) and rural areas (39%). For primary education (first and second cycle of EEB), the picture is significantly brighter: 92% had the required qualifications in 2012 (up from 85% in 2004). The level of qualifications of teachers varies largely depending

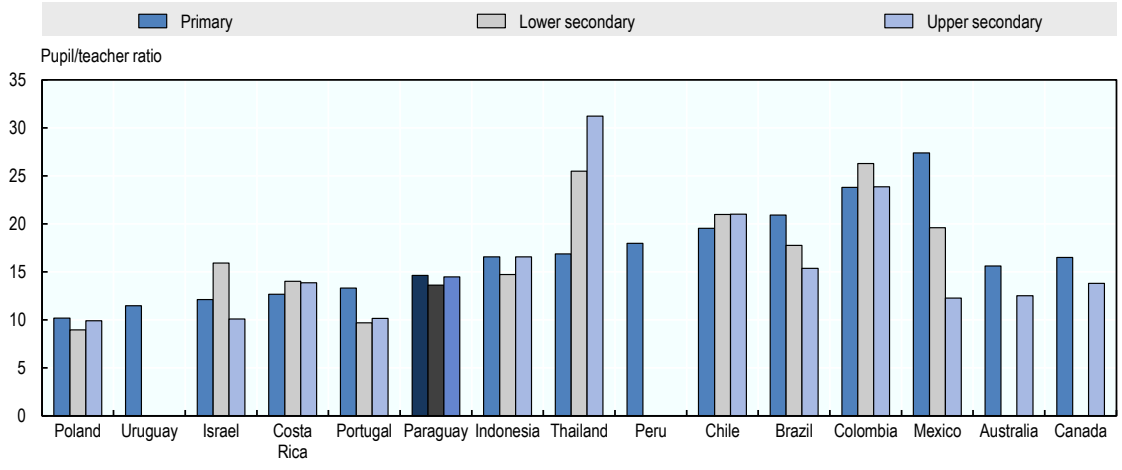
on the level of education where they teach, with most of the more qualified teachers in secondary education (Figure 4.9) (Elías et al., 2014).

Deficiencies in the design of teachers' careers provide few incentives for teachers to improve their performance. The teachers' career can be understood as the legal framework that regulates the conditions of the teaching profession, in aspects such as access to the profession, responsibilities, professional development, or remuneration. In Paraguay, the *Estatuto del Docente* approved in 2001 is the current legal framework, but there are many pending challenges that suggest that it is time to move towards a more modern teachers' career. In particular, current challenges demand actions at all the stages of the teachers' pathway. First, it is critical to improve incentives to attract talent and select the most suitable candidates to the teaching career. Second, prospective teachers must be equipped with relevant skills and the quality of the training offered by teachers' training institutions must be ensured, while the selection mechanisms to start teaching need to be improved. Third, new teachers must be supported, and the quality of continuous education must be guaranteed and accompanied by strong incentives and sound evaluation mechanisms to support constant professional development.

Competitive selection processes to become an educator are recent in Paraguay and reveal that the skills of candidates are low and that teaching does not attract talent. Evidence about the performance of teachers is scarce, but data from competitive selection processes to become a teacher show that in 2009 more than 75% of candidates did not pass the test or meet the minimum requirements to become a teacher. In 2010, more than 50% failed the tests to become a teacher or director (PREAL, 2013). More recently, preliminary results of the written test of the last public competition for teachers, carried out in February 2016, showed that around 53% had failed the exam. In addition, the framework for competitive entry into teaching (*Reglamento de Seleccion del Educador Profesional*) was only recently implemented (2009). Consequently, the training levels of teachers vary considerably, particularly among veteran teachers.

Figure 4.8. Pupil/teacher ratio in Paraguay and selected countries, by level of education

2015 or latest available



Source: Multi-dimensional Review of Paraguay. Vol I: Initial Assessment (OECD, 2018).

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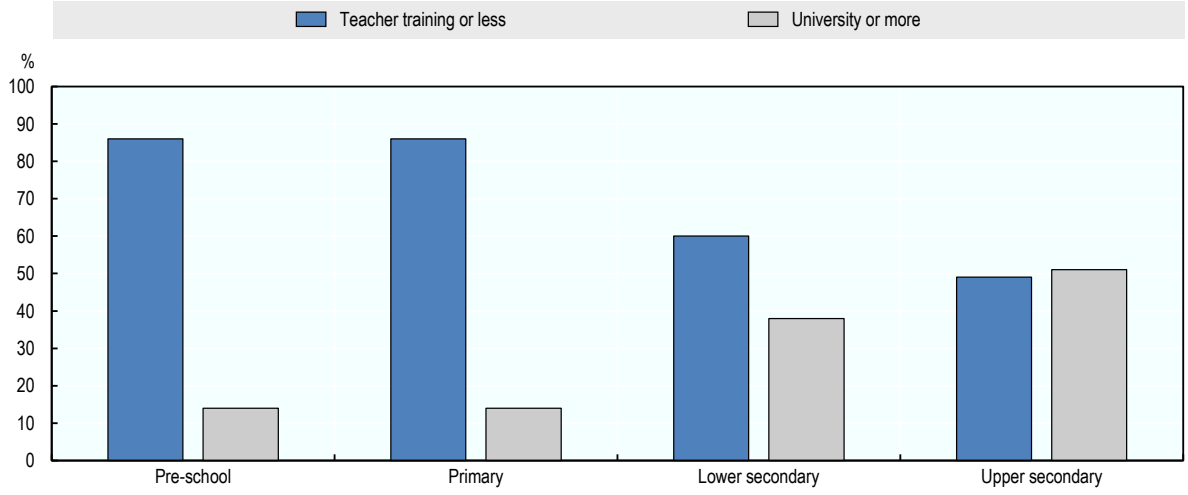
Educators' qualifications and skills largely depend on the quality of teacher-training systems. The *Instituciones Formadoras de Docentes* include all higher education institutions that are entitled to train and certify teachers. They include universities, higher education institutes, and IFDs, i.e. *Institutos de Formación Docent*e (institutes for teacher training). In particular, a majority of teachers have a training degree from these IFD, which fall under the responsibility of the Ministry of Education (Figure 4.9). This type of training corresponds to the non-university tertiary education level (ISCED 5), and includes degrees for teaching in pre-primary education, primary, lower secondary, with different levels of specialisation, and upper secondary, with different levels of specialisation (3-year degree).

Figure 4.9. Distribution of teachers according to their level of education and the level of education where they teach



Source: Elías et al. (2014).

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The quality of IFDs is low, and while the education authorities have acknowledged in recent years the importance of improving them through mechanisms for licensing and accreditation, progress is still modest and slow. The guidelines for the licensing of IFDs (*Mecanismo de Licenciamiento de Instituciones Formadoras de Docentes*) were published in 2007 with the objective of improving quality and transforming these institutions into centres of educational excellence. The Ministry of Education and Science (MEC) must follow these guidelines before an IFD can be allowed to operate (MEC, 2007). Following these efforts, the creation and licensing of new IFDs was legally suspended between 2007-13, in response to the disorderly expansion of IFDs in the 1990s and early 2000s, which took place oftentimes at the expense of quality, and led to an over-supply of potential teachers (PREAL, 2013). This control over the supply of IFDs is an essential component of quality, but must be complemented by accreditation processes that help to ensure that the quality of the training provided by an institution meets the required standards. The accreditation process falls under the responsibility of the ANEAES (*Agencia Nacional de Evaluación y Acreditación de la Educación Superior*), created in 2003. This process is still in its early stages for IFDs. ANEAES is expected to publish the IFD accreditation guidelines in 2019. The urgency revealed by low

performance of students and teachers in the country suggests that ANEAES should be given the institutional and financial capacity to carry out these demanding tasks and develop a robust IFD accreditation system.

Poor quality of teaching is directly linked to the weaknesses of evaluation mechanisms and the lack of incentives to improve performance. Evaluation mechanisms are crucial to improve information on teaching practices and identify main gaps and challenges. They should be the basis of developing tools and programmes to help teachers improve their performance. Teachers' evaluations have been traditionally weak in Paraguay. Since 2016, the Evaluation system to ensure quality based on a policy of holistic evaluation (*Sistema de Evaluacion para el Aseguramiento de la Calidad con base en una Política de Evaluación Integral*) intends to take an overarching approach to the evaluation of the education system, including education institutions, teachers, and students. Regarding teachers, the proposal is to have a pedagogical support system (*Sistema de Acompañamiento Pedagógico*), focusing on how the educator manages the curriculum, his professional development, and the link with social actors. The final objective is to establish a culture of evaluation that can support teachers in improving their performance and recognising their crucial role in societies. Evaluations should be complemented by incentives to improve performance. These incentives have been generally weak in Paraguay, where increases in teachers' salaries have been mostly linked to the accumulation of years of experience, accreditations, and training, instead of performance or merit (PREAL, 2013).

The limited and low quality options for continuous training represent an additional barrier to effective teaching and the improvement of performance throughout the teacher's career. In addition to the initial training, IFDs also provide continuing education, which is aimed at supporting teachers as they update or strengthen their knowledge and skills once they are already in service. Evidence on the quality and impact of this type of education is scarce in Paraguay, but the literature suggests that it is fragmented, of a small scale, and mostly unrelated to the needs of educators (UNESCO, 2015; World Bank, 2013). Also, incentives are low for acquiring this type of training, given the way in which the increases in the remuneration scale (*escalafón docente*) is designed.

Policies must continue to expand access to school as well as completion rates, particularly among the most disadvantaged groups

Policy design, implementation, monitoring and evaluation must be based on reliable statistics to be successful. Today, the administrative data needed to produce relevant education indicators are inaccurate in some cases. A good example is the overestimation of the population projections of the 2002 census, which has led to a lack of statistics for some key education dimensions in recent years such as enrolment. In this context, efforts are being made to build a system of education indicators that is more reliable. The launch in 2016 of a unified student registry (*Registro Único del Estudiante*) is a step in this direction. This is a way to centralise information of students that should favour the production of more reliable, easy-to-manage and comparable data on access, progression, and completion, among other things. Being able to produce sound education statistics is critical to support policymaking and to measure progress. The education goals included in the National Development Plan, as well as the more specific targets that will eventually be part of the PNTE 2030, will have to be based on sound statistics. Indeed, data-related capacities will have to be strengthened if those goals and targets are to be monitored correctly. Likewise, SDG 4 sets a number of targets in the field of education for 2030,

and tracking progress towards them requires sound and internationally comparable statistics.

Policies to support access in remote areas and across most disadvantaged socioeconomic groups, particularly in some education levels, must be pursued to complete the universalisation of compulsory education. Access to early childhood education is still low and must be expanded, given its key role in improving well-being and learning outcomes across the life cycle (Heckman, 2006). Indeed, having attended pre-primary education raises PISA scores by the equivalent of one additional year of secondary schooling, according to the results of LAC countries participating in PISA 2012 (OECD/CAF/ECLAC, 2014).

Various areas for policy recommendations can be highlighted related to pre-primary education. First, families and children should be supported in overcoming their main barriers – economic and geographic – to access pre-primary education. The target is to reach universal pre-schooling (age 5) by 2024, as set in the *Plan Nacional de Educacion 2024*, and expand overall coverage for all levels of initial education. This entails placing particular efforts in rural areas and among indigenous communities. The conditional cash transfer programme, known as *Tekoporã*, must continue its support to most disadvantaged families, linking its disbursement to pre-school attendance. And the school kits (*kits escolares*) must be guaranteed, as they can mark the difference between attending pre-school or not among the most disadvantaged. To avoid geographical barriers, the *maestras mochileras* programme represents an interesting initiative of non-formal initial education that could be scaled-up. This consists of teachers visiting households with children aged 0 to 5, to support early childhood development. Second, it is important to raise awareness within communities about the importance of early childhood education and care. To this end, strengthening the role of the Childhood and adolescence councils (*Consejos de la Niñez y Adolescencia*) to raise awareness in communities should be considered. Third, expanding compulsory education to age four should be considered. This has already happened in countries like Argentina, Brazil and Uruguay. Finally, and in a more structural manner, the offer of pre-primary education must be enlarged, as it is scarce today. This goes together not only with having more schools, but also more – and better – teachers.

Access to lower secondary and upper secondary education can also be improved, mainly across some segments of society and regions where coverage is still insufficient. This is an area where the role of scholarships can be critical, but generally these focus on higher education levels, thus with a potentially regressive impact, as not many students from poor households reach tertiary education. Also, *Tekoporã* is a strong tool to support youth from the most disadvantaged backgrounds to access secondary school. Distance learning solutions and open education for educación media are a good mechanism to reach rural areas or students who cannot attend classes and follow a rigid schedule, and thus should be strengthened, but taking into account that blended learning, where students learn remotely but also benefit from in-person instruction, can be particularly effective (OECD, 2016). Finally, expanding access to secondary education could be supported by strengthening school transport in remote areas.

Policies to favour school retention and completion, avoiding repetition and drop-out, must be at the centre of all efforts. Most dropouts take place in the transitions between lower and upper secondary schools, and onwards. Hence policies must focus on reducing repetition and dropout, and favour a more successful progression within the education system. This would help lift completion rates. The main reasons behind dropout are

economic, and thus scholarships are also an interesting tool to discourage students from leaving the education system. Mechanisms to identify and support students at risk of exclusion are also relevant, with flexibility in pedagogical methods to support those with higher difficulties. A gradual expansion of the school day could be considered, starting with a small sample of schools to assess the impact in the reduction of dropout (as well as in learning outcomes).

Policies to improve learning outcomes must focus on teachers, educational resources, and the management of schools

Improve evidence on learning outcomes to inform policy making. The SNEPE is currently the main tool for evaluation of student performance in the country, but its public availability has been irregular, and the use of its results to inform and support evidence-based policy-making very limited. To complement this, PISA will provide informative results and will help administrators develop policy actions. Notwithstanding this effort, the engagement in the next round of PISA should be considered as part of the ambitious commitment of the country to transform education. This will allow for a deeper analysis of learning outcomes, will inform policy and practice, and will be useful to establish a rigorous comparison with international standards, which should help to set the bar higher.

Improve teaching to achieve better learning outcomes. The quality of teaching is probably the single most important factor determining the quality of the broader education system (Hanushek and Rivkin, 2012). One of the core policy challenges to transform education and improve teaching in Paraguay is re-shaping teachers' career pathways, which demands strong political will. This will be crucial to:

- Attract talent and raise the status of teaching, to ensure that the best candidates enter and remain in the profession. This entails rethinking mechanisms for selection, but also incentives (salaries, social recognition, etc.) in the exercise of teaching, to make the profession attractive. Countries like Singapore or Finland have strong and competitive teacher selection processes that guarantee that candidates are top performers. In Paraguay, the move towards competitive selection processes goes in the right direction, but should probably be accompanied by probationary periods for teachers in the first steps in the teaching profession, with mentoring, support, and an induction programme to identify challenges, complement gaps and support the development of instructional practices;
- Strengthen incentives to develop and improve once in the teaching profession. This involves strengthening the link between performance and rewards (not just in terms of pay progression but also regarding access to higher responsibilities and different roles), and supporting good quality in-service training, to enable educators to update and improve their pedagogical skills. Given the existing gaps among current teachers, strengthening in-service training can be particularly effective in raising overall teaching quality in the short-to-mid-term;
- Establish a stronger, more systematic system for the evaluation of teachers' performance, which should be understood as a way to support teachers in identifying constraints, monitor progress in their career, and favour re-skilling and the development of new pedagogical methods. This should include not only the assessment of school principals and peers, but also external evaluations to ensure and independent and fair judgement.

Raise the quality of the *Instituciones de Formacion Docente.* The quality of teaching cannot be enhanced without a major improvement in the quality of training institutions. MEC's efforts to control the supply of these institutions and establish clear criteria for their licensing are a step in the right direction. Yet, these efforts should also include a process of accreditation of IFDs to be carried out by the ANEAES. The latter's budget and human resources should be augmented in order to secure the capacities needed to carry out these tasks effectively, which should include powers to close an institution if the standards are not met. The evaluations associated to this accreditation process should be a tool to identify areas of improvement, and one requirement of accreditation could be that institutions publish the proportion of graduates that gain permanent posts as teachers, to help prospective students make informed choices. Evaluations should also be used to provide support for IFDs in boosting overall quality, including for both initial and continuing education.

Improving the transition from school to work is critical to favour employability and access to good quality jobs

Education and skills can play a major role in enhancing job prospects and access to good quality jobs in Paraguay. Participation in labour markets with good job conditions constitutes a fundamental aspect of well-being. In this sense, improving the transition from school to work in Paraguay – through better education and skills for all – must be a priority for public policy.

Yet the transition throughout the education system in Paraguay still has many hurdles that stand in the way of successful inclusion in labour markets. A considerable share of students does not access the education system, particularly at the upper secondary level. And among those who access, there are many that leave school too early, as illustrated by high drop-out and low completion rates. In addition to this, learning outcomes are poor, and increased schooling does not provide good quality education and skills, making it difficult for workers to move beyond low-skilled occupations. An additional fundamental barrier to good quality employability is low relevance: the education and skills acquired in the education system are oftentimes distant from the ones that are more valued and that remain scarce in labour markets, which are keys to finding a better job. Demand-side issues – i.e. the capacity of the economy to provide good-quality job opportunities – are also critical to understand school-to-work transitions, but go beyond the scope of this analysis.

The transition from school to work is bumpy and many young people leave the education system to enter bad quality jobs

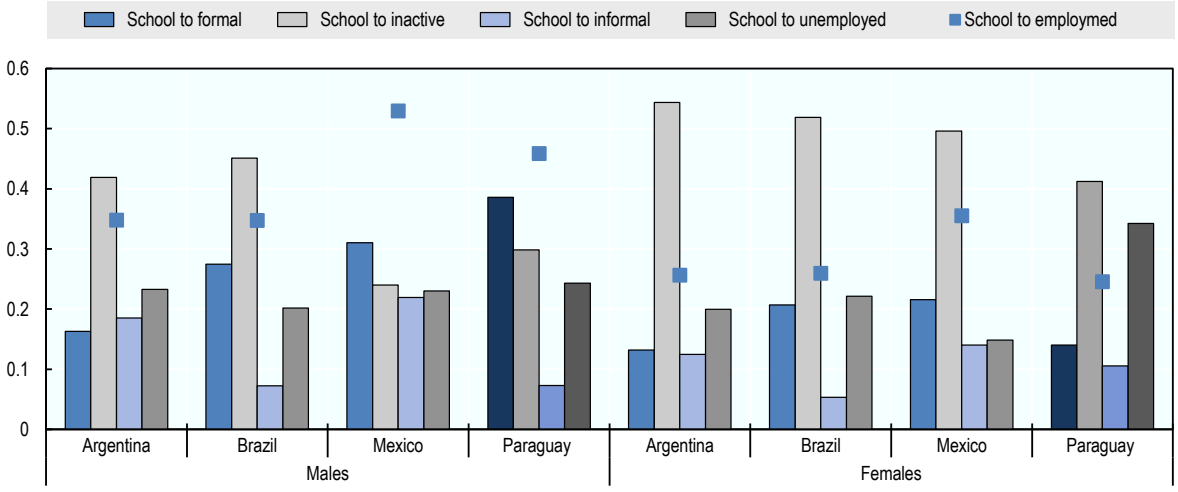
Transitions from school to work are difficult in Paraguay, with more than half of students leaving the education system to join inactivity, unemployment or informality. Yearly out-of-school transitions rates show that among urban youth (ages 15-29) in Paraguay, around 30% of males enter inactivity when they leave school, while almost 10% join informal jobs, and 25% become unemployed. The remaining percentage joins formal jobs. Young females show significantly worse transitions: only around 15% access formal jobs after leaving school, while as many as 40% become inactive, 12% join informal jobs, and above 35% become unemployed (Figure 4.10). The comparison with Argentina and Brazil shows that a larger share of students transition to employment in Paraguay, though this should be interpreted with caution, as only urban youth are considered in this

analysis, and the share of rural population vary largely between Paraguay (40%) and Brazil (14%) and Argentina (8%), which may lead to biases (World Bank, 2018a).

The transition from school to work is particularly difficult for the most disadvantaged socioeconomic groups. After age 15, young people withdraw from school in large numbers, which has particularly adverse consequences for low-income households. At age 29, and among youth living in extreme poor households, around 6 out of 10 workers are not employed, nor in education or training (NEET), 3 out of 10 are informal workers, and only 1 out of 10 workers has a formal job. In vulnerable households, half of workers at age 29 are either NEET or informal. The picture is somewhat brighter for youth living in middle-class households, where only around 2 out of 10 workers are either NEET or informal at age 29 (Figure 4.11). Guarani-speaking households face greater risks of being informal, as most formal jobs are located in Asuncion (Ruppert Bulmer et al., 2017).

Inactivity is widespread and affects women the most, with negative consequences on well-being. Around 25% of young females and almost 8% of young males were NEET in Paraguay in 2014. The larger share of NEET among females is usually associated to work in the household: indeed, many women working in the household are productive and contribute to the economy, as they are engaged in unpaid domestic work and caregiving (OECD/CAF/ECLAC, 2016). The consequences of such large shares of inactivity among young people are straightforward: not only do they face a stigma and difficulties to participate in various dimensions of society (thus increasing the risk of engaging in risky behaviour) they also lack a fundamental source of income and social protection. In addition, they struggle to acquire new – or maintain existing – skills that would be crucial for their future integration into labour markets.

Figure 4.10. Transitions from school to the labour market among youth (ages 15-29) in Paraguay and other selected Latin American countries (2005-2015)



Note: Results show yearly transition rates out of school for the period 2005-15. These are calculated as the ratio between the flow of people transitioning from Condition 1 (school) to Condition 2 between time 0 and 1, over the total stock of people in Condition 1 in time 0. Transitions are year to year (from year t to year t + 1). Only the urban population is covered due to data limitations.
Source: *Latin American Economic Outlook 2017: Youth, Skills and Entrepreneurship* (OECD/CAF/ECLAC, 2016).

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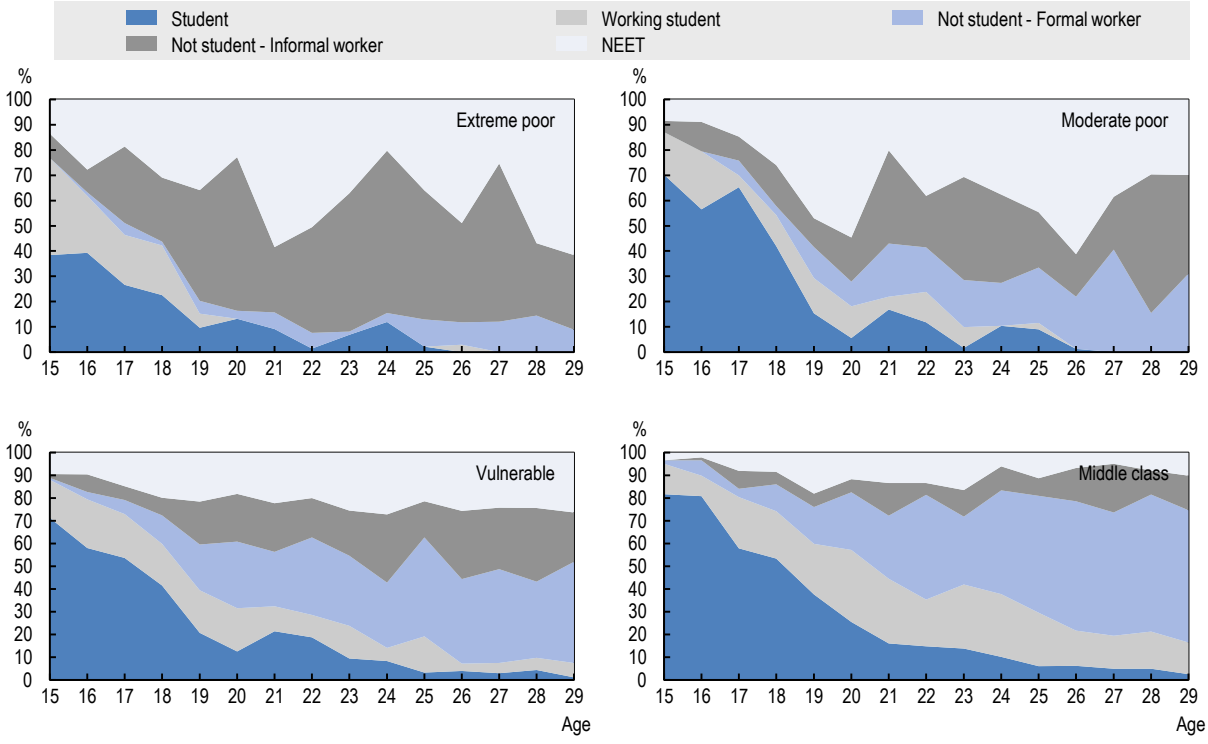
Informality is a widespread phenomenon in Paraguay, with heavy consequences for workers and the wider economy. Labour informality affected 64% of workers outside the agriculture sector in 2015 (OECD, 2018). Informal jobs tend to be associated to low quality job conditions, lower earnings, higher levels of insecurity, a poorer quality of the working environment, and no access to social protection and other benefits associated to formal jobs. While informality sometimes represents a first step on a labour trajectory that can improve at later stages, it acts in many cases as a trap, leading to poor labour market outcomes in the future. Evidence from Argentina, Brazil, Chile and Mexico shows that, of all urban adults (ages 30-55) transitioning each year from an informal job, 70% move to another informal job (OECD/CAF/ECLAC, 2016). Informality also limits the development of skills, as it usually entails working at low-skilled professions performing low value-added tasks, frequently leading to a deterioration of workers' skill sets. Workers in the informal sector are more difficult to identify and thus they are difficult to reach with training and active labour market policies, while training at informal workplaces is almost non-existent.

Figure 4.11. Activity status of youth by single year of age and socio-economic group in Paraguay, 2014



Note: Socio-economic classes are defined using World Bank classification: "Extreme poor" = youth belonging to households with a daily per capita income lower than USD 2.50. "Moderate poor" = youth belonging to households with a daily per capita income of USD 2.50-4.00. "Vulnerable" = individuals with a daily per capita income of USD 4.00-10.00 "Middle class" = youth from households with a daily per capita income between USD 10.00-50.00. Poverty lines and incomes are expressed in 2005 USD PPP per day (PPP = purchasing power parity). LAC weighted average of 16 countries: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Paraguay, Peru and Uruguay.
Source: *Latin American Economic Outlook 2017: Youth, Skills and Entrepreneurship* (OECD/CAF/ECLAC, 2016).

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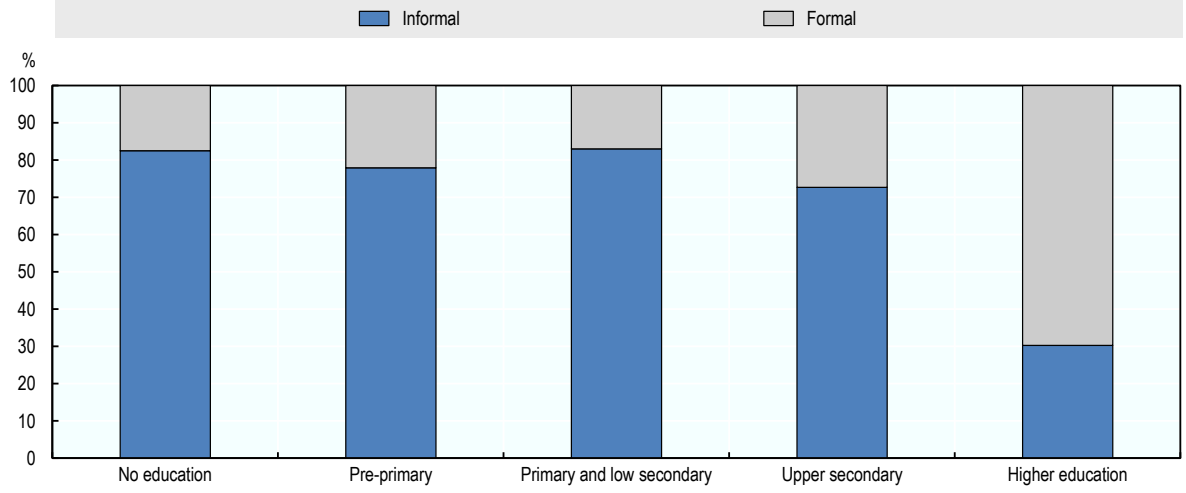
The education system does not provide the right skills to favour access to good quality jobs

Low levels of education and skills are a direct cause of poor school-to-work transitions in Paraguay. In particular, there are many complex and diverse causes of informality in the country including: (i) the low-skill labour force, (ii) an economic structure where subsistence micro, small enterprises dominate, (iii) the relatively high cost of formalisation (with little incentive to become formal), (iv) the deficiencies in the design of social protection programmes and (v) the weaknesses in terms of workers' representation (Ayala, 2016).

Informality decreases with the level of education among Paraguayans. While informal work remains above 80% for those with no education or with just a lower secondary education, it affects around 70% of those who have completed upper secondary education, and only 30% of those who have completed higher education (Figure 4.12). The fact that informality remains high even for workers who have completed significant levels of education – i.e. upper secondary – could be explained by two phenomena, which can be at play simultaneously: first, the skills acquired in the education system are not relevant for the demands and requirements of existing formal jobs; and second, there are few formal job opportunities due to an economic structure that is not conducive to their creation.

Figure 4.12. Labour informality by level of education, 2016



Note: Workers with no health insurance of any type are assumed to be informal.
Source: Own elaboration based on EPH 2016 (DGEEC, 2017).

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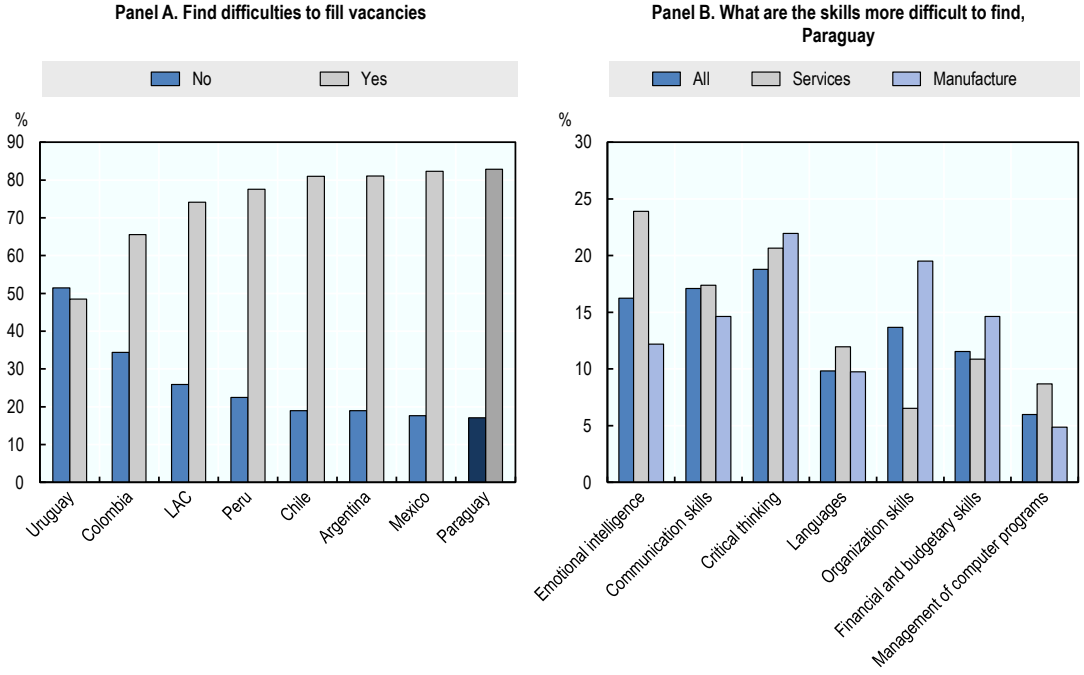
Low relevance of skills limits the opportunities to access formal jobs, as illustrated by the substantial difficulties faced by formal firms to find the workers with the skills they need. Around 80% of formal firms in the country claim that they face difficulties to fill their vacancies. This is significantly above the already high LAC average of 65%. The skills that are more difficult to find are mainly related to emotional intelligence, communication skills and critical thinking, all part of a group of generic, soft skills that are scarce among

Paraguayan workers. Also, other more specific, technical skills related to budget, financial or computing skills appear as particularly relevant given the unmet demand (Figure 4.13).

Figure 4.13. Percentage of formal firms with difficulties to fill vacancies, by country, sector and type of skills



Source: Authors' elaboration based on *Survey on skill demand and shortages in Latin America* (OECD/Manpower, forthcoming).

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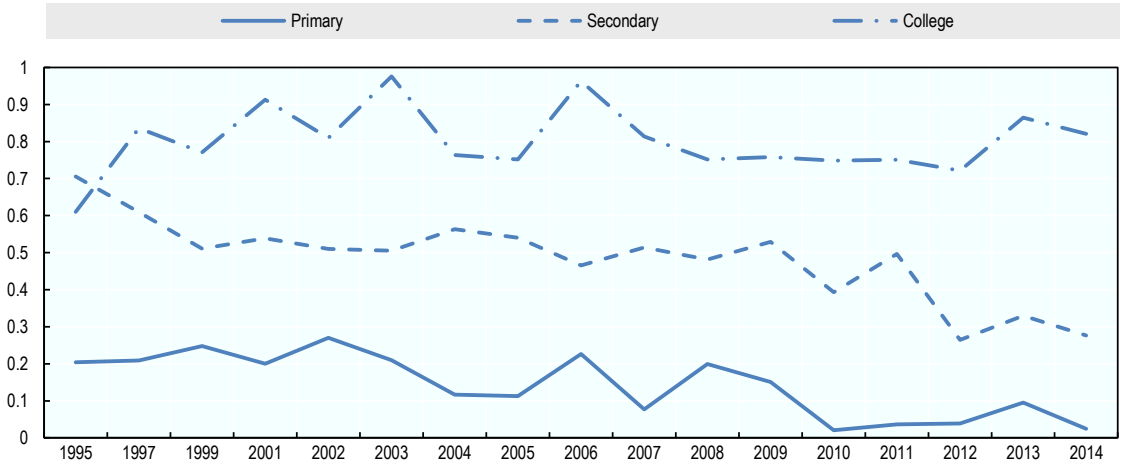
Returns to education have increased for skilled occupations, pointing to a relative scarcity of high-skilled workers. Since the beginning of the century, returns to university education, i.e. the monetary returns of reaching a higher level of education, have not had a uniform trend. Most recently, they have been on the rise, however. This can be interpreted as the result of a relative scarcity of high-level skills (i.e. the demand for high skills has grown faster than the supply). Returns on mid-and-low-level skills, associated to secondary and primary education respectively, have decreased in recent years (Figure 4.14). Factors driving these trends can be related to demand or supply. The expansion of access to primary and secondary education, which has taken place in some cases at the expense of quality, could be a driver of these declining returns. But demand-side dynamics leading to a shift towards higher-level skills could also be driving these trends. Changes in returns to education is similar to that of most LAC countries, where there has been a pattern of expansion of the relative supply of skilled and semi-skilled workers (i.e. higher and secondary education). This led to a fall of returns to secondary education, but returns to higher education have been more volatile, with a significant increase in the 1990s, a decline and relative stability in the 2000s, and an upsurge after 2012. Recent evidence suggests that this can be better explained by looking at demand-

side factors (i.e. the change in the demand for skilled workers) rather than the supply side (Galiani et al., 2017).

Figure 4.14. Returns to education in Paraguay, 1995-2014



Note: The figure presents the coefficients of educational dummies on a Mincer equation regression.
Source: Authors' elaboration based on CEDLAS and World Bank (2017).

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Upper secondary education must be modernised to provide more relevant skills

The *educación media* (upper secondary education) is perceived as not preparing students to access labour markets or enter higher education with the right skills. The *educacion media* in Paraguay has two main paths. First, the scientific baccalaureate (*bachillerato científico*), which is usually more associated to the preparation of students for university education, and has three different options depending on the focus of the curriculum: social sciences, basic sciences, and arts and literature. Second, the technical baccalaureate (*bachillerato técnico*), or upper-secondary technical and vocational education and training (TVET), which is more oriented towards labour market insertion or to prepare for post-secondary TVET, and has more than 25 types of training in agriculture, industry and services. Three out of four students of *educación media* were enrolled in the *bachillerato científico* in 2011 (MEC, 2012). Existing evidence, though very limited, suggests that students find that the skills acquired in *educación media* are not sufficiently relevant in the workplace, a view shared by firms, while higher education institutions claim that students reach this level with insufficient levels of skills.

The curriculum of *educación media* must be redesigned so that it favours labour market insertion and provides a more solid basis for accessing higher education. The curriculum of *educación media* must be oriented towards training students with skills for the 21st century. In increasingly knowledge-based economies, and in a context where manufacturing and certain low-skill tasks are increasingly becoming automated, the demand for repetitive manual skills is declining, while the demand for information-processing and other high-level cognitive and interpersonal skills is growing. In addition to mastering occupation-specific skills, workers in the 21st century must also have information-processing skills and various "generic" skills, including interpersonal communication, self-management, and the ability to learn, to help them weather the

uncertainties of rapidly changing labour markets (OECD, 2013). Recent efforts to transform the curriculum of *educación media* were a move in the right direction, with a skills-based approach that promotes more workplace learning. However, institutional turnover and fragmentation have limited the success of these initiatives. Now, a more co-ordinated effort should be started in the aim of building on the findings and lessons learned from previous initiatives.

Strengthening technical and vocational education and training could support the improvement of school-to-work transitions and life-long education

Technical and vocational education and training (TVET) can play a critical role in preparing people for jobs in Paraguay, thus improving school-to-work transitions for all. TVET has a strong potential as a mechanism to help people get skills that are better aligned to the labour market needs. In this sense, it is another option besides the general academic path for those who have a technical vocation, as well as a viable option for many other individuals: people who wish to access a job early in their careers, adults who once left the education system and want to have a second opportunity to acquire professional skills, and individuals who want or need – as a way to adapt or re-skill – to change professional paths (OECD/CAF/ECLAC, 2016; UNESCO, 2016).

TVET is highly fragmented in Paraguay, with many providers and multiple modalities that limit its potential as a strong, integrated system of professional training. The main pillars of TVET in Paraguay are broadly organised as follows. First, there is formal TVET, which falls under the responsibility of the Ministry of Education. At the level of *educación media* it is provided through *bachilleratos técnicos* as well as by the *formación profesional media* (professional training), which is more clearly oriented towards direct labour market insertion. At the level of higher, non-university education, TVET is provided in the *Institutos Técnicos Superiores*. In addition to this, there are modalities of permanent education for young people and adults. Historical data shows that traditionally around 25% of students following a *bachillerato* enrol in *bachillerato técnico*. And recent data from MEC shows that only a small fraction enrol in *formación profesional media*, while around a third of students enrolled in *educación permanente* are following a TVET programme in one of its modalities. Second, there is non-formal TVET, which is usually under the supervision of the Ministry of Labour and is mainly provided through the *Sistema Nacional de Promoción Profesional* (SNPP) and the *Sistema Nacional de Formación y Capacitación Laboral* (SINAFOCAL). Finally, there are many other forms of TVET offered by other ministries and bodies in specific areas like agriculture, health or construction. In sum, TVET in Paraguay is highly fragmented, with multiple training options being offered by a plethora of actors. While there have been successful TVET experiences and programmes in Paraguay, they have grown in a dispersed and uncoordinated manner. They are usually planned by different bodies with a focus on specific groups or very specific needs (MEC et al., 2011; UNESCO, 2013).

Paraguay lacks an integrated system of technical and vocational education and training. In recent years, efforts to better co-ordinate TVET programmes and communicate about them to the general public at the national level have been ineffective in establishing an integrated national TVET system. *The Plan Nacional de Mejoramiento de la Educación Técnica y Profesional 2011-2013* represented an effort to expand the TVET offer and improve its quality by strengthening public-private collaboration and raising funds. The law that was discussed in 2012 to regulate and articulate TVET did not come to fruition. The new statutes of the Ministry of Education, approved in 2017, establish the functions of an advisory body called *Consejo Nacional de Educación y Trabajo* (CNET), which

operates in a tripartite scheme where one of its objectives is to propose and approve a strategic plan for TVET, fostering co-ordination with the various sectors involved in the execution of public policies related to education and work. Among the functions of the CNET, an inter-ministerial technical unit is created, which is responsible for installing and keeping updated the *Sistema Nacional de Cualificaciones Profesionales*, whose activities have been carried out since 2014 with a working team of both ministries of education and labour. This should be a relevant stepping stone to move towards an integrated TVET, which demands broad, ambitious efforts, that must be complemented with specific actions that deal with the main challenges of TVET at different levels (upper-secondary, post-secondary, permanent and non-formal education) and in different areas: quality, relevance, and coherence/efficiency of the system.

Upper-secondary TVET must be supported to be an effective gateway to the labour market but also to post-secondary TVET. Given the dropout rate after age 15, making TVET more useful at the upper-secondary education level can be an effective mechanism to keep students in school and improve transitions to jobs. In addition to the aforementioned measures to support better learning in *educación media*, which are related to teachers and teaching practices, school resources and school management, particular focus must be placed on upper-secondary TVET as a way to favour better school-to-work transitions. To this end, it is critical to design vocational programmes adapted to economic changes and needs, with more mechanisms to facilitate dialogue between educators, unions and firm associations and adapt curricula to these evolving needs. It is also fundamental to focus not only on specific skills, but also on foundation and generic skills that are transferable and prepare workers to adapt to changing skill demands and to build vocational training pathways. Career guidance to deliver active orientation and feedback to young learners is also essential, in order to identify vocations and inform them about labour market prospects. Finally, making significant use of the workplace as a quality learning environment is a critical element to train in the practical aspects of the specific profession and favour a smoother transition to jobs (OECD, 2010). These actions, together with specific communication efforts, must be effective in raising the reputation of initial TVET in Paraguay as a mechanism to effectively transition from school to work. In this respect, anecdotal evidence suggests that *bachillerato técnico* is well regarded by Paraguayans, and contrary to most countries in the LAC region, it is seen as being a more solid training platform from which to access higher education than the *bachillerato científico*. However, the perception it has as a mechanism to access jobs or to start a vocational pathway can be significantly improved.

The quality and relevance of post-secondary TVET must be improved. While initial TVET at the upper secondary level can provide useful skills, such training is sometimes – and increasingly so – insufficient for certain jobs and must be complemented with post-secondary TVET of the highest quality and relevance (OECD, 2014). Post-secondary TVET is mainly provided in Paraguay through the *Institutos Técnicos Superiores* (ITS), which fall under the responsibility of the Ministry of Education, as set out in the Law of Higher Education 4995/13. To improve their quality and relevance, three elements appear critical. First, integrating work-based learning in TVET programmes, as this represents a strong learning environment that also facilitates subsequent recruitment. This should be made compulsory, and funding for public ITS should be associated to compliance with this. Second, teachers should have strong teaching skills and up-to-date industry knowledge and experience. This entails promoting flexible arrangements to facilitate the hiring of practitioners directly from industry or to establish part-time arrangements. Also, qualification requirements for teaching at this level should be adapted to reflect the

desired mix of requirements: academic, pedagogical and practical skills. Third, the curriculum must reflect a mix of technical and job-specific skills as well as basic skills. In fact, international evidence shows that many adults, even with post-secondary education, have weak basic skills, while firms claim these abilities are particularly difficult to find (OECD/Manpower, forthcoming; OECD, 2014). These dimensions should be incorporated into criteria used by the *Consejo Nacional de Educación Superior* and the Ministry of Education to determine the suitability of ITS. In the LAC region, some best practices can be transposed to future reform. As an example, in Brazil and Colombia there is an obligation for workplace training or traineeship after TVET that has had positive results for labour market insertion. And Jamaica is a good example of training for TVET teachers, through its Vocational Training Development Institute (UNESCO, 2016).

Non-formal TVET needs to be better co-ordinated and supported. The role of SINAFOCAL, created in 2001, is more related to the definition of the strategy for professional training, with a clear responsibility to supervise the quality of non-formal TVET, including the certification and accreditation of skills, as well as a research role involving the analysis of skills demands of the productive sector. The SNPP, operational since 1971, focuses on the actual provision of training. In practice, both bodies provide training and the distribution of attributions is still somewhat unclear. While progress is being made in this direction, the objective should be to have a co-ordinated, complementary functioning of these two institutions where the role of SINAFOCAL to strengthen the quality of the non-formal TVET system is supported financially. The recent development of a registry of institutions of professional training (REIFOCAL) is a step in the right direction. On the other hand, the SNPP can be an effective tool to favour labour market insertion, but challenges related to outdated or insufficient infrastructure to provide good quality training suggest that its financial resources need to be increased.

Paraguay must move towards a national, integrated TVET system that supports quality and relevance, favours the transparency of learning outcomes and the transferability of qualifications, and provides clear career pathways. The multiple modalities of TVET represent a challenge to guarantee its quality and relevance across the country. Thus, a national policy for TVET must be designed to co-ordinate the existing offer, enhance the transparency of learning outcomes, and set qualifications that are easy to interpret both for students and employers, uniform across the country and accompanied by rigorous assessments. It can also facilitate transitions from non-formal training to formal options. In this respect, developing a National Qualifications Framework should be considered: while this can be costly, it can also be enormously beneficial. Discussions around this should be part of the agenda towards the definition of the PNTE 2030. The recognition of prior skills can also be critical in a country where learning often takes place outside formal education such as within the family, at the workplace and through self-directed individual activity. Finally, building clear career pathways can make the TVET system more attractive.

The match between the supply and demand of skills must be improved to support better employability

Improving the transition from school to work and fostering better employability demands efforts that go beyond the education and skills system and include mechanisms to better match these skills with the actual demands from the economy. Policy emphasis placed on improving the relevance of skills should thus be complemented by more information and better programmes to effectively make the match between workers and job vacancies.

The reach of active labour market policies (ALMPs) must be extended in order to support training and intermediation programmes that favour access to job vacancies. ALMPs and Public Employment Services can facilitate a better transition from school to work through programmes for training and intermediation, but their coverage is limited in Paraguay (ILO, 2014). In 2009, more than 90% of job search in the country took place through informal channels (Mazza, 2011). This suggests that the potential to improve the efficiency in the match between job supply and demand is large. Public employment services can be strengthened not only by expanding them and making them more present at the local level, but also by introducing performance management frameworks, more tailored job search assistance, and by increasing the use of digital technologies to expand their reach and effectiveness. Regarding training services, and beyond the role of SNPP and SINAFOCAL, there have been valuable public-private partnerships to provide training to disadvantaged youth, such as *Sape'a* and *Nuevas Oportunidades de Empleo para Jóvenes,* but their small scale has limited their impact (OECD/CAF/ECLAC, 2016).

Improving labour market information can be an effective tool to support better education and career choices. Providing information to students about available options and professional career paths after graduation can support them in making informed choices about their field of study and future professional career. This can be an effective way of signalling sectors where skills are scarcer and help in closing skills gaps. An interesting example in this direction is the web service called *Ponte en Carrera* in Peru, which collects information on educational offerings and labour market demands and makes it public for the use of all prospective students.

Setting up institutional mechanisms to foster dialogue between educators, private sector and workers will be critical to anticipate and identify skills needs. Skills councils for particular economic sectors, involving various stakeholders, can support a better identification of skills needs, and can be informative to develop specific training programs to respond to those gaps. The role of the *Observatorio Laboral* of the Ministry of Labour should be strengthened, as a critical body to provide information about skills needs, including specific data on gaps at the regional level. The *Consejo Nacional de Educación y Trabajo* is a step in the right direction to promote interministerial cooperation to search for policy responses to bride existing gaps between the demand and supply of skills.

Policy recommendations

Box 4.2. Main recommendations to promote an education and skills system that fosters inclusiveness and employability

1. Policies to support a better education system for all

1.1. Adopt a national pact on education – the PNTE 2030 – built on a consensus reached in a consultative process:

- Set specific targets and milestones for the different areas of action.
- Establish specific financial commitments.
- Mobilise international expertise to learn from best practices.

1.2. Strengthen efforts to expand coverage and foster completion, particularly in pre-

primary and secondary, and among the most disadvantaged groups:

- Produce better education statistics to evaluate future challenges, monitor progress, and inform education policy.
  - Use the Registro Unico del Estudiante as a way to centralise student information and favour the production of more reliable, easy-to-manage and comparable data.
  - Overcome the current challenges for the production of basic education metrics regarding access, enrolment, progression and completion.
- Support access in remote areas and across the most disadvantaged socioeconomic groups.
  - Support access to pre-primary education, helping families to overcome main barriers:
    - Economic: strengthen the conditionality of CCT Tekoporã with preschool attendance.
    - Geographical: scale-up the non-formal, initial education programme maestras mochileras.
  - Raise awareness within communities of the importance of early childhood education:
    - Strengthen – or establish when non-existent – the role of the Consejos de Ninez y Adolescencia.
  - Expand the offer of pre-primary education:
    - More and better school and teachers, and developing modalities to address special needs.
    - Consider expanding compulsory education to age 4.
  - Expand coverage in secondary education:
    - Scholarships earmarked for students from disadvantaged groups and/or with special needs.
    - Reinforce “educación media abierta y a distancia”.
    - Strengthen school transport for secondary education in remote areas.
- Policies to favour school retention and completion, avoiding repetition and dropout:
  - Consider a gradual expansion of the school day, starting with a pilot to measure impact on the dropout reduction (and learning outcomes).
  - Develop mechanisms to identify and support students at risk of exclusion, with flexibility in pedagogical methods to support those with greater difficulties.

1.3. Policies to improve learning and the overall quality of the education system:

- Improve evidence on learning outcomes to inform policy-making.

- Strengthen the SNEPE as the main tool for evaluation of student performance, improving its use and the public-availability of results to favour analysis and evidence-based policy-making.

- Improve teaching to achieve better learning outcomes.
  - Re-shape teachers' career pathways to:
    - Attract talent and raise the status of teaching to ensure that the best candidates enter and remain in the profession. This entails rethinking mechanisms for selection, but also incentives (salaries, social recognition, etc.).
    - Strengthen incentives to develop and improve, with a stronger link between rewards and performance.
    - Reinforce and systematise teachers' evaluations, to monitor progress and assess weaknesses to support improvement.
  - Raise quality of the Instituciones de Formacion Docente:
    - Initiate the process of accreditation of IFDs, and strengthen ANEAES to guarantee capacity to carry out this task effectively.
    - Improve the quality of both initial and continuing education.

2. Policies to improve access to better quality jobs

2.1. Transform and modernise the curriculum of educación media técnica:

- Reform curricula to prioritise 21st century skills.
- Develop mechanisms to adapt the curriculum of bachilleratos técnicos to the fast-changing demands of industry, involving private sector and other stakeholders.
- Provide a mix of technical, job-specific skills with soft and basic skills.

2.2. Strengthen the TVET system:

- Improve the quality of VET: strengthen accreditation efforts of Institutos Superiores Técnico-Profesionales.
- Make it more relevant: modernise curriculum and connection with private sector.
- Build VET pathways to support students' transition to the workplace.
- Support VET for adults and establish a system for the recognition of skills acquired in the labour market, to give adults a second chance.

2.3. Improve the match between labour supply and demand:

- Strengthen active labour market policies to favour employability in formal jobs: training and intermediation systems.
- Set up an information system to attract students to sectors with higher demand.
- Consider establishing skills councils in dynamic sectors (e.g. a pilot in some segment of agroindustry) and establishing an observatory to anticipate demand for certain skills Consider establishing a qualifications framework to facilitate the recognition of skills.

References

Altinok, N., N. Angrist, and H. A. Patrinos (2018), Global Data Set on Education Quality (1965-2015), Policy Research Working Paper 8314, World Bank Group, Washington D.C.

Ayala, D. (2016), *Ocupación Informal en Paraguay: Evolución, Características y Acciones de Políticas Públicas*, Observatorio Laboral.

CEDLAS and World Bank (2017), *Socio-Economic Database for Latin America and the Caribbean,* CEDLAS [Centre for Distributive, Labour and Social Issues in Latin America], Universidad Nacional de La Plata (Argentina) and World Bank, http://sedlac.econo.unlp.edu.ar/eng (accessed on February 2018).

DGEEC (2017), *Encuesta Permanente de Hogares* [Permanent Household Survey] (database), Dirección General de Estadística, Encuestas y Censos de Paraguay, Fernando de la Mora, www.dgeec.gov.py/datos/encuestas/eph (accessed on February 2018).

Elías, R., G. Walder and D. Sosa (2016), "Perfiles de la exclusión educativa en la República de Paraguay" in *Informe integrante de la Iniciativa Global por los Niños Fuera de la Escuela*, OOESCI, Unicef-UIS, UNESCO.

Elías, R., N. Briet, C. Spinzi and B. Aquino (2014), *Revisión Nacional 2015 de la Educación para Todos: Paraguay*, Ministerio de Educación y Cultura, Asunción.

Galiani, S. et al. (2017), *Educational Upgrading and Returns to Skills in Latin America: Evidence from a Supply-Demand Framework*, NBER Working Paper No. 24015.

Hanushek, E. and S, Rivkin (2012), "Boosting teacher effectiveness" in *What lies ahead for America's children and their school*, Stanford: Hoover Institution Press, 23-35.

Heckman, J. (2006), *Skill formation and the economics of investing in disadvantaged children*, Science, Vol. 312, pages 1900-1902, http://jenni.uchicago.edu/papers/Heckman_Science_v312_2006.pdf.

ILO (2014), *Paraguay: Mesa de Dialogo Social. Políticas de Empleo*, International Labour Organization, Asunción, www.oit.org/wcmsp5/groups/public/---americas/---ro-lima/---sro-santiago/documents/genericdocument/wcms_248872.pdf.

MEC (2018), *Presentación de Resultados de la Evaluación Nacional de los Aprendizajes, Aplicación Censal 2015*, Ministerio de Educación y Ciencias de Paraguay, Asunción.

MEC (2012), *Estadística Educativa 2011, Datos e Indicadores de la Educación*, Ministerio de Educación y Ciencias de Paraguay, Asunción.

MEC et al. (2011), *Plan Nacional de Mejoramiento de la Educación Técnica y Profesional en el Paraguay 2011-2013*, Ministerio de Educación y Ciencias de Paraguay, Asunción.

MEC (2007), *Mecanismo de Licenciamiento de Instituciones Formadoras de Docentes*, Ministerio de Educación y Ciencias de Paraguay, Asunción, www.mec.gov.py/cms_v2/adjuntos/14692?1506353855.

MH (2017), *Diseño de la Estrategia de Transformación Educativa del Paraguay 2030*, Ministerio de Educación y Ciencias de Paraguay, Asunción.

OECD (2018), *Multi-dimensional Review of Paraguay: Volume I. Initial Assessment*, OECD Development Pathways, OECD Publishing, Paris, https://doi.org/10.1787/9789264301900-en.

OECD (2015), *PISA 2015 Results (Volume I): Excellence and Equity in Education*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264266490-en.

OECD/CAF/UN ECLAC (2018), *Latin American Economic Outlook 2018: Rethinking Institutions for Development*, OECD Publishing, Paris, http://dx.doi.org/10.1787/leo-2018-en.

OECD/CAF/UN ECLAC (2016), *Latin American Economic Outlook 2017: Youth, Skills and Entrepreneurship*, OECD Publishing, Paris, https://doi.org/10.1787/leo-2017-en.

OECD/CAF/UN ECLAC (2014), *Latin American Economic Outlook 2015: Education, Skills and Innovation for Development*, OECD Publishing, Paris, https://doi.org/10.1787/leo-2015-en.

OECD/ E. Hanushek / L. Woessmann (2015), *Universal Basic Skills: What Countries Stand to Gain*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264234833-en.

OECD (2014), *Skills Beyond School: Synthesis Report*, *OECD Reviews of Vocational Education and Training*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264214682-en.

OECD (2013), *OECD Skills Outlook 2013: First Results from the Survey of Adult Skills*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264204256-en.

OECD (2010), *Learning for Jobs, Synthesis Report of the OECD Reviews of Vocational Education and Training, Series: OECD Reviews of Vocational Education and Training*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264087460-en.

PREAL (2013), *El Desafío es la equidad: Informe de Progreso Educativo. Paraguay* [The challenge is equity: Educational progress report. Paraguay], Programa de Promoción de la Reforma Educativa en América Latina y el Caribe and Instituto Desarrollo.

Ruppert Bulmer, E., S.M. Watson, and D. De Padua (2017), *Paraguay Jobs Diagnostic: the dynamic transformation of employment*, Working Paper, Jobs Series Nº 9, World Bank, Washington, D.C., http://documents.worldbank.org/curated/en/500641499411206696/Paraguay-jobs-diagnostic-the-dynamic-transformation-of-employment.

UNESCO (2016), *La enseñanza y formación técnico profesional en América Latina y el Caribe: una perspectiva regional hacia 2030*, Oficina Regional de la UNESCO para América Latina y el Caribe, OREALC/UNESCO, Santiago.

UNESCO (2015), *Informe de resultados: Tercer Estudio Regional Comparativo y Explicativo* [Third Regional Comparative and Explanatory Study], Laboratorio Latinoamericano de evaluación de la calidad de la educación, UNESCO, Santiago.

UNESCO (2013), *World TVET Database: Paraguay* (database), UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training.

UNICEF (2012), *Finishing school. A right for Children's Development: a joint effort*, Global Initiative on Out-of-School Children, UNICEF Regional Office for Latin America and the Caribbean.

World Bank (2018a), World Development Indicators (database), Washington D.C.

World Bank (2018b), *World Development Report 2018: Learning to Realize Education's Promise*, World Bank, Washington D.C., https://openknowledge.worldbank.org/handle/10986/28340.

World Bank (2013), *Estado del Arte de la Profesión Docente en Paraguay. Ideas Inspiradoras para la Elaboración de Políticas Educativas*, World Bank, Asunción.