

**ANNEX II**  
**EXAMPLE OF AN ESA REPORT WITH POINTERS**

**KYRGYZ REPUBLIC:**  
**Education Sector Analysis**  
**Strategic Choices for the Government to Improve Education**

**DRAFT**

June 2018, UNICEF

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## Foreword

This report aims to provide an evidence-based diagnosis of the Kyrgyz Republic's education sector, to enable decision makers to adjust national policies. The analysis focuses primarily on the public education sector, with limited commentaries on private engagement in vocational and higher education.

While there is a rich literature exploring various specific aspects of Kyrgyzstan's education, including government and development agency reports, there have been few attempts at system-wide analysis since the publication of the OECD-World Bank report of 2010. Given the 2012 launch of the landmark Education Development Strategy 2012-2020, and its implementation over the past six years, a sector-wide analysis seems justified. As requested by the Ministry of Education and Sciences (MOES) of the Kyrgyz Republic and its development partners, the report tries to take a sweeping view of the education system, and provide some analytical and empirical insights that could inform efforts to reform the country's education sector going forward.

While taking stock of data from the past ten years, the report also seeks to situate the analysis in the context of emerging strategic initiatives in the education sector and national development. More than anything else, this analysis should be viewed as an informed input into ongoing education policy discourse and practices in Kyrgyzstan as the MOES embarks on the critical preparatory phase of defining the country's new education sector strategy for the years 2020 and beyond.

The analysis is based on the Methodological Guidelines for Education Sector Analysis co-developed by Global Partnership for Education (GPE), the World Bank, UNICEF and UNESCO Institute of Statistics. It is also informed by critical insights about the way forward gathered from independent local experts and key stakeholders throughout the process of report development. It aligns with the GPE recommendations to use the methodological guidelines 'a la carte' to ensure local ownership.

The first four chapters of this report attempt to set out how things have worked over the past decade. The last two chapters – on crosscutting priorities and delivering reform – attempt to shed light on why progress has been slow and what efforts could be focused on going forward.

The MOES provided significant support for this report by ensuring that critical education sector data were available to the report's author in a timely fashion. The MOES was also generous in allowing the author access to key events and high-level personnel, including the Minister. In the sole instance of primary data collection from teachers as part of a rapid analysis, effective cooperation from the regional education authorities was instrumental.



## Abbreviations

<b>ADB</b>	Asian Development Bank
<b>AKF</b>	Aga Khan Foundation
<b>AKDN</b>	Aga Khan Development Network
<b>CBK</b>	Community-Based Kindergarten
<b>CEATM</b>	Center for Educational Assessment and Teaching Methods
<b>CFPR</b>	Centralized Fund for Poverty Reduction
<b>CIS</b>	Commonwealth of Independent States
<b>CEE/CIS</b>	Central and Eastern Europe and the Commonwealth of Independent States
<b>DPCC</b>	Donor Partnership Coordination Council
<b>ECD</b>	Early Childhood Development
<b>ECE</b>	Early Childhood Education
<b>EDI</b>	Early Development Index
<b>EGMA</b>	Early Grade Math Assessment
<b>EGRA</b>	Early Grade Reading Assessment
<b>EMIS</b>	Education Management Information System
<b>EU</b>	European Union
<b>GDP</b>	Gross Domestic Product
<b>GER</b>	Gross Enrolment Rate
<b>GIR</b>	Gross Intake Rate
<b>GMR</b>	Global Monitoring Report
<b>GNI</b>	Gross National Income
<b>GPE</b>	Global Partnership for Education
<b>GPI</b>	Gender Parity Index
<b>HDI</b>	Human Development Index
<b>HEI</b>	Higher Education Institution
<b>ICT</b>	Information and Communication Technology
<b>IER</b>	Internal Efficiency Rate
<b>KAE</b>	Kyrgyz Academy of Education
<b>KGS</b>	Kyrgyz Som (National Currency of the Kyrgyz Republic)
<b>LSG</b>	Local Self-Government (municipality)
<b>LMIC</b>	Lower Middle-Income Country
<b>ME</b>	Ministry of Economy
<b>MICS</b>	Multi-Cluster Indicators survey
<b>MOES</b>	Ministry of Education and Science
<b>MF</b>	Ministry of Finance
<b>MLSD</b>	Ministry of Labour and Social Development
<b>NEET</b>	Youth Not in Employment, Education or Training

<b>NER</b>	Net Enrolment Rate
<b>NGO</b>	Non-Governmental Organization
<b>NSBA</b>	National Sample Based Assessment of Student Achievements
<b>NSC</b>	National Statistical Committee
<b>NTC</b>	National Testing Center
<b>OOSC</b>	Out of School Children
<b>OSCE</b>	Organization for Security and Co-operation in Europe
<b>OSI</b>	Open Society Institute
<b>ORF</b>	Oral Reading Fluency
<b>ORT</b>	<i>Obsherespublikanskoe testirovanie</i> ” (ORT), University admission testing modelled on the American SAT
<b>PCR</b>	Primary Completion Rate
<b>PISA</b>	Programme for International Student Assessment
<b>PPE</b>	Primary Professional Education
<b>SABER</b>	Systems Approach for Better Education Results
<b>SPE</b>	Secondary Professional Education
<b>STR</b>	Student-Teacher Ratio
<b>UN</b>	United Nations
<b>UNICEF</b>	United Nations’ Children’s Fund
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organization
<b>USAID</b>	United States Agency for International Development
<b>USD</b>	United States dollar (\$)
<b>WB</b>	World Bank

## Summary of Key Issues in Education

- **Access** to pre-primary education remains low and represents a significant concern, though considerable progress in terms of offer and quality has been achieved through sustained efforts by governments and partners. Access to compulsory education is high – with the exception of children with disabilities and minority ethnic groups. Access to upper secondary (not compulsory) is lower, and reveals gender, ethnic, wealth, and location disparities.
- **Learning outcomes** measured in international and national sample based assessments point to very low achievement and performance in all grades tested (2, 4, 8) and at age 15 (PISA). Assessment capacity (both formative and summative) is not strong, and there are serious issues with the capacity of the **teaching workforce** including pre- and in-service training.
- **Governance and Policy:** While Kyrgyzstan has improved its legislative framework (regulation on absenteeism and dropout, new law on preschool education), more is needed at policy level in the area of **data collection, school governance and management, inclusive education**, particularly for children with disabilities and **multi-lingual education**. Inefficiencies in the management of education policies lead to some serious **gaps in data and policy implementation**, including in early learning, out-of-school children/dropout, children with disabilities and teachers.

### SDG 4.2 Pre-Primary Education

- **Overall:** 22.7% children age 36-59 months are attending an organized early childhood education programme according to MICS 2014 data. 2014 data represent a drastic increase since the previous MICS data (11% in 2006).
- **Equity:** No gender disparity in pre-primary enrolment. However there are drastic geographical disparities (40.5% in urban vs 16% in rural areas), wealth disparities (11.7% and 12.7% of children of the poorest and second wealth quintile vs 33.3% and 55% for the fourth and richest quintile).
- **School readiness:** 43.1% of children enrolled in Grade 1 had attended preschool in the previous year in 2014. Kyrgyzstan has drastically increased the level of participation of 6-year-old children in pre-primary education through the Nariste **480-hour universal school readiness programme** through prioritization of GPE funds between 2014-2018 into pre-primary education. The Nariste programme remains one of the most successful school readiness policy measures in Kyrgyzstan's Education Development Strategy 2012-2020. Government data indicate 100% coverage for children one year before primary entrance age, but according to NSC data the total coverage of any pre-school/ECD programme among children entering Grade 1 increased from 55.6 per cent in 2015/16 to 78.9 per cent in 2017/18.

### SDG 4.1 & 4.5 Equitable Access to Primary and Secondary Education

**Overall:** Attendance rates are high for compulsory education (grades 1-9), but decrease in upper secondary education (grades 10-11) which is not compulsory. There is a high rate of overage attendance.

MICS 2014 - Indicators	Total %	Boys %	Girls %
Net intake rate in primary education	94.9		
Primary school net attendance ratio (adjusted) (G 1-4)	99.3	99.4	99.2
Lower secondary net attendance ratio (adjusted) (G 5-9)		97.9	98
Upper secondary net attendance ratio (adjusted) (G10-11)		78.9	86.4
Transition rate to lower secondary school	98.3	98.8	97.8

Equity: Gender parity is achieved in access to primary education and lower secondary, but disparities to the disadvantage of boys in upper secondary (78.9% of net attendance rate for boys vs. 86.4% for girls), particularly in rural areas 77.7% of attendance rate for boys vs. 87.3% for girls. Inclusion of children with disabilities into education is the weakest point of the current system. The total population of children with disabilities may not be known in the country. Government estimates (based on the number children registered with disabilities) 26,700 is likely an underestimate. Children with disabilities are often not registered at birth and may not enter school, or are given home-schooling which is not the same quality as regular school. As per the data of the Ministry of Education and Science, in 2016-2017 school year, 10,925 children were enrolled to preschool and school education which makes 40% of total population of children with disabilities.

## SDG 4.1 & 4.5 Learning and Quality of Education

Learning outcomes: Kyrgyzstan last participated in PISA in 2006 and 2009, when it was each time the lowest-performing country. The results of PISA 2009 reveal that the vast majority of students in Kyrgyzstan (83%) did not reach the baseline level of achievement in reading. The majority did not even reach an even lower level, Level 1a (59 %), and 30 % of students did not manage even to reach the lowest level of measured performance (Level 1b). 65% of students did not reach the lowest level of measured performance (Level 1) in mathematics. In science, 82% did not reach the baseline level and 53% did not even reach the lowest level of measured performance.<sup>1</sup> This raises concerns over the ability of these 15-year-old students to “be capable of the basic tasks that will enable them to participate effectively and productively in life situations.”<sup>2</sup> These results were confirmed by the large scale National Assessment in Grade 9 and 11 conducted in Kyrgyzstan in 2015 and 2016.

Issues related to realizing SDG 4.1: The 2009 PISA results reveal a very high proportion of **low-performing schools** in the country. While Kyrgyzstan has officially adopted a competence-based curriculum (to the exception of social studies in lower and upper secondary education), major **gaps remain in the alignment between curricula, assessment and teaching practices**. While several development agencies have supported various large-scale learning assessments there is still a lack of system’s capacity and reliable assessment of student learning at all levels of education. The results of the externally supported assessments are hardly used for policy improvements or development of measures targeted at poor performance. Teaching remains teacher-led in both preschool and basic education. The **teacher recruitment, preparation and support systems face major constraints**, including recruiting and retaining good teachers.

The systems are also unsupportive of **inclusive education**. The main challenges for introduction and development of inclusive education lack of enabling physical and psychological learning environment, lack of adapted teaching and learning materials, lack of professionals and insufficient capacity and motivation of teachers in identification and provision of responsive to individual learning and special education needs of children as well as solid monitoring and management of schools.

**Learning content is not always relevant** to young people’s priorities and labor market requirements and overall students are not supported in acquiring the critical thinking and socio-emotional skills that would support their learning and their construction as well-rounded individuals able to make informed choices in their lives and to contribute to stronger and more resilient communities.

Both the Government of Kyrgyzstan and the international donor community are concerned by the continuing levels of communal tension being caused by both push and pull economic and political factors which could destabilise this country and the region. The tension directly affects adolescents and youth as the most susceptible group to unhealthy behaviour, conflicts and violent extremism. Supporting their adequate social and emotional development through curricular, co-curricular and extracurricular learning becomes more meaningful if it is done through promoting **basic human values, tolerance and non-discrimination principles, core competencies of critical thinking, constructive discussion and consensus building**. The school civic education (now called **Social Studies** subject) present an ideal and safe forum for the

<sup>1</sup> UNICEF (2009). *Equity in Learning? A Comparative Analysis of PISA 2009 Results in CEECIS*. Geneva: UNICEF.

<sup>2</sup> Ibid.

discussion of social issues in a way that both informs and builds the skills of participating students to cope with pull factors towards violent and extremist ideologies.

This way the education system can contribute to achieving SDG 4 specifically targeting **SDG 4.7**: “By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture’s contribution to sustainable development”.

### SDG 4.3 TVET and Professional Education

There are multiple opportunities for obtaining professional education in Kyrgyzstan through various types of educational institutions offer professional programmes – higher education institutions (including universities, institutes, academies and conservatories), secondary professional education institutions (colleges, technical colleges and training schools), and technical and vocational training institutes (professional lyceums and training schools). In terms of coverage by the education and labour market, see the table below. About one third of 15-24 year old youth are not in education, employment or training (NEET) nationally, though the share is higher in regions outside Bishkek.

#### Status of youth aged 15-24 years old (by regions)<sup>3</sup>

Regions	Youth aged 15-24 years old in 2016		Of whom employed in 2016		Of whom in formal education in 2016		Share of NEET	
		% women		% women		% women		% women
Kyrgyzstan	1062,3	49%	379,0	33%	441,17	52%	23%	32%
Osh province	247,4	49%	122,3	29%	38,7	49%	35%	55%
Jalalabad province	220,9	49%	65,3	41%	59,8	52%	43%	46%
Chuy province	137,5	49%	42,2	40%	34,6	49%	44%	50%
Bishkek city	93,7	48%	40,9	24%	29,7	52%	25%	44%
Batken province	85,1	49%	21,9	35%	24,8	53%	45%	50%
Issyk-Kul province	55,3	49%	13,4	27%	16,9	52%	45%	54%
Naryn province	46,9	48%	21,5	33%	13,7	54%	25%	36%
Talas province	128,9	51%	36,3	41%	156,5	51%	n/a	n/a
Osh city	46,6	50%	15,2	27%	66,4	53%	n/a	n/a

### Efficiency of education financing

Government of the Kyrgyz Republic allocates about 6% of GDP to education and public expenditure on education remained a priority over the decade.

<sup>3</sup> Source: National Statistical Committee, *Employment and unemployment*, 2016

KYRGYZ REPUBLIC	Actual Values for Prior Years (%)		
	2014	2015	2016
Public recurrent and capital education expenditure (as % total public expenditure)	26.4 %	23.3 %	24.9 %
Public recurrent education expenditure		25.3 %	27.6 %
Public capital education expenditure		15.3 %	16.7 %

However, **inadequate financing of the education system** and **inefficient use of the existing budget** as well as **institutional and management capacity weaknesses** in the education system, do not allow the system itself to use funding towards introduction of equitable inclusive education and improving the quality of education – the main two issues of education in the country. Given the fact that school population is growing at about 5% annually, more schools, teachers and teaching and learning materials are needed not only to maintain current level of access but also to improve the quality of education and reach SDG goals. So, efficient and **transparent management of resources** in education as well as **public-private partnership** to be regulated addressing the existing and potential inequities.

### Significant issues that influence progress

**Data, monitoring and financing capacity:** The MoE has worked on data collection mechanisms for the past decade, developing several database and software for piloting but failing to adopt the necessary legislation for these tools to be implemented nation-wide. Donors have increased their support to the development of a functional EMIS and an EMIS concept paper is approved by the MOES collegium in 2015. The absence of systematic and reliable data collection mechanisms constrains planning at both national and school levels. Schools have no autonomy and low capacities to respond to the individual needs of children. School financing is done through a per-capita funding mechanism. Supplementary coefficients were included in the per-capita funding formula in primary and secondary schools to support the education of children with special educational needs. But it is not sufficient to move forward the introduction and development of inclusive education in schools due to the other reasons such as capacity of education workers, absence of classification of functionalities, non-ratification of CRPD, lack of monitoring system, low understanding of inclusive education and more.

**Discrimination and stigma** against marginalized children, particularly children from minority groups and children with disabilities, lead to low political will or administrative capacity to respond to the needs of these groups, and low academic expectations for certain groups of children.

**Gaps in policies and legislation** create barriers to marginalized children's participation and learning. Out-of-school children and adolescents require complex policy responses that employ a holistic approach and are informed and monitored by robust statistical measures; responses must explicitly but not exclusively target the most marginalized children. While Kyrgyzstan has improved its legislative framework (regulation on absenteeism and dropout, new law on preschool education), more is needed at policy level in the area of data collection, school governance and management, inclusive education, particularly for children with disabilities and multi-lingual education. Inefficiencies in the management of education policies lead to some serious **gaps in data and policy implementation**, including in early learning, out-of-school children/dropout, children with disabilities and teachers. There is a **weak cross-sector collaboration** between education, health, child protection, the police and social services at national and local levels, although the country has increasingly recognized in recent years the need to adopt a more cross-sector approach to respond to the overlapping needs of children.

Schools in Kyrgyzstan have **shortages of essential inputs** that are required to deliver preschool and basic education services, such as early learning centres, accessible schools, classrooms and toilets, qualified teachers for preschool and higher education levels (many teachers do not teach the subject they are trained in in lower secondary), transportation in remote areas, textbooks and teaching and learning materials in

majority and minority languages. Moreover, according to UNICEF's preschool and school safety assessment conducted in 2011-2014, 85% of education facilities exhibited a low structural (e.g. buildings) and non-structural (e.g. knowledge, practice) safety level. This means that more than 1 million children are exposed to potential disaster risks.

**Poverty remains a barrier** to participation and learning in Kyrgyzstan, from preschool to upper secondary and vocational education and contributes to dropout, particularly in higher grades. **Social and cultural barriers within specific minority groups** might prevent some children from participating and learning in school although there has been some recent improvement, for instance within the Liuli community. Children with disabilities continue to face a host of barriers within their own families that relate to their access to education in addition to the more traditional school and system level barriers.

## Considerations for policy formation

**Development of new National Education Strategy:** The year 2018 marks the beginning of the 24-36 month cycle in which the Ministry of Education and Science develops a new National Education Strategy for Kyrgyzstan for the years beyond 2020 (EDS 2020+). It needs to be developed in line with National Development Vision 2040 and Taza Koom initiative, Country Programme of Socio-Economic Development (2019-2023) – “Unity, Trust, Creation”, and 3 year Development Programme of the Government (2018-2020), which all should be closely in line with the SDGs and national targets identified to achieve SDG goals.

**Taza Koom programme:** Taza Koom is a high-profile government campaign for a transparent system of governance underpinned by a robust national strategy of digital transformation in every field of social economic and political life. It represents excellent policy momentum to significantly improve coverage of schools and institutions with electricity, internet, as well as improvements to the Education Management Information System.

Lastly, the Kyrgyzstan Education Sector Analysis makes strategic recommendations around four areas:

1. Affirm country ownership and leadership in education reform
2. Ensure a systems approach to policy and programme initiatives
3. Focus on the implementation of policies and delivery of results
4. Build sustainable institutional capacity and support innovation at all levels

## Chapter One. Context and structure

### Introduction

#### The Kyrgyz Republic: Basic Data

<b>Location</b>	Central Asia, west of China, south of Kazakhstan
<b>Area and borders</b>	199,951 sq km; Border countries (4): China 1,063 km, Kazakhstan 1,212 km, Tajikistan 984 km, Uzbekistan 1,314 km
<b>Capital</b>	Bishkek
<b>Administrative units</b>	7 provinces and 2 cities*: <i>Batken, Bishkek* (capital), Chuy, Jalal-Abad, Naryn, Osh, Osh*, Talas, Ysyk-Kol</i>
<b>Government type</b>	Parliamentary republic
<b>Political system</b>	Multi-party democracy
<b>Population</b>	5,727,553 (July 2016 est.); urban population: 36% of total population (2015)
<b>Annual pop. growth</b>	1.09% (2016 est.)
<b>Median age:</b>	Total: 26.2 years
<b>HDI</b>	Value: 0.655 (2014); Rank:120/188 countries
<b>Dependency ratio</b>	Total: 55.3%
<b>Life expectancy at birth</b>	Total population: 70.7 years; Male: 66.5 years; Female: 75.1 years (2016 est.)
<b>Total fertility rate</b>	2.64 children born/woman (2016 est.)
<b>Ethnic groups</b>	Kyrgyz 71%, Uzbek 14%, Russian 8%, Dungan 1%, other 6% (includes Uyghur, Tajik, Turk, Kazakh, Tatar, Ukrainian, Korean, German) (2009 est.)
<b>Religion</b>	Muslim 75%, Russian Orthodox 20%, other 5%
<b>Languages</b>	Kyrgyz (official) 71.4%, Uzbek 14.4%, Russian (official) 9%, other 5.2% (2009 est.)
<b>Labour force</b>	2.732 million (2015 est.)
<b>GDP</b>	\$20.1 billion USD (PPP) (2015 est.)
<b>Inflation rate</b>	6.5% (2015 est.)
<b>Unemployment rate</b>	8.1% (2014 est.); Young people (15-24) total: 13%, male: 12%, female: 16% (2013 est.)
<b>Budget</b>	Revenues: \$1.987 billion; Expenditures: \$2.085 billion (2015 est.)
<b>Public debt (% GDP)</b>	68.8% of GDP (2015 est.)
<b>Natural resources</b>	Arable land 7%; Permanent crops 0.4%; Permanent pasture 48.3%; Forest: 5.1%; Abundant hydropower; gold, rare earth metals; locally exploitable coal, oil, and natural gas; other deposits of nepheline, mercury, bismuth, lead, and zinc

*Sources: GKR-National Statistical Committee; UN; World Bank; World Fact-book.*

The Kyrgyz Republic is a landlocked country in Central Asia, which is bordered by Kazakhstan to the north, China to the east, Uzbekistan to the west and Tajikistan to the south. It is located on the ancient Silk Route, which connects China, the Middle East and Europe. Several of the highest peaks in the world which are over 7000 meters are in the Kyrgyz Republic, and mountains cover almost 90 per cent of the territory. The Kyrgyz Republic's territory is about 200 000 square kilometres, which is almost the size of Great Britain.



**Figure 1.1 Map of the Kyrgyz Republic**



## Politics and International Relations

The Kyrgyz Republic's location between China, the Middle East and Europe along the old Silk Way makes it a strategic spot in international politics, though the country is landlocked and farther from an ocean than any other country on earth. At the same time, the Kyrgyz Republic's relationship with its immediate neighbour countries is mostly limited to socioeconomic activities, giving the major political arena to Russia and USA, which have their strategic military bases in the country. The socioeconomic activities of immediate neighbouring countries of the Kyrgyz Republic include the exchange of natural resources. For example, the Kyrgyz Republic has considerable water resources which Uzbekistan and Kazakhstan lack. At the same time, the Kyrgyz Republic imports gas and oil from Uzbekistan and Kazakhstan.

In terms of internal politics, the Kyrgyz Republic has more liberal social policies than other Central Asian republics. It is also the first country with a parliamentary government in the post-Soviet zone. The election of President Roza Otunbayeva in 2010 is a highly visible gain for women as there are still few women in politics in the Kyrgyz Republic. However, there has been a substantial increase of the number of seats in the National Parliament held by women and currently women hold around one-quarter of seats.

The Kyrgyz Republic has experienced two revolutions (in 2005 and 2010) and several ethnic clashes during the last two decades. This caused massive displacement, migration, distrust among ethnic groups and barriers to schooling.

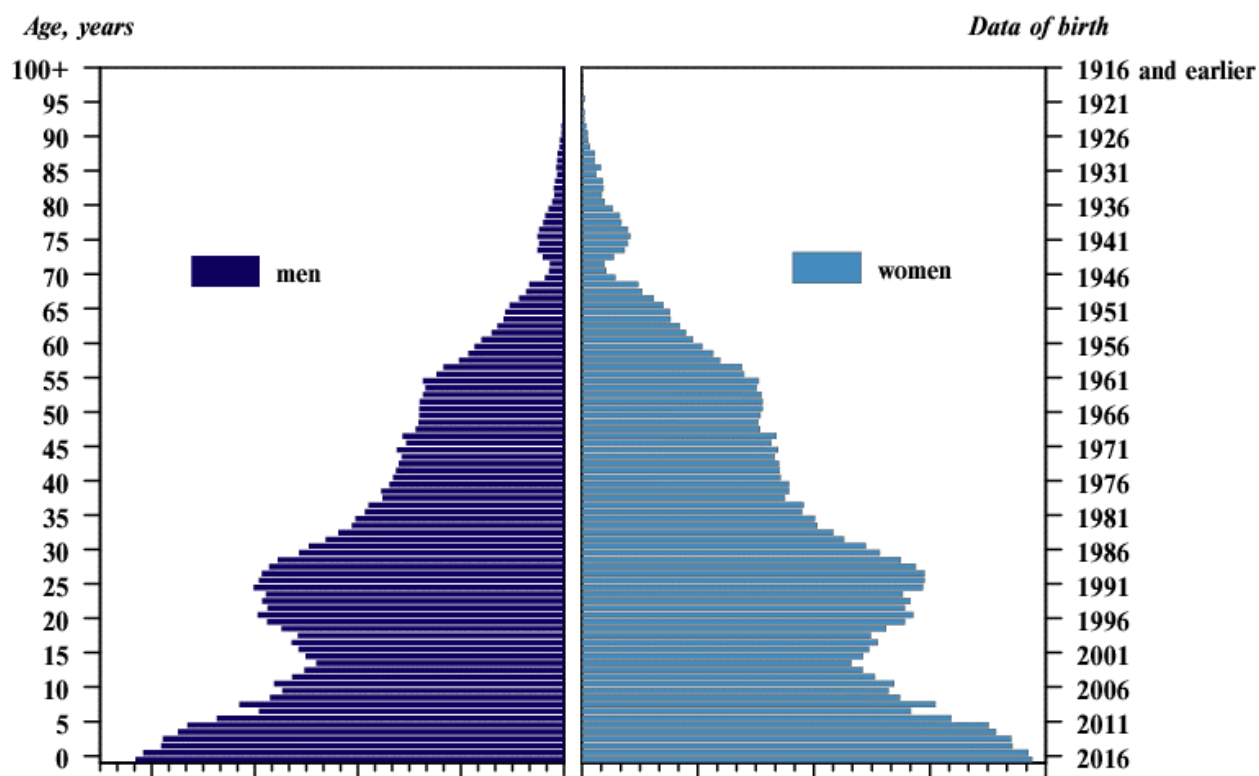
## Social and demographic indicators

Analysis of demographic indicators and ongoing migration processes can help to identify the scale of educational services required in the long run, as well as overall education system expenditure and per-capita spending. According to National Statistical Committee, the permanent population of Kyrgyzstan in early 2017 was 6,140,000 people. Of these, 66 per cent live in rural areas, and 34 per cent in urban settlements, making the country an agriculture-based economy.

Emigration and differences in levels of natural population growth have led to changes to its ethnic composition. The shares of Kyrgyz, Uzbeks and other ethnicities have increased, while the proportions of Russians, Ukrainians, Belorussians, Jews, Germans and other ethnic groups has fallen. However, despite high emigration rates in the 1990s and early 2000s, the spread of ethnicities that were historically settled in the country, has remained the same. Overall, there are representatives of more than 100 ethnicities in the country, with the largest group (2016 estimates) being Kyrgyz– 4,493,000 people (73.2 per cent), Uzbeks – 898,000 (14.6 per cent) and Russians – 357,000 (5.8 per cent).

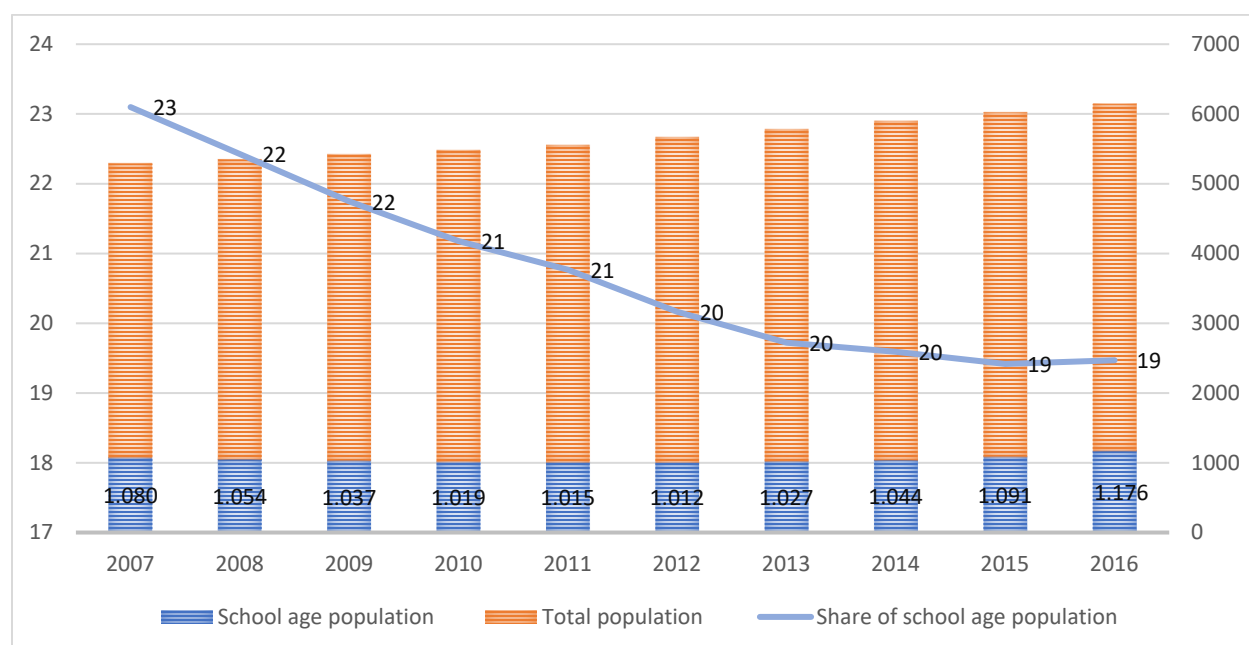
The population of Kyrgyzstan is young: over a third are children and adolescents. At the beginning of 2017, nearly 34 per cent of the population were children and adolescents, 59 per cent persons of working age and 7 per cent older than working age as seen in Figure 1.2. The number of children under five years old significantly exceeds the number of young people aged 20-24 and 25-29 years old (i.e. born between 1987 and 1996), largely because of the substantial increase in the birth rate in the 2000s. Females begin to predominate at about the age of 40, and in age groups older than 80 years, there are two times more women than men. This predominance is mainly due to differences in the age-specific death rates of the male and female population.

**Figure 1.2 Population by sex and age**



(as of 1 January 2017)

The increase in the birth rate in most regions of the country since the 2000s has contributed to a growth in the number of school-aged children. However, in recent years, a slight reduction has been noticed in the share of school-aged children (7-17 years old) in the total population of the country (see Figure 1.3).

**Figure 1.3 School-age population growth***(at end of the year, %)*

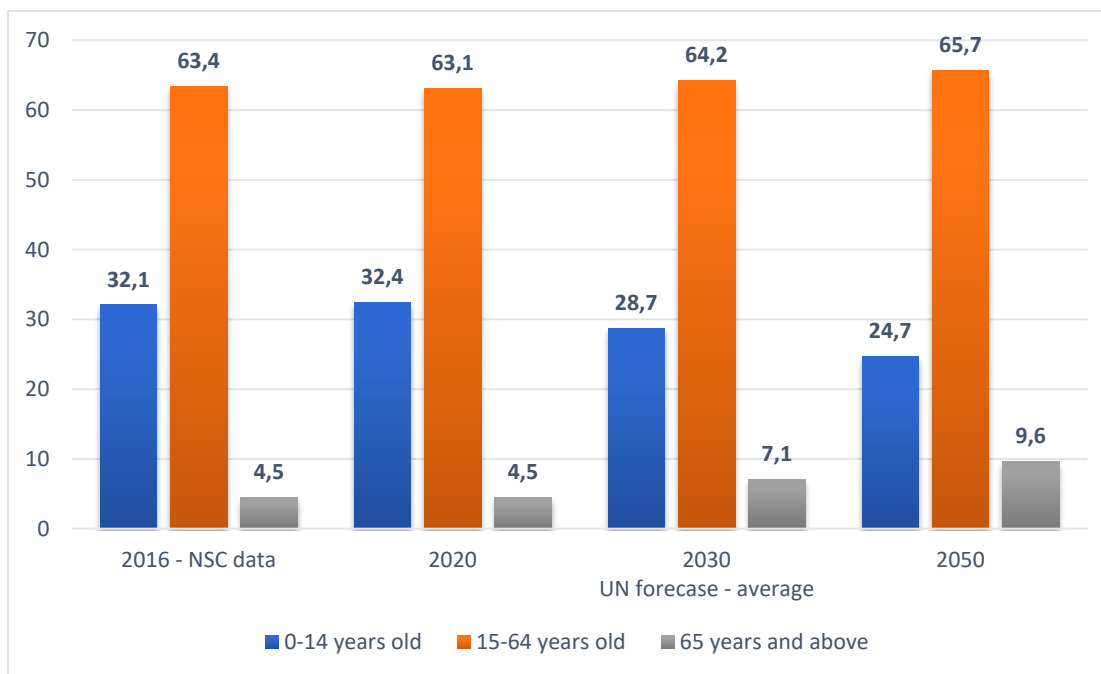
In the past decade, the rate of population growth has been steady at between 1.4 per cent and 2.1 per cent per year. From 2012 to 2016, the indicator remained around 2 per cent, which is considered quite high in compare to global average. For this period, natural population growth (determined from birth and mortality rates), has remained consistently high, ensuring population growth despite net emigration, and this has had a significant impact on the population size (Table 1.1).

**Table 1.1 Key demographic indicators of the Kyrgyz Republic**

Indicators	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total population, thousands	5,289.2	5,348.3	5,418.3	5,477.6	5,551.9	5,663.1	5,776.6	5,895.1	6,019.5	6,140.2
Total ECE age population aged 3-15 years, thousands										
Total school age population aged 7-17 years, thousands	1,221.7	1,199.4	1,178.3	1,160.0	1,152.9	1,141.9	1,139.3	1,154.9	1,168.8	1,195.5
Share of school aged population in total population (%)	23.1	19.7	24.9	22.4	19.2	24.1	21.7	18.3	23.5	21.2
Population growth, annual % (WDI)	-	1.0	1.2	1.2	1.2	1.7	2.0	2.0	2.1	2.1
Rate of natural increase, per 1,000 population	16.8	18.5	20.2	20.6	21.1	21.1	21.6	21.6	20.5	16.8

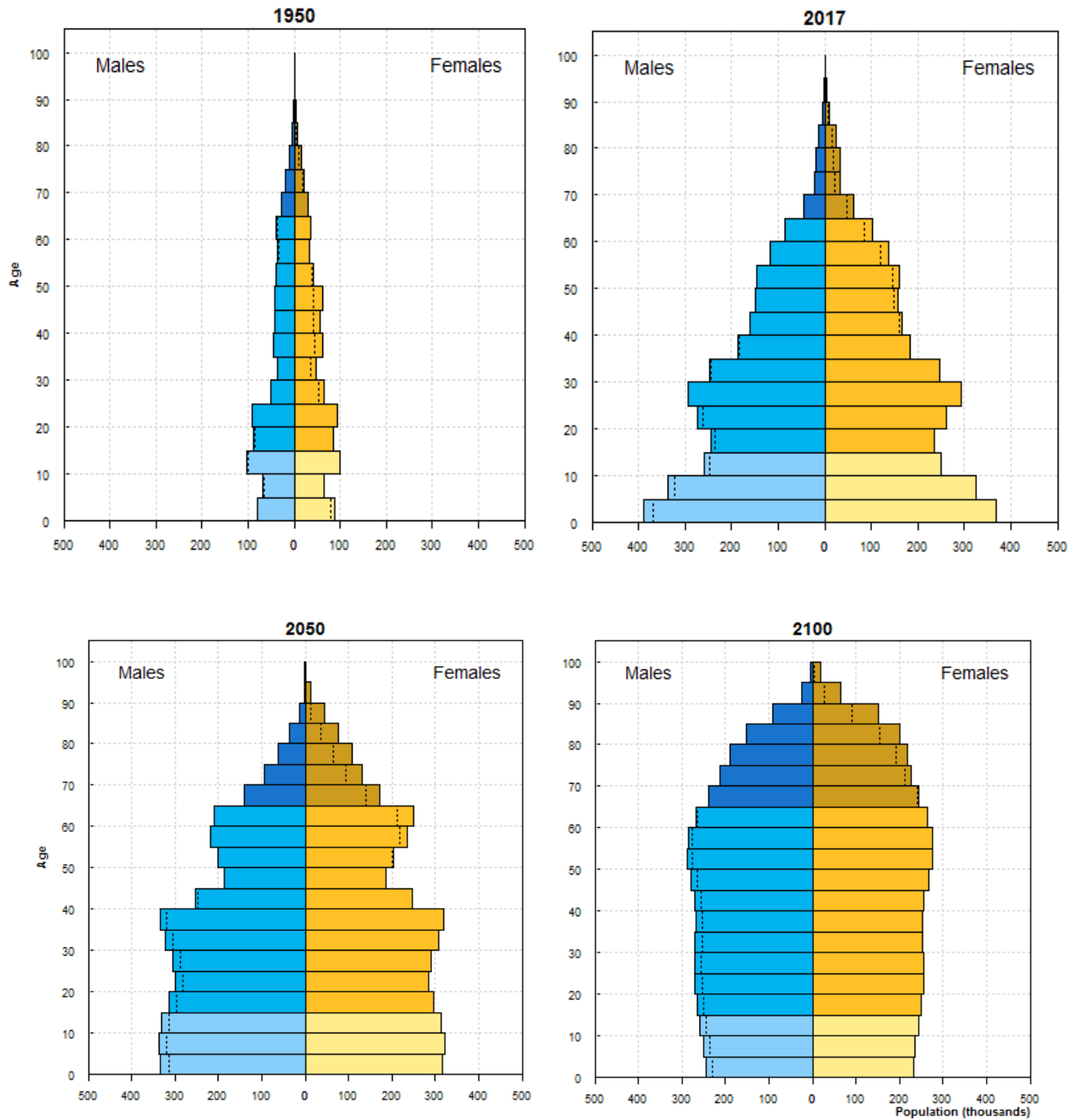
In international practice, the total fertility rate (average number of children born to one woman in her reproductive age) is used to measure the birth rate. In Kyrgyzstan, since the early 2000s, this rate has steadily increased, and reached 3.1 children per woman in average in 2016. To secure simple reproduction or replacement of the population, this rate should not be below 2.1. In many CIS countries unlike in Kyrgyzstan the birth rates have dropped to the replacement rate.

**Figure 1.4 Population growth dynamics and forecast by age cohorts**



According to forecast of the UN Population Division, the population of the Kyrgyz Republic will increase steadily, the share of children in the total population of the country will reduce. The period of "rejuvenation" ended in The early 1970s (Figure 1.4), when the population increase in the proportion of children and adolescents was faster than the decline in the proportion of the elderly, as a result, the proportion of the population in working age decreases, and the level of population pressure increases. Then for 40 years, from 1970 to 2010, Kyrgyzstan passes through the so-called "demographic window", that is, the period when the proportion of the population in working age increases, and the demographic load decreases. It should be noted that the rejuvenation phase was accompanied by a migration influx of the population, while the window is passing the balance of migration is negative.

**Figure 1.5 Historical dynamics and perspectives of the population growth by ages**



Source: *The 2017 Revision of World Population Prospects, Department of Economic and Social Affairs of the UN*

Although the population of the Kyrgyz Republic remains very young, with over half of its citizens below 23 years of age, the ageing process can already be seen in the increased share of the population of retirement age. Soon, the increasing share of older population will be compensated for by a falling proportion of youth, but the demographic dependency rate will be characterized by strong fluctuations in population of employable age, over a period of 20 years, caused by the demographic wave of the 1980s and 1990s.

The inevitable growth in the working age population will increase demand for new jobs, but subsequently it will also increase the proportion of people of retirement age. Entry of youth into the labour market will substantially exceed the rates of those leaving the labour market on achieving retirement age.

Over the past five years, there has been a constant outflow of people from the country, an average of 13,200 people per year. 2012-2015 years showed considerable reduction in external migration of population due to termination of bilateral inter-governmental agreements between Kyrgyzstan and Russia on simplified Russian Federation citizenship gaining processes and changes to its migration legislation, leading to subsequent economic crisis. After Russia, Kazakhstan remains the second most popular country for migration. Despite the reduction in external migration in the past five years (from 39 per cent in 2011 to 28 per cent in 2015), the proportion of migrants remains high.

Kyrgyzstan's population has become more ethnically homogenous because of an increase in the share of the population who are ethnic Kyrgyz from 40.5 per cent in 1959 to 71 per cent in 2009. In the Kyrgyz Republic, there are clear trends of growth of proportions of indigenous ethnic groups to Central Asia (Tajiks, Uzbeks, Uighurs and Dungans) and reduction in European ethnic groups (Russians, Tatars, Germans, Ukrainians). Meanwhile, ethnic Uzbeks (the second largest ethnic group) are concentrated in provinces bordering with Fergana Valley, while ethnic Russians (the third largest ethnic group) primarily live in Bishkek city and Chuy province.

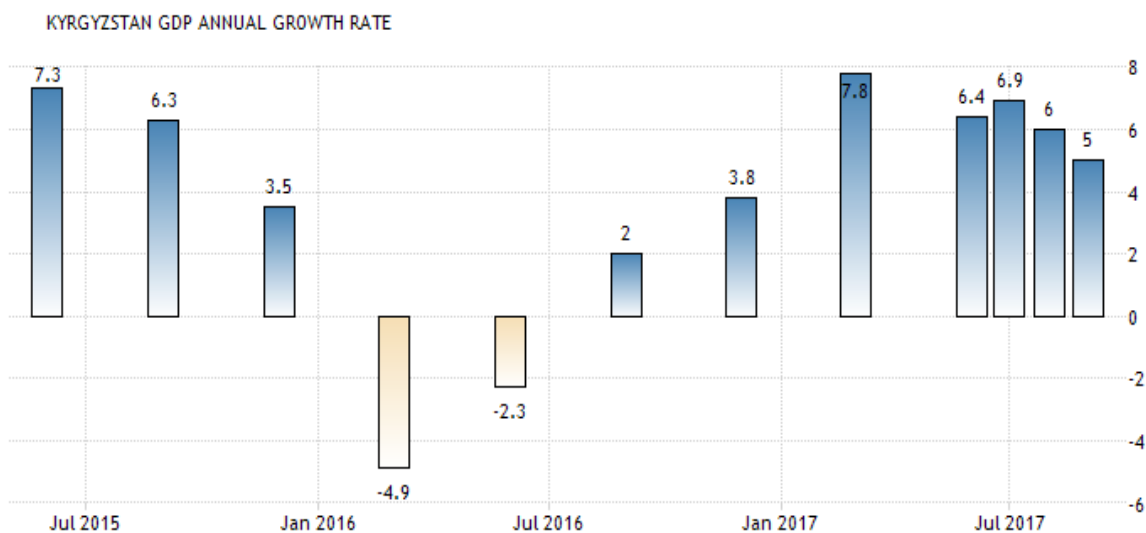
76 per cent of the population speak Kyrgyz, the official state language. For better social integration and cohesion the learning and use of Kyrgyz language as state language have been strengthened in state policy. Russian language is the major tool of interethnic communication, although its importance has slightly reduced after the independency, in recent years it gained high interest as economically beneficial language for labour migrants.

## Economic growth indicators

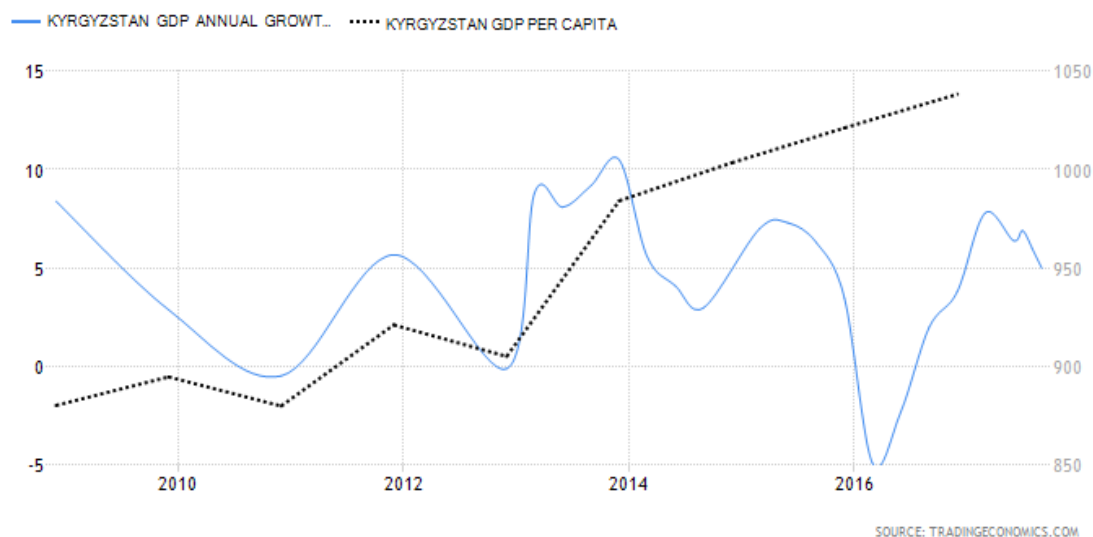
In 2014 the Kyrgyz Republic has been re-classified from a low income country to a lower-middle income country with increase of GNI per capita from USD 1,040 in 2012 to USD 1,200 in 2013. After a few years of steady economic growth between 2006 and 2009, in 2010 the country's economic indicators became volatile because of political instability and global economic changes. In 2013 GDP increased by 10,9 per cent, followed by a slower growth rate of nearly 4 per cent in 2014 and 2015, and 3.5 per cent in 2016. This reduction is attributed to economic crisis in Russia and Kazakhstan caused by falling oil prices.

The Gross Domestic Product (GDP) in Kyrgyzstan expanded 5 percent in the third quarter of 2017 over the same quarter of the previous year. GDP Annual Growth Rate in Kyrgyzstan averaged 3.95 percent from 1994 until 2017, reaching an all time high of 10.50 percent in the fourth quarter of 2013 and a record low of – 20.08 percent in the fourth quarter of 1994.

**Figure 1.6 GDP annual growth rate**



**Figure 1.7 GDP annual growth and GDP per capita growth rates**



The biggest sector of Kyrgyzstan's economy is services. Trade and repairs of motor vehicles; transport and communications; hotels and restaurants; financing and real estate; health care and education and government services account for 56 percent of the GDP. Agriculture contributes 18 percent of the wealth and manufacturing and mining 18 percent. Construction and generation and distribution of electricity, gas and water account for the remaining 8 percent of the output. Private sector development including manufacturing and industry are the centerpiece of the economy, contributing over 90% of total output across key sectors. In 2015, the gold mining sector accounted for 25% of industrial production and about 42% of exports. Excluding the gold sector, real GDP grew between 4 and 5% per year, but has weakened recently due to economic contraction in Russia and decreased demand for Kyrgyz manufacturing and industrial exports.

Manufacturing and industry are potential drivers for long-term economic development<sup>4</sup>. Ongoing challenges for expansion of the industrial and manufacturing sector, including for micro, medium, and small enterprises (MSME) are: a lack of skilled labour, insufficient access to infrastructure and finance, and high transportation costs that prevent integration in global supply chains, especially for MSMEs and agricultural producers. These factors have encouraged many MSMEs to remain in the informal sector with limited growth prospects and more restricted access to export markets, new technologies and management practices, and the formal labour market. About 70% of total employment in the Kyrgyz Republic and the overwhelming majority of working poor are in this informal sector. It is characterized by low productivity and wages, low standards of work safety, few long-term labour contracts, discrimination, and limited protection of workers' rights.

The energy sector has suffered from underinvestment and past mismanagement. The development of smaller hydropower plants could support the longer-term sustainability of the energy system. Low tariffs and a lack of market incentives have deterred businesses and homes from switching to more energy-efficient production and consumption and has side-lined the development of other renewable energy sources, such as: biogas, wind, and solar. While arable land is limited to 7% of the total country, agriculture plays a significant role in the economy of the country and the resilience of the population, contributing 14% of total GDP<sup>5</sup> and employing an estimated 43% of the population.

<sup>4</sup> For example, food and agri-food processing could generate new growth and jobs but just 7% of agricultural produce is processed within the Kyrgyz Republic.

<sup>5</sup> NSC, 2015.

## Economic activity of population

In 2015, 64 per cent of the population was economically active and almost 59 per cent were employment (see Table B.2). Almost a third of overall employment is in the informal sector. In urban areas, every second job is informal; in rural areas, four out of five jobs are informal. This is unchanged since 2009.

The overall unemployment rate in Kyrgyzstan was 7.6 per cent in 2015 (8.1 per cent in 2014). Again, there is a gender gap and the unemployment rate is higher among women than among men. Unemployment is higher in cities than in villages.

The youth unemployment rate is almost two times higher (15 per cent in 2015), than overall unemployment. There is also a gender gap in unemployment among young people: for young women it is 19 per cent and for young men 12.5 per cent. The youth unemployment rate was more volatile than the overall unemployment rate between 2007 and 2016. This shows that youth entering the labour market are more vulnerable to changes in the economy than those who are already employed.

Women face disadvantages in access to economic opportunities and access and control over productive resources. Employment varies significantly across age groups and sectors with significant gender imbalance. The gender pay gap has narrowed in the recent years, from 67% in 2007 to 74% in 2012, but it remains high, driven by the concentration of women in lower paid sectors and the informal economy. Women are underrepresented in managerial positions in public administration.<sup>6</sup> Domestic violence, violence against women and girls, early marriages, adolescent pregnancy, access to and quality of family planning services, and the economic and social status of rural women all need consistent attention and action by government.

Ethnic minorities continue to remain severely under-presented in public life, including in civil service, law enforcement, and judiciary, as well as in political life, with meaningful high level political will to achieve changes missing. This is creating conditions for the gender and ethnic discriminative environment within the public, lack of transparency and gender-blind service provision and in general very low levels of ethnic minority participation in public life and decision-making.

## Poverty

The transition to the market economy led to significant changes in the socio-economic sphere of the Republic. Large-scale political and economic reforms have affected not only the national economy but, above all, the living standards of the population. Superseded from the labour market and from the state economy, people lost their guaranteed work and a steady source of income, many found themselves in the category of poor.

The main indicator of poverty is the proportion of the poor (poverty level in the country), defined as the proportion of the population with capita consumption below the poverty line. Similarly, the level of extreme poverty is calculated as a proportion of the population whose capita consumption is less than the extreme poverty line. The main data sources for the indicators and indicators under consideration are the results of sample household surveys.

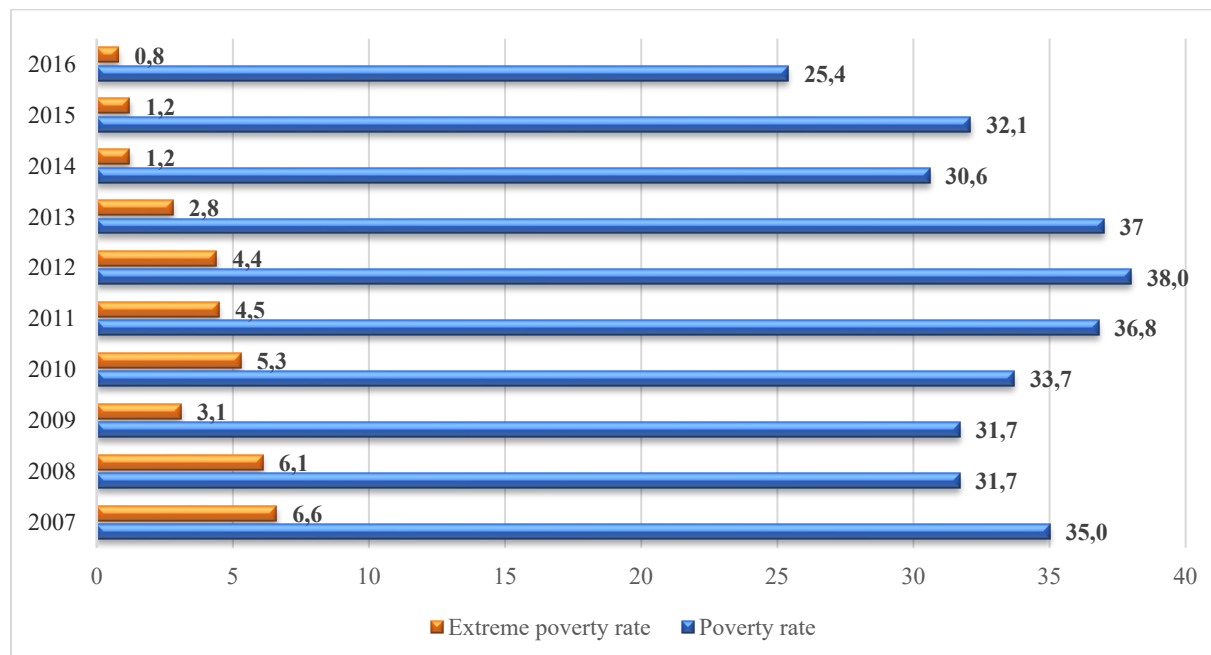
To assess the level of poverty in 2016 the threshold was applied to the poverty line 2015, indexed on the average annual consumer price index. Value of the overall poverty line in 2016 amounted to 31,151 KGS per capita, extreme poverty – 17,052 KGS.

According to the results of the integrated household budget survey, the poverty rate for consumer expenditures decreased from 35.0 percent in 2007. To 25.4 per cent in 2016g. At the same time, the level of extreme poverty declined from 6.6 percent in 2007. To 0.8 percent in 2016g. If in 2007 Almost every eleventh citizen of the Republic fell into the category of very poor, then in 2016g. -One hundred and twenty-fifth, which indicates a decrease in the level of extreme poverty (schedule 5)..

<sup>6</sup> There were 25 women (21%) out of 120 seats in the Parliament in 2012 and now only 16%; in 2012 only 15% of women were in ministerial positions in the Government.



**Figure 1.8 Poverty and extreme poverty rates**

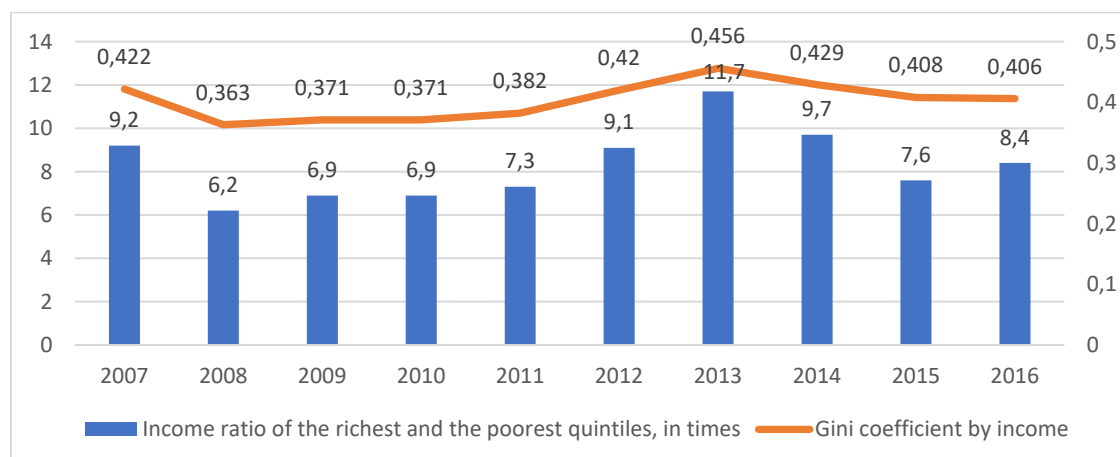


Poverty in the country still continues to be mainly a rural phenomenon. At the same time, 74 per cent of the poor population live in rural areas. Inequality in the development of regions is reflected in the living standards of the population living in different regions of the country.

The poverty depth index shows the ratio of the average consumption deficit of poor people to the poverty line. An assessment of the poverty depth index reveals differences in the level of well-being of the population. From 2007 to 2016 the poverty depth index in the country declined from 6.6 to 5.9 per cent.

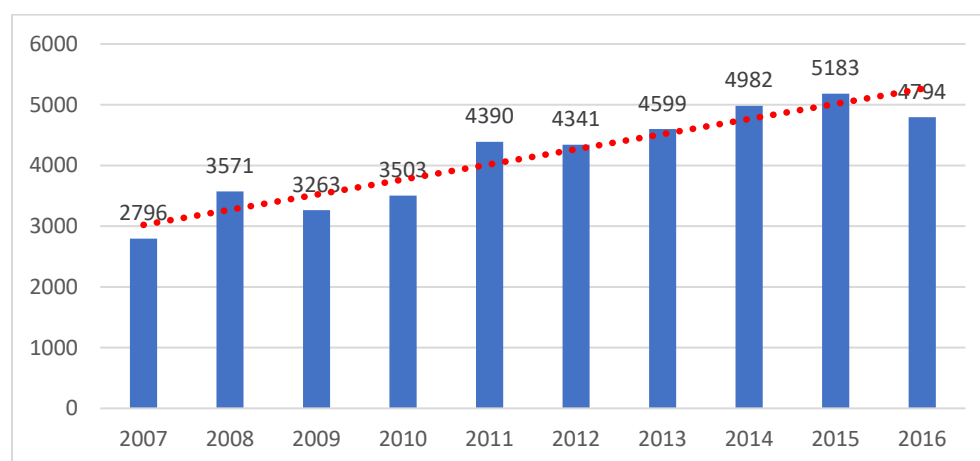
**The distribution of cash income and the Gini coefficient:** The distribution of total cash income among quintiles is in favour of 20 per cent of the population with the highest incomes, who have concentrated about 46 per cent of all cash income. As shown in Figure 1.9, for the period of 2007-2016, the ratio of money incomes between the most and the least secured groups of the population is rather high. Despite this, the ratio of money incomes between the richest and the poorest quintiles of the population decreased from 9.1 times in 2007 to 8.4 times in 2016. The trend towards uneven distribution of income is also reflected in the Gini coefficient, which shows the distribution of the total income of the population between its individual groups and ranges from 0 to 1. The lower the value of this coefficient, the evenly distributed income of the population. The Gini coefficient has shown that inequality in income distribution has declined in Kyrgyzstan over the past five years. If in 2007 this coefficient reached the level of 0.422, then in 2016 it fell to 0.406.

**Figure 1.9 Income inequality of the population**



**The subsistence minimum** – is the cost of the minimum package of material benefits and services, or the minimum consumption basket required to ensure personal wellbeing, maintain health, and pay taxes. The subsistence minimum is the cost of the minimum set of food products, multiplied by the fixed share of expenses for minimum essential non-food items, services and mandatory payments and fees. Of the subsistence minimum, 65 per cent comes from food products, 16 per cent from non-food items, 17 per cent from services and 2 per cent from taxes.

**Figure 1.10 Subsistence level average per month in KGS**



For 2007-2016, the average annual subsistence level increased from 2796 KGS to 4794 KGS, and compared to 2015 its value decreased by 7.5 per cent in 2016.

## The Human Development Index (HDI)

**The Human Development Index (HDI)** is the key tool for assessing the country's achievements in the area of human development, made up of life expectancy at birth, mean and expected years of schooling, and GDP per capita at purchase power parity in US dollars. According to the United Nations, Kyrgyzstan is in the medium human development category. It was ranked 120<sup>th</sup> of 188 countries, between South Africa and Iraq, with an HDI of 0.699, which is slightly higher than the previous HDI, which was 0.655. The CIS countries with the highest HDI rankings in the past 15 years were Russia, Belarus and Kazakhstan, while Ukraine, Kyrgyzstan, Turkmenistan and Tajikistan had the lowest rankings.

**Table 1.4 Human Development Index and its components in 2015**

HDI Ranking	Country	HDI	Life expectancy at birth (years)	Expected years of schooling	GNI per capita (2011 PPP \$) *	GNI ranking per capita minus HDI ranking
49	Russia	0.804	70.3	15.0	23,286	1
52	Belarus	0.796	71.5	15.7	15,629	19
56	Kazakhstan	0.794	69.6	15.0	22,093	-3
78	Azerbaijan	0.759	70.9	12.7	16,413	-12
84	Armenia	0.743	74.9	12.7	8,189	28
105	Uzbekistan	0.701	69.4	12.2	5,748	21
107	Moldova	0.699	71.7	11.8	5,026	31
111	Turkmenistan	0.691	65.7	10.8	14,026	-32
120	Kyrgyzstan	0.664	70.8	13.0	3,097	32
129	Tajikistan	0.627	69.6	11.3	2,601	30

Source: Human Development Report, 2016.

Table 1.4 compares rankings by levels of average national income and HDI. Almost all these countries experience problems ensuring access to knowledge: mean and expected years of schooling are much lower than in countries with similar HDI rates. There are 28,400 illiterate people aged 15 years old and older in Kyrgyzstan or 0,8 per cent of this age group, with a 0.3 per cent figure in urban settlements and 0.9 per cent in rural areas. Women are twice as likely to be illiterate than men. Almost 70 per cent of illiterate people are aged above 55 years, while in 1999, 82 per cent were above that age.

The overall situation in Kyrgyzstan can be seen in the following international estimations and indicators:

- Corruption Perception Index (Transparency International): 135<sup>th</sup> out of 180 countries (2017);
- Doing Business (World Bank): 77<sup>th</sup> out of 190 countries (2018);
- Global Peace Index (Institute for Economics and Peace): 111<sup>th</sup> out of 163 countries (2017); and
- Global Competitiveness Index (World Economic Forum): 102<sup>nd</sup> out of 137 countries (2017-2018).

## Chapter Two. Access to Education

The education system in the Kyrgyz Republic consists of pre-school institutions, primary schools, secondary schools, vocational schools, specialized technical schools, and universities. While pre-school and upper secondary school are non-compulsory in the Kyrgyz Republic, primary and lower secondary education are compulsory and last nine years. In accordance with the Law on Education, compulsory education consists of general primary for grades 1 to 4 and general lower secondary for grades 5 to 9. The ISCED (International Standard Classification of Education) levels and corresponding levels of education in the Kyrgyz Republic are shown in the table below.

**Table 2.1 Kyrgyz Republic's ISCED 2011 mapping<sup>7</sup> (School Year reference: 2015)**

Name of the education programme (English)	Theoretical entrance age	Theoretical duration (in years)	ISCED 2011 level		ISCED 2011 Access (Y/N)	Notes
Pre-primary education for young children (under 3 y.o.)	1	2	Early childhood education	0	-	
Pre-primary education	3	3	Early childhood education	0	-	
Preparation for school	6	1	Early childhood education	0	-	Part of compulsory education
Primary general education	7	4	Primary education	1	-	Part of compulsory
Basic general secondary education (1st stage of secondary)	11	5	Lower secondary education	2	Yes, to ISCED 3	Part of compulsory education
Secondary general education (2nd stage of secondary)	16	2	Upper secondary education	3	Yes, to ISCED 4 and 5, 6, 7 (tertiary)	
Basic vocational education based on basic general secondary	16	2	Upper secondary education	3	Yes, to ISCED 4 and 5, 6, 7 (tertiary)	
Grades 1-2 of secondary vocational education based on Basic General Secondary	16	2	Upper secondary education	3	Yes, to ISCED 5, 6, 7 (tertiary) only	
Basic vocational education based on secondary general education	18	1	Post-secondary non-tertiary education	4	Yes, to ISCED 5, 6, 7 (tertiary) only	
Grades 3-4 of secondary vocational education based on Basic General Secondary	18	2	Short-cycle tertiary education	5	-	
Secondary Vocational education based on General Secondary education	18	3	Short-cycle tertiary education	5	-	
Higher professional education	18	4	Bachelor's or equivalent level	6	-	
Higher professional education (leading to entry into advanced research programmes)	18	5	Master's or equivalent level	7	-	

<sup>7</sup> These are the ISCED 1997 mappings, which have not yet been updated to the new ISCED 2011, which includes changes in the classification of early childhood and tertiary education and introduces educational attainment in the framework. The ISCED mappings were retrieved from the UNESCO Institute for Statistics website: <http://www.uis.unesco.org/Education/ISCEDMappings/Pages/default.aspx>



Secondary special educational institutions	3,327	4,290	5,818	6,739	9,140	10,999	13,247	12,013	11,263	11,407	14.5%
Higher educational institutions	24,883	25,625	26,324	27,848	29,808	27,525	27,009	25,616	23,883	21,964	-1.0%

## Access to preschool education

In Kyrgyzstan in the 1990s, some preschool institutions were closed or re-profiled. The number of preschool institutions for children aged 0-7, generally referred to as "kindergartens" in Kyrgyzstan, fell from 1,604 in 1993 to 416 in 1999 (DeYoung, 2005). To address this challenge, pre-school education was defined as one of the priority areas in the Education Development Strategy of the Kyrgyz Republic for 2012-2020.

Over the past decade, Kyrgyzstan has made steady progress in providing access to education at pre-primary level. In addition to two types of government-funded preschool services – traditional nurseries (for children aged six months to three years) and kindergartens (for three to seven year olds), two important innovations in provision of early care have been instrumental in expanding access to and the benefits of pre-school: Community Based Kindergartens (CBK) and the Nariste 480-hour school-readiness programme. By passing responsibility for feeding the children to families, CBKs provided a cost-effective option to the Government (and its development partners) for expanding developmental enrichment to children aged three to seven years. The Nariste programme – a universal school-readiness programme for children who otherwise would not attend any ECD programmes before entering primary school – was increased to a 480-hour course of one academic year by 2015, with support from GPE. This in turn met a key national objective of providing a minimum level of pre-school enrichment to most school going children of the country. Table 2.2 presents all types of ECD institutions.

Beginning in 2016 the 100-hour programme was introduced as school preparatory programme for children aged six and seven years before entering primary school and ran in the summer. Later from 2011, the Government extended it to 240-hour programme and it ran for few months during the spring term. Since 2015, the programme has expanded to 480-hour programme and is currently delivered throughout the academic year. The expansion was supported by GPE within the EDS (2012-2020).

**Table 2.2 Types of ECD institutions<sup>8</sup>**

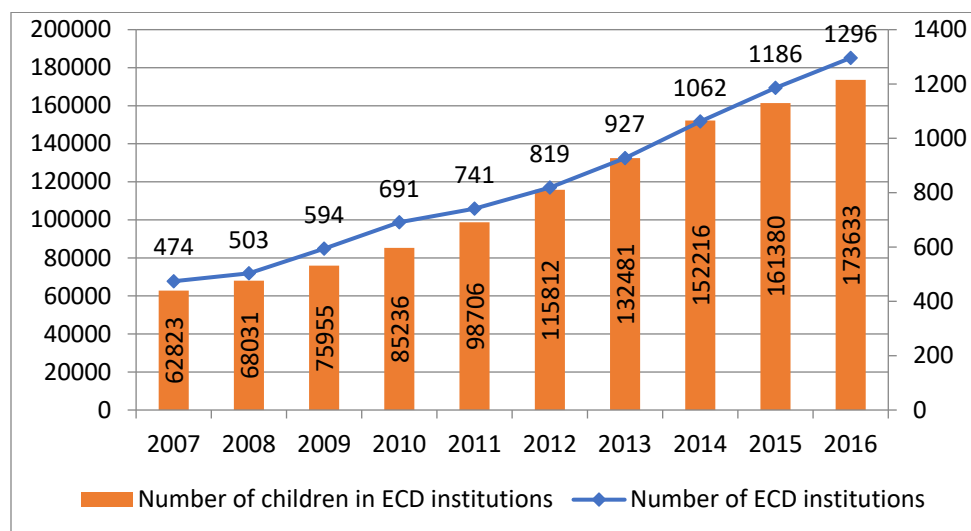
Provision	Description
Nurseries	Care and developmental support for children aged six months to three years.
Kindergartens	Care and developmental support for children aged three to seven years for 8 to 24 hours a day, with beds, kitchen, principal, and support staff such as cooks, laundry workers, on-site medical personnel, and others depending on the number of classes (van Ravens, 2010). This category also includes "special kindergartens" for children with special needs.
CBKs	Half-day to full-day care and developmental support for children aged three to seven; largely supported by development partners (UNICEF, ADB, AKF, OSI, GPE and WB). It also includes tent-like <i>jailoo</i> kindergartens in the high mountain pastures for children from families that move to remote areas for several months a year to graze livestock.

As the data below demonstrates, there is an upward trajectory in supply of early childhood care and education, especially in full-service nurseries and kindergartens. This indicates that more children are receiving developmentally appropriate care and education.

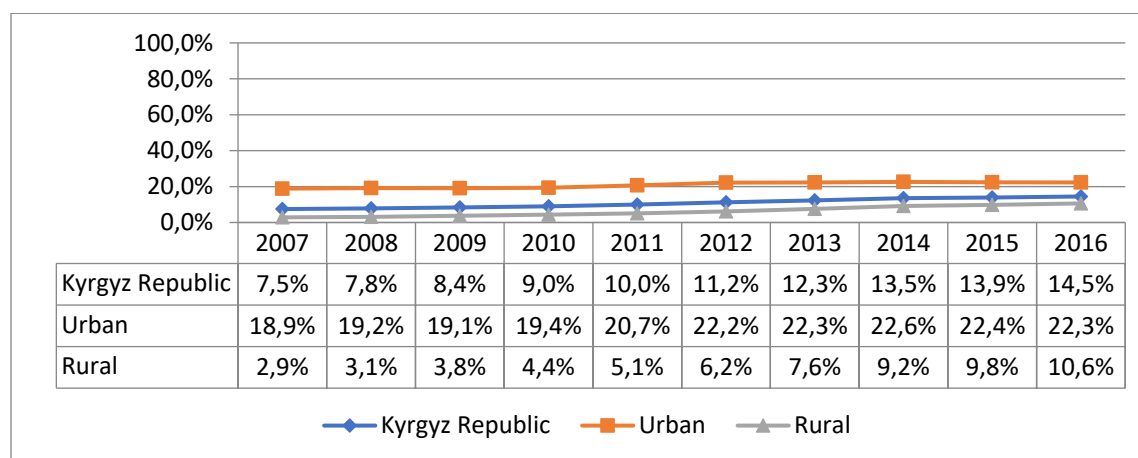
<sup>8</sup> Analytical Review of Governance, Provision and Quality of Early Childhood Education Services at the Local Level in Countries of Central and Eastern Europe and the Commonwealth of Independent States (CEE/CIS). UNICEF 2017

**Table 2.3 Number of ECD Institutions by Type**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Average Annual Growth Rate
<b>Nursery</b>	0	0	11	16	18	36	59	123	135	234	59%
<b>Kindergarten</b>	474	503	546	633	659	713	803	899	1015	1037	9%
<b>CBK</b>	0	0	37	42	64	70	65	40	36	25	-2%
<b>Total</b>	<b>474</b>	<b>503</b>	<b>595</b>	<b>691</b>	<b>741</b>	<b>819</b>	<b>927</b>	<b>1062</b>	<b>1186</b>	<b>1296</b>	<b>12%</b>

**Figure 2.1 Number of ECD institutions and number of children aged 0-7**

The growth in the number of preschool age children population from 2007 to 2016 was 43 per cent, with an average annual growth rate of 4 per cent. The percentage coverage of children aged 0-7 years by type of pre-school organization is presented in Table 2.3 below. Since enrolment to ECD institutions starts from six months, these data do not show the exact coverage rate, but give a picture of the general trend, one of them is that access to pre-school institutions is twice as high in urban as in rural areas.

**Figure 2.2 Children aged 0-7 covered by ECD (by type of location)**

In urban areas, coverage has increased over the last five years largely due to increases in the number of children in existing kindergartens, to an average of 230 children, while in rural areas the average number

of children per institution is 93. Most ECD coverage in Kyrgyzstan is for the age group 3-6 years, which is used in official statistics to calculate coverage rates. The gross enrolment ratio has doubled in ten years, but still only every fourth child has access to early childhood services.

**Table 2.4 Enrolment of children (aged 3-6) in ECD institutions**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Number of children aged 3-6 in ECD	51,123	55,925	62,590	70,313	82,023	96,967	111,176	129,519	138,828	149,676
Total number of children aged 3-6	409,750	421,490	434,215	454,091	459,198	482,766	514,096	536,616	572,211	593,289
<b>NER</b>	<b>12.5</b>	<b>13.3</b>	<b>14.4</b>	<b>15.5</b>	<b>17.9</b>	<b>20.1</b>	<b>21.6</b>	<b>24.1</b>	<b>24.3</b>	<b>25.2</b>
<b>GER</b>	<b>13.0</b>	<b>13.9</b>	<b>15.1</b>	<b>16.2</b>	<b>18.7</b>	<b>21.0</b>	<b>22.9</b>	<b>25.4</b>	<b>25.1</b>	<b>26.0</b>

In rural areas, the number of children enrolled in ECD institutions has been increasing at a faster pace, which may partly be because increased CBKs set up in rural areas with less establishment costs. Whereas increase in urban coverage may partly arise from development of private ECD institutions. Currently about 8.5 per cent of ECD institutions are private with coverage rate of about 4 per cent. For 2014 NSC reports the number of private kindergartens to be 100 as of 2015 based on license records, there are now more than 200 in Bishkek alone, with nearly half operating without a license.<sup>9</sup> The rural-urban breakdown data by regions presented below, along with the relatively small number of ECD institutions presented earlier, creates a credible challenge of ECD centres running at over-capacity in certain regions such as Issyk-Kul, Osh province and Osh city.

**Table 2.5 Children aged 3-6 in ECD institutions by type of location and region (oblast)**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Average Annual Growth Rate
<b>Kyrgyz Republic</b>	<b>51,123</b>	<b>55,925</b>	<b>62,590</b>	<b>70,313</b>	<b>82,023</b>	<b>96,967</b>	<b>111,176</b>	<b>129,519</b>	<b>138,828</b>	<b>149,676</b>	<b>7.25</b>
Urban	37,357	40,108	42,705	46,238	52,692	59,879	63,544	69,244	71,841	74,725	3.86
Rural	13,766	15,817	19,885	24,075	29,331	37,088	47,632	60,275	66,987	74,951	10.63
<b>Batken oblast</b>	<b>2,339</b>	<b>2,538</b>	<b>3,919</b>	<b>4,560</b>	<b>5,284</b>	<b>6,564</b>	<b>8,810</b>	<b>11,731</b>	<b>12,837</b>	<b>15,041</b>	<b>14.65</b>
Urban	1,947	1,967	2,416	2,647	2,848	3,696	4,351	4,979	5,082	5,380	5.54
Rural	392	571	1,503	1,913	2,436	2,868	4,459	6,752	7,755	9,661	19.73
<b>Jalalabad oblast</b>	<b>9,592</b>	<b>10,205</b>	<b>10,775</b>	<b>11,250</b>	<b>12,935</b>	<b>15,073</b>	<b>17,214</b>	<b>19,903</b>	<b>22,032</b>	<b>23,614</b>	<b>6.70</b>
Urban	5,001	4,925	5,072	5,238	5,781	6392	7012	7640	8214	8672	5.28
Rural	4,591	5,280	5,703	6,012	7,154	8,681	10,202	12,263	13,818	14,942	7.52
<b>Issyk Kul oblast</b>	<b>3,881</b>	<b>4,261</b>	<b>4,862</b>	<b>5,589</b>	<b>6,514</b>	<b>7,412</b>	<b>8,899</b>	<b>9,837</b>	<b>10,555</b>	<b>11,979</b>	<b>11.89</b>
Urban	2,833	2,994	3,424	3,715	4,359	4,827	5,601	5,863	6,471	6,749	4.12
Rural	1,048	1,267	1,438	1,874	2,155	2,585	3,298	3,974	4,084	5,230	21.91
<b>Naryn oblast</b>	<b>1,468</b>	<b>1,762</b>	<b>2,706</b>	<b>3,863</b>	<b>4,787</b>	<b>5,561</b>	<b>6,701</b>	<b>8,660</b>	<b>7,759</b>	<b>8,193</b>	<b>5.30</b>
Urban	794	906	896	1,081	1,208	1,114	1,477	1,740	1,653	1,577	-4.82
Rural	674	856	1,810	2,782	3,579	4,447	5,224	6,920	6,106	6,616	7.71

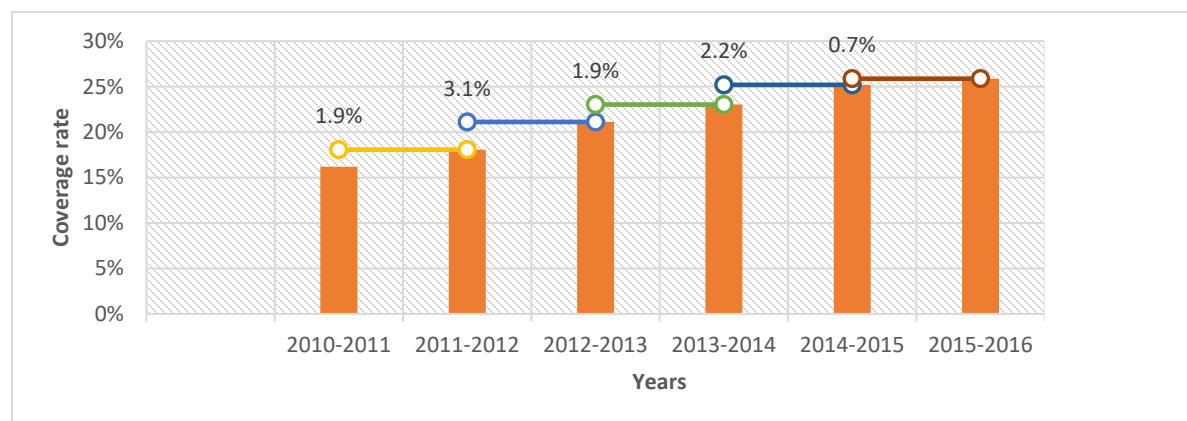
<sup>9</sup> UNICEF, *Analytical Review of Governance, Provision and Quality of Early Childhood Education Services at the Local Level in Countries of Central and Eastern Europe and the Commonwealth of Independent States (CEE/CIS)*, 2017



<b>Osh oblast</b>	<b>4,473</b>	<b>5,079</b>	<b>6,285</b>	<b>7,490</b>	<b>9,800</b>	<b>12,466</b>	<b>16,392</b>	<b>19,428</b>	<b>22,556</b>	<b>25,233</b>	<b>10.61</b>
Urban	1,449	1,490	1,494	1,510	2,058	2,053	1,364	1,479	1,406	1,628	13.64
Rural	3,024	3,589	4,791	5,980	7,742	10,413	15,028	17,949	21,150	23,605	10.40
<b>Talas oblast</b>	<b>1,685</b>	<b>1,698</b>	<b>1,893</b>	<b>2,500</b>	<b>2,934</b>	<b>3,564</b>	<b>4,268</b>	<b>5,390</b>	<b>5,788</b>	<b>5,785</b>	<b>-0.05</b>
Urban	863	824	1,007	1,234	1,377	1,406	1,485	1,878	1,781	1,744	-2.12
Rural	822	874	886	1,266	1,557	2,158	2,783	3,512	4,007	4,041	0.84
<b>Chui oblast</b>	<b>5,846</b>	<b>6,325</b>	<b>6,936</b>	<b>7,682</b>	<b>8,590</b>	<b>10,367</b>	<b>11,254</b>	<b>14,836</b>	<b>16,292</b>	<b>17,646</b>	<b>7.67</b>
Urban	2,631	2,945	3,182	3,434	3,882	4,431	4,616	5,931	6,225	6,790	8.32
Rural	3,215	3,380	3,754	4,248	4,708	5,936	6,638	8,905	10,067	10,856	7.27
<b>Bishkek city</b>	<b>16,917</b>	<b>18,634</b>	<b>19,629</b>	<b>22,172</b>	<b>24,348</b>	<b>27,379</b>	<b>27,941</b>	<b>28,398</b>	<b>29,003</b>	<b>29,622</b>	<b>2.09</b>
Urban	16,917	18,634	19,629	22,172	24,348	27,379	27,941	28,398	29,003	29,622	2.09
<b>Osh city</b>	<b>4,922</b>	<b>5,423</b>	<b>5,585</b>	<b>5,207</b>	<b>6,831</b>	<b>8,581</b>	<b>9,697</b>	<b>11,336</b>	<b>12,006</b>	<b>12,563</b>	<b>4.43</b>
Urban	4,922	5,423	5,585	5,207	6,831	8,581	9,697	11,336	12,006	12,563	4.43

More significantly, the rate of growth of coverage for 3-6 year olds has been declining over the last three years (see Figure 2.4), despite the fact that about 190 previously privatized kindergarten buildings were returned to the system (though not all are being used yet). Nevertheless, the number of preschool-aged children is increasing, and so the need is increasing.

**Figure 2.4 Rate of growth of coverage for ages 3-6, 2010-2016**



Source: UNICEF, based on NSC data (2017)

According to the 2014 MICS Survey, there are significant differences in ECD enrolment by household income level. Fifty per cent of children from the highest quintile of households attend such programmes, compared to 11.7 per cent in the poorest quintile. MICS also revealed ECD coverage of children aged 36-47 months (19.2 per cent) to be lower than for 48-59 month olds (26.4 per cent).<sup>10</sup>

The Nariste 480 hours pre-school programme remains one of the most successful school readiness policy measures in Kyrgyzstan's Education Development Strategy 2012-2020. This policy focus remained consistent, and was systematically implemented. From a 100-hour pre-school programme, it grew to 240 hours, and then to 480 hours as a school-based academic year of preparation for entering Grade 1 grade. The Ministry of Education and Science reports that the programme covers almost 100 per cent of pre-school age children who did not attend other forms of preschool education, but according to NSC data the total coverage of any pre-school/ECD programme among children entering Grade 1 increased from 55.6 per cent in 2015/16 to 78.9 per cent in 2017/18.

<sup>10</sup> MICS, 2014

**Table 2.6 National coverage of pre-school programmes <sup>11</sup>**

Academic year	All children entering Grade 1					Total number of Grade 1 pupils who attended pre-school	Total number of Grade 1 pupils	% of coverage
	240 hour programme	Nariste (480 hour programme)	ECD institutions	"Mother's school" Preparatory course	Other school preparation courses			
2015-2016	38,828	25,455	6,808	740	279	72,110	129,630	55.6%
2016-2017	54,995	28,206	23,240	382	124	106,947	140,041	76.4%
2017-2018	57,457	27,625	25,799	346	110	111,337	141,066	78.9%

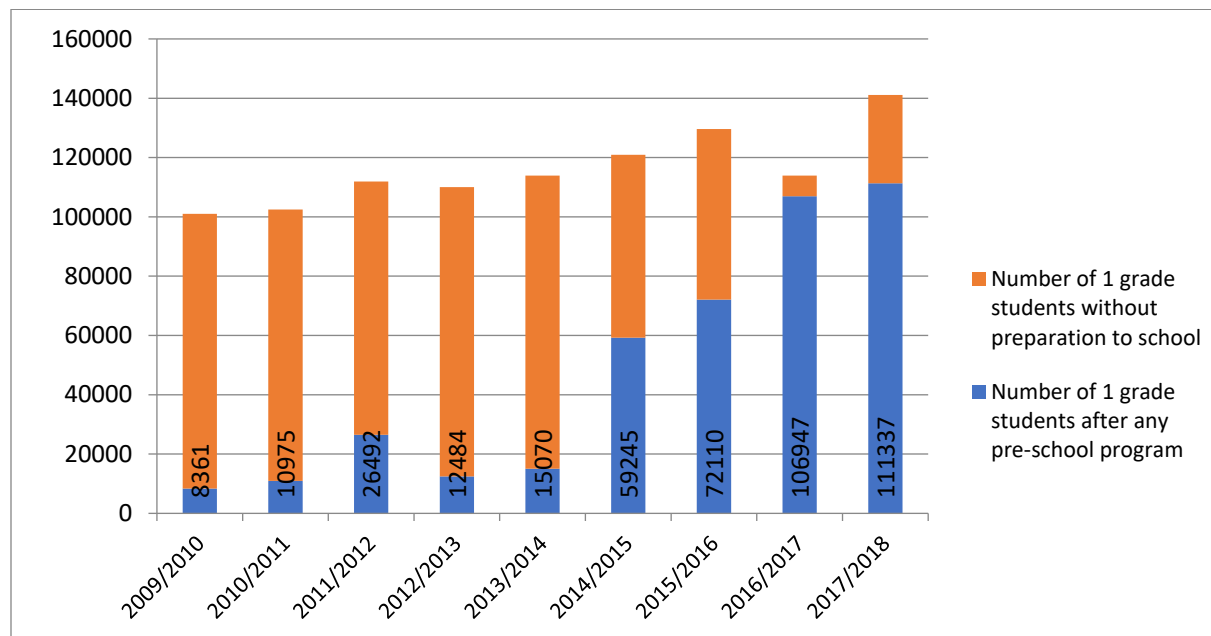
The data presented below confirm that in 2016/17 schools still used both types of preparation programs, although Nariste had officially replaced the 240 hours programme.

**Table 2.7 Regional coverage of 480 hours Nariste programme (2016/17)**

	Of all children entering 1st grade with ECD exposure				
	240 hour program	480 hour program	Kindergarten	Prep courses within School	Other early care institutions for younger children
<b>Kyrgyz Republic</b>	<b>57457</b>	<b>27625</b>	<b>25799</b>	<b>346</b>	<b>110</b>
Batken Region	9202	5308	915	-	-
Jalal-Abad Region	7860	4953	2747	-	-
Issyk-Kul Region	3585	127	3351	-	-
Naryn Region	5534	1106	4428	-	-
Osh Region	13068	8637	4367	-	-
Talas Region	4680	1887	2499	169	22
Chui Region	9370	4387	4869	26	88
Bishkek City	2059	1220	524	151	-
Osh City	2099	-	2099	-	-

Figure 2.7 clearly shows a sharp jump in the number of first-graders who entered school after a pre-school programme in 2015, when the 240-hours (in spring semester 2015) and Nariste programme (from September 2015) were approved and introduced to schools. It is fair to say, based on the discussions above, that the school preparation programme has significantly smoothed the transition of children from pre-school age to Grade 1 of school education.

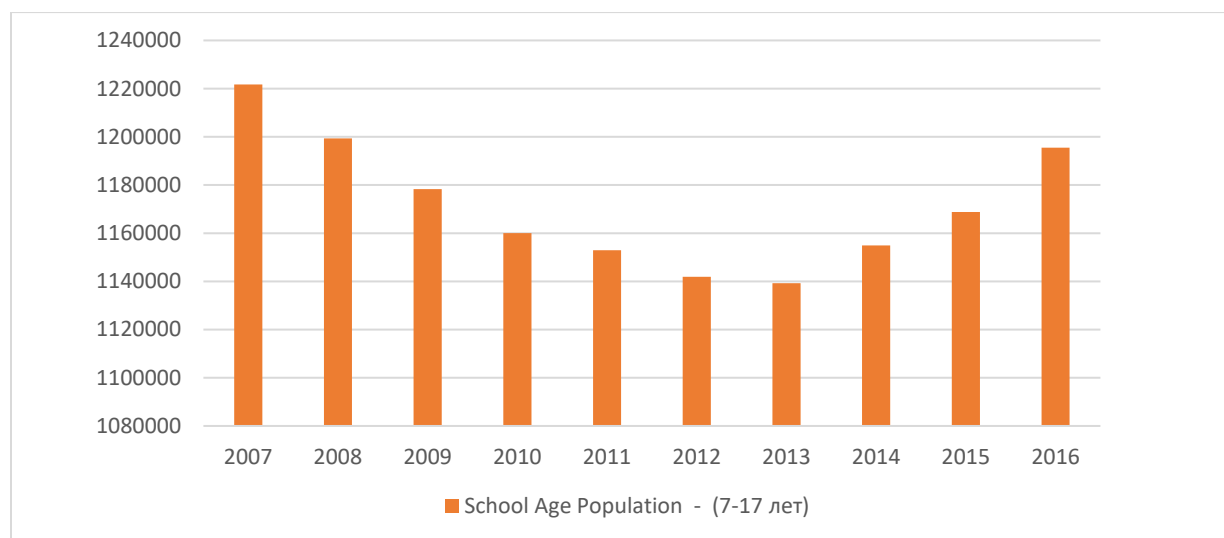
<sup>11</sup> Reported from 2015 when 240-hours and 480-hours programs were officially approved and introduced to school

**Figure 2.5 Number of children entering Grade 1 after pre-school programme**

## Access to primary and secondary general education

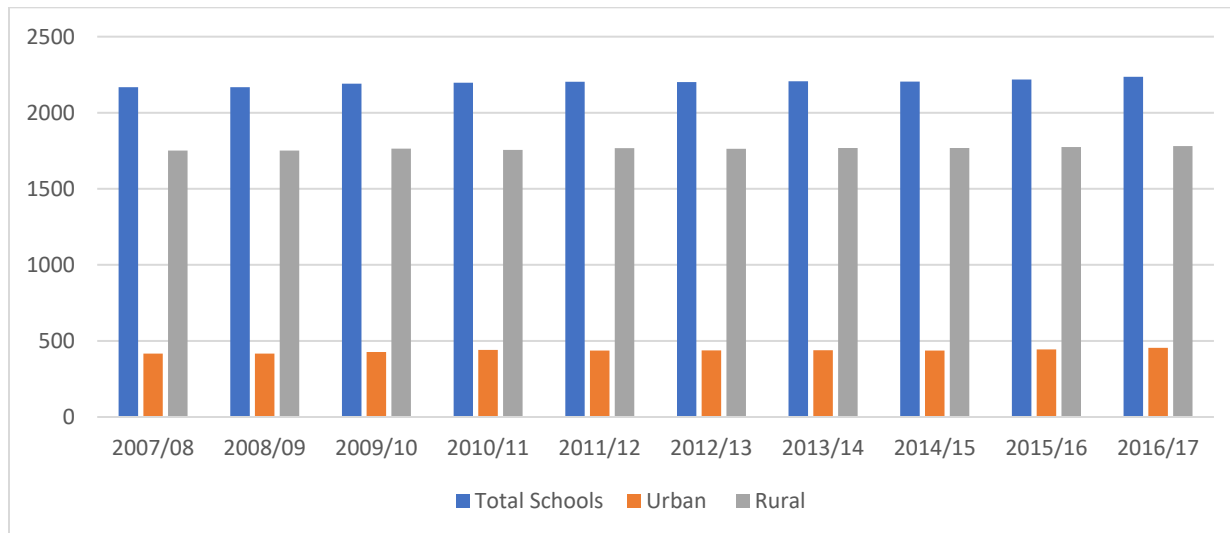
### 2.1. Dynamics of changes in the enrolment of pupils and analysis of school education coverage

When it comes to compulsory school education, apart from the decline in the years following the political unrest of 2010/2011, enrolment has been consistently high, reaching 98.4 per cent in 2016. The increase in the number of school-aged children (aged 7-17 years) since 2013 is also worth noting. The average annual growth rate has been 8.5 per cent since 2007; while since 2012 there has been a constant increase in the number of children, while the number of schools has not changed significantly, from 2,168 schools in 2007 to 2,236 in 2016.

**Figure 2.6 Dynamics of changes in school age population (7-17 years old)**

Source: NSC 2017

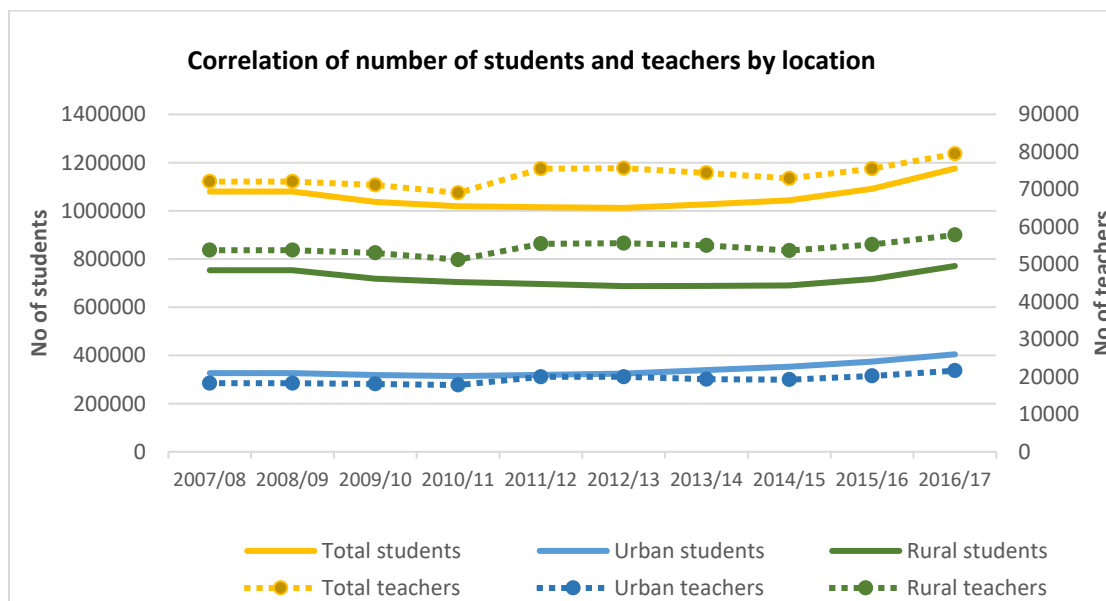
**Figure 2.7 Number of schools by locations**



Source: NSC 2017

As urban and rural locations have different patterns of population density, accessibility and general infrastructure across the country, so comparing urban and rural access is instructive. It should be noted that growth has occurred in the number of school-age children since 2012 in both urban and rural areas and as for the population forecast data, the number is expected to increase.

**Figure 2.8 Urban and rural distribution of students and teachers**

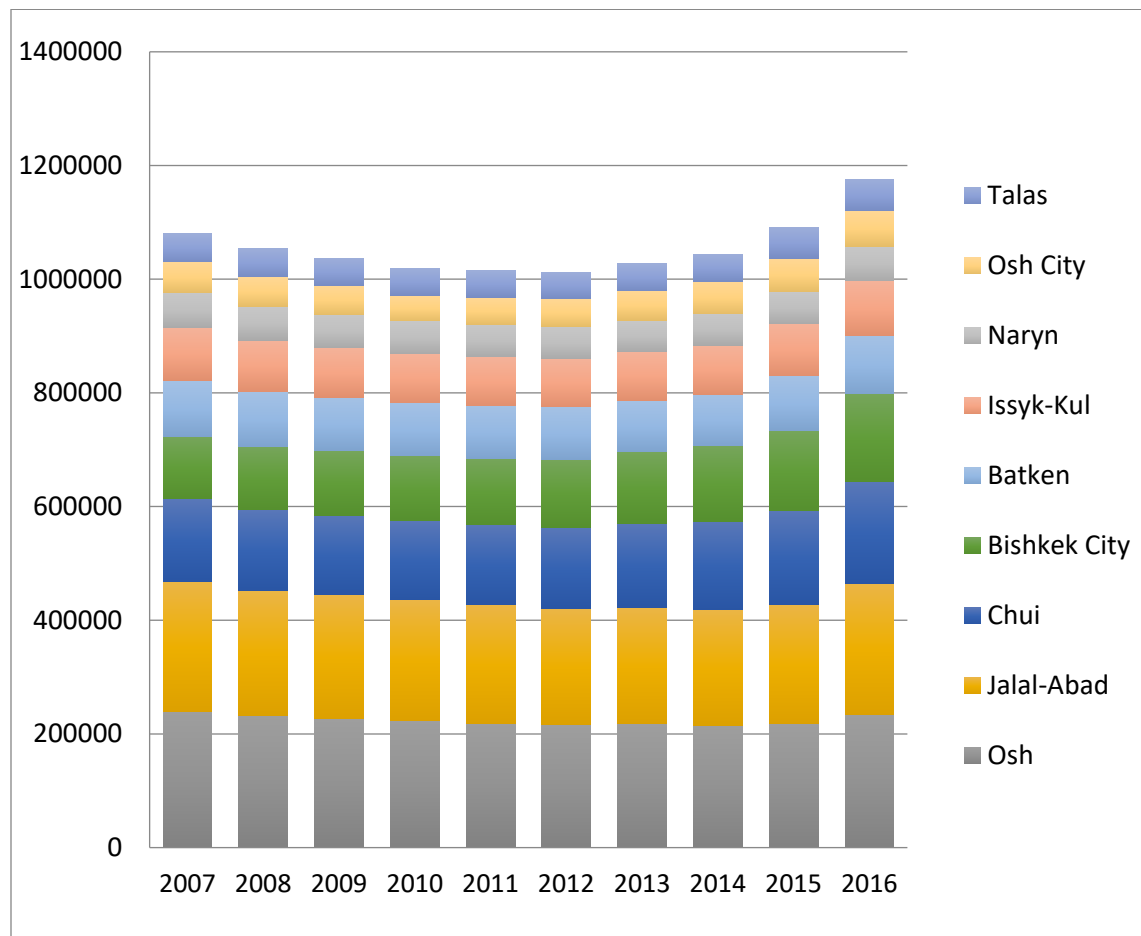


Source: NSC 2017

**By region**

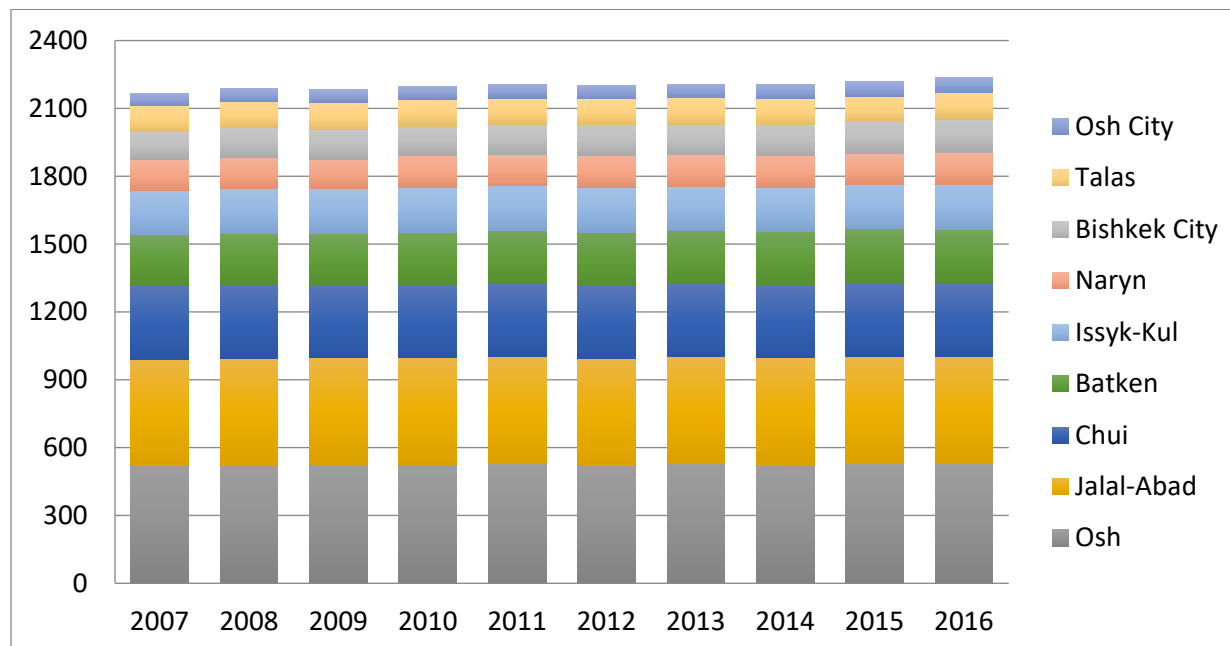
Among the regions, Osh and Jalalabad provinces have traditionally had largest number of school-attending children, while the number in Chui province and Bishkek city has grown most rapidly in the past 10 years.

**Figure 2.9 Regional distribution of primary and secondary level students**



However, regional distribution of schools over time shows that the number schools in Bishkek city and Chui province have not grown at the same rate as the students enrolling in them, leading to considerable overcrowding.

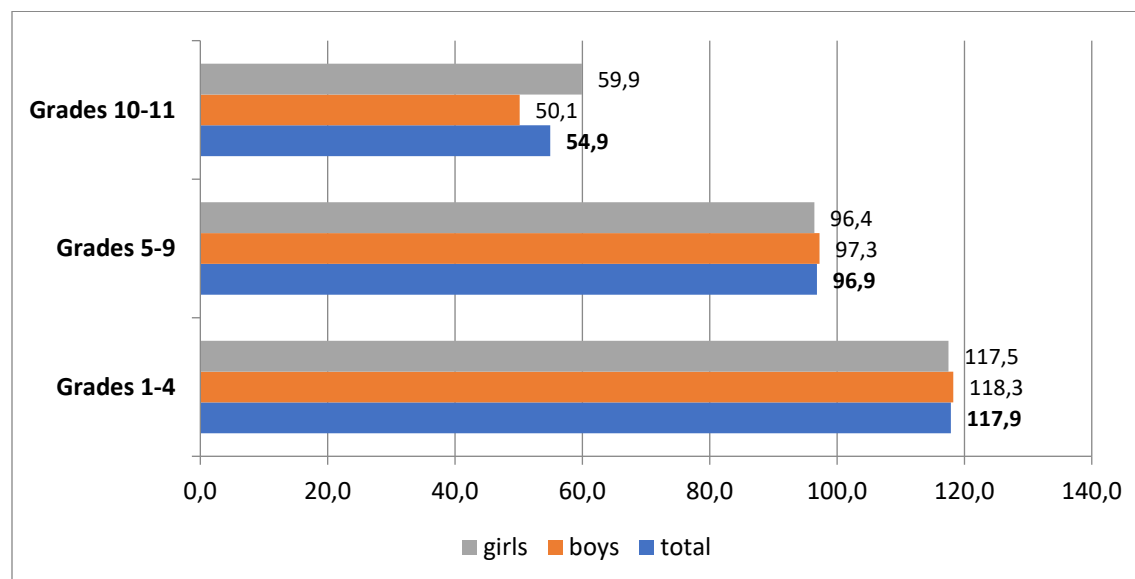
**Figure 2.10 Distribution of primary and secondary schools by region**



**Gross enrolment rate (GER)** increased during the past decade from 88,4 in 2007-2008 to 98,4 in 2016-2017. Due to the fact that children enter the primary school at various ages, the GER in primary always exceeds 100%, in 2016-2017 it was about 118%. In lower secondary grades it is 97%, with no significant difference between girls and boys. Unlike previous levels in upper secondary level GER tends to decrease, so in fact about 45% do not continue their education in Grades 10-11 and the gender difference is about 10 percentage points as more boys leave school after compulsory Grade 9.

**Table 2.8 GER by primary and secondary education levels and sex (for 2007-2017)**

Levels	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017
<b>Grades 1-11</b>	<b>88,4</b>	<b>87,9</b>	<b>88,0</b>	<b>87,8</b>	<b>88,1</b>	<b>88,7</b>	<b>90,2</b>	<b>90,4</b>	<b>93,4</b>	<b>98,4</b>
boys	87,8	87,1	87,6	87,4	87,8	88,4	89,7	89,9	92,9	97,9
girls	89	88,6	88,4	88,3	88,3	88,9	90,6	90,9	93,8	98,8
<b>Grades 1-4 (primary)</b>	<b>99,5</b>	<b>99,2</b>	<b>100,2</b>	<b>100,1</b>	<b>101,5</b>	<b>101,6</b>	<b>102,4</b>	<b>104,2</b>	<b>107,3</b>	<b>117,9</b>
boys	100	99,5	100,8	100,6	102,1	102,1	102,8	104,5	107,9	118,3
girls	98,9	98,8	99,6	99,5	100,9	101	102	103,9	106,6	117,5
<b>Grades 5-9 (lower secondary)</b>	<b>93,9</b>	<b>95,1</b>	<b>94,2</b>	<b>93,9</b>	<b>93,6</b>	<b>94,4</b>	<b>95,0</b>	<b>95,2</b>	<b>96,2</b>	<b>96,9</b>
boys	94,1	95,00	94,4	94,1	94,1	94,7	95	95,4	96,6	97,3
girls	93,7	95,1	93,9	93,7	93,1	94,1	94,9	94,9	95,9	96,4
<b>Grades 10-11 (upper secondary)</b>	<b>60,6</b>	<b>56,8</b>	<b>53,2</b>	<b>53,4</b>	<b>52,2</b>	<b>51,2</b>	<b>53,4</b>	<b>54,2</b>	<b>55,2</b>	<b>54,9</b>
boys	56,1	52,5	49,6	49,7	48,8	48,1	50,2	49,8	50,3	50,1
girls	65,3	61,2	57,00	57,1	55,6	54,4	56,7	58,7	60,2	59,9

**Figure 2.11 GER by primary and secondary education levels and sex (for 2016/2017)**

The net enrolment rate (NER) for Grades 1-11 in 2016/17 was 81.3 per cent and there is very little difference between girls and boys, whereas the NER for 1-4 grades is 90.6 per cent.

**Table 2.9 NER by primary and secondary education levels and sex (Grades 1-11)**

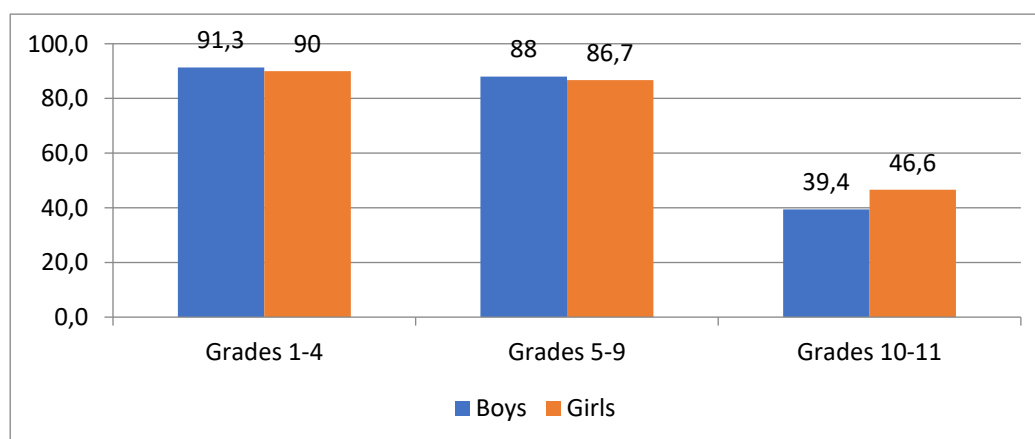
Levels	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017
<b>Grades 1-11</b>	<b>86,5</b>	<b>86,1</b>	<b>84,0</b>	<b>83,5</b>	<b>83,1</b>	<b>83,5</b>	<b>84,8</b>	<b>84,8</b>	<b>86,6</b>	<b>87,5</b>
boys	85,9	85,4	83,8	83,2	83,0	83,4	84,5	84,5	86,3	87,1
girls	87,1	86,7	84,20	83,9	83,2	83,6	85	85,1	86,9	87,8
<b>Grades 1-4 (primary)</b>	<b>86,8</b>	<b>86,1</b>	<b>87,1</b>	<b>86,5</b>	<b>86,7</b>	<b>87</b>	<b>87,5</b>	<b>86,7</b>	<b>89,6</b>	<b>90,6</b>
boys	87,4	86,7	87,8	87,2	87,4	87,8	88,1	87,4	90,4	91,3
girls	86,2	85,5	86,3	85,8	85,9	86,1	86,7	85,8	88,7	90,0
<b>Grades 5-9 (lower secondary)</b>	<b>86,6</b>	<b>87,4</b>	<b>86,4</b>	<b>86,0</b>	<b>85,5</b>	<b>85,9</b>	<b>86,0</b>	<b>68,8</b>	<b>86,4</b>	<b>87,4</b>
boys	86,8	87,5	86,9	86,3	86,1	86,4	86,2	69,2	86,9	88,0
girls	86,3	87,2	86,0	85,7	84,8	85,5	85,8	68,3	85,8	86,7
<b>Grades 10-11 (upper secondary)</b>	<b>48,0</b>	<b>45,9</b>	<b>43,1</b>	<b>43,4</b>	<b>42,2</b>	<b>41,2</b>	<b>42,4</b>	<b>42,9</b>	<b>43,5</b>	<b>42,9</b>
boys	44,6	42,6	40,3	40,8	39,7	38,8	40,2	39,6	39,9	39,4
girls	51,5	49,2	45,9	46,1	44,7	43,6	44,7	46,4	47,1	46,6

The data below show how gender parity (the ratio of female NER to male NER) has evolved in the country over time. The **gender parity index** for enrolling in primary school is 99.4, indicating that there is no significant difference between the enrolment ratios of girls and boys, except in Talas province.

**Table 2.10 Gender parity index by NER in primary education**

	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012 / 2013	2013 / 2014	2014/ 2015	2015/ 2016	2016/ 2017
<b>Kyrgyz Republic</b>	<b>98,9</b>	<b>99,3</b>	<b>98,8</b>	<b>98,9</b>	<b>98,8</b>	<b>98,9</b>	<b>99,2</b>	<b>99,1</b>	<b>98,9</b>	<b>99,4</b>
Batken province	99,5	99,9	99,8	99,6	100,1	99,3	99,2	100	100,5	100,6
Jalalabad province	98,7	99,3	97,9	98,2	99	98,5	99,3	99	98,3	98,4
Issyk Kul province	96,5	95,7	96,6	98	98,3	98,2	98,5	96,6	97,5	98,4
Naryn province	96,2	99,3	98	98,4	98,3	96,9	97,8	98	98,9	99,6
Osh province	98,5	98,6	99,9	99,4	98,9	99,3	98,4	98,7	99,6	99,4
Talas province	98,7	99,2	97,4	99,7	97,4	96,5	96,8	94,2	95,8	96,3
Chuy province	98	98,3	98,8	99,3	98,6	98,7	99,7	99,3	99,8	100,4
Bishkek	102,2	103,1	101,4	99,4	99,2	101,9	100,7	101,1	98,6	100,3
Osh	103,9	102,6	96,4	97,7	97,7	98,2	101,7	103,7	99,3	100,1

**By levels of school education.** The low NER for Grades 10-11 reflect the fact this is not a compulsory level of education, and many young people opt for primary vocational tracks or to find employment. For the same reason, the NER for boys in Grades 10-11 is significantly lower than for girls. However out of 54.4 percent of adolescent girls and 61.6 percent of adolescent boys, leaving secondary schools almost the half (27%) is not continuing their education after completing Grade 9. Almost one third of the 15-24-year-old youth became trapped in a frustrating situation being not in education, employment or training (NEET). In Chapter Four of the given analysis on vocational education, we will look in detail this emerging issue in the country with increasing trends among girls and in rural areas.

**Figure 2.12 NER by level of grades and by gender (2016-2017)**

**By regions.** When considering the difference between regions, the lowest net enrolment ratio is in Osh province (73.8%) and the highest in Osh and Bishkek cities, at more than a hundred per cent, which is unusual for a net ratio, and may be due to inaccurate data on the total number of children of the corresponding age because of migration. It needs to be noted that since 2007, the NER have improved slightly in all regions except in Jalal-Abad, Osh and Talas provinces where the numbers have reversed.

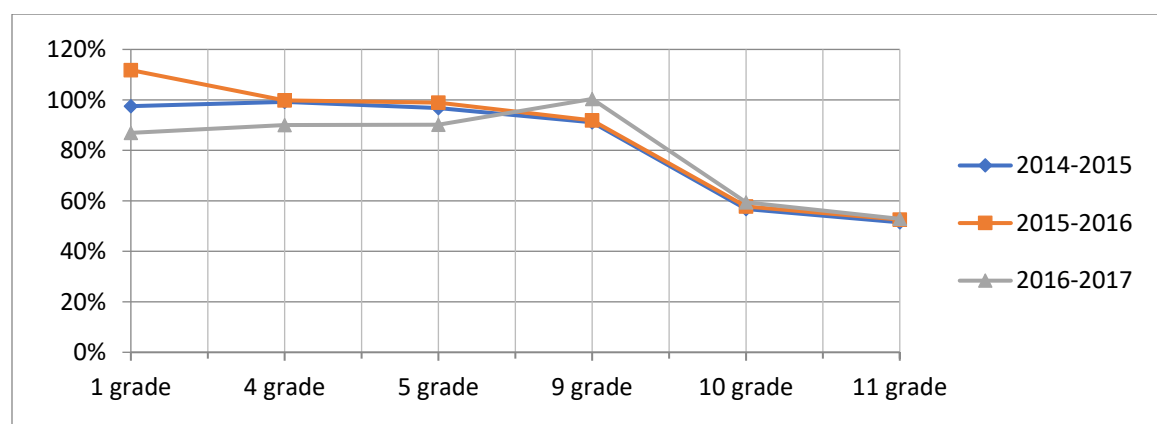


Table 2.11 NER by regions (Grade 1-11)

Region	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017
Kyrgyz Republic	86.5	86.1	84	83.5	83.12	83.5	84.8	84.8	86.6	87.5
Batken province	85.6	85	87	87.7	87.1	87.2	87	85.9	88.2	88.4
Jalalabad province	85.9	84.3	84.2	82.8	81.4	81.1	81.3	81.3	82.2	82.3
Issyk Kul province	89.9	90.5	87.1	87.4	87.2	87.2	87.9	87.2	88.8	89.3
Naryn province	86.3	83.7	88.9	88.1	88.2	88.1	86.2	85.3	86.2	86.2
Osh province	78.8	77.7	78.2	77.4	75.3	74.6	75.6	73.4	74.3	73.8
Talas province	89	89.2	84.9	84	82.7	82.2	82.2	82	83.7	83.8
Chuy province	93.7	95.3	86.9	88.6	89.4	91.3	95	96.8	100.1	101.8
Bishkek	92.3	94.2	81.5	83.1	85.1	87	90.2	92.7	95.4	98.8
Osh	91.2	90.9	93.1	85	87.8	92	96.3	100.4	103.8	108

**Gross intake rate:** Between the 2014/15 and 2016/17 academic years, the student retention rate in three cycles of general school education remained stable. For every 112 children who entered Grade 1 in 2015, 100 completed Grade 4 and only 92 graduated from Grade 9. The drop in the intake rate into Grade 1 in 2016 might result from the introduction of the pre-school preparation class. In 2016, some increase was observed in the primary school completion rate, perhaps due to internal migrations or underlying issues of population data quality. It is expected that the student completion rate for Grade 4 should be 100 per cent, but there are minor deviations from this ideal indicator in Kyrgyzstan.

Figure 2.13 The Gross Intake Rate and Completion Rate per levels of grades (2014-2017)



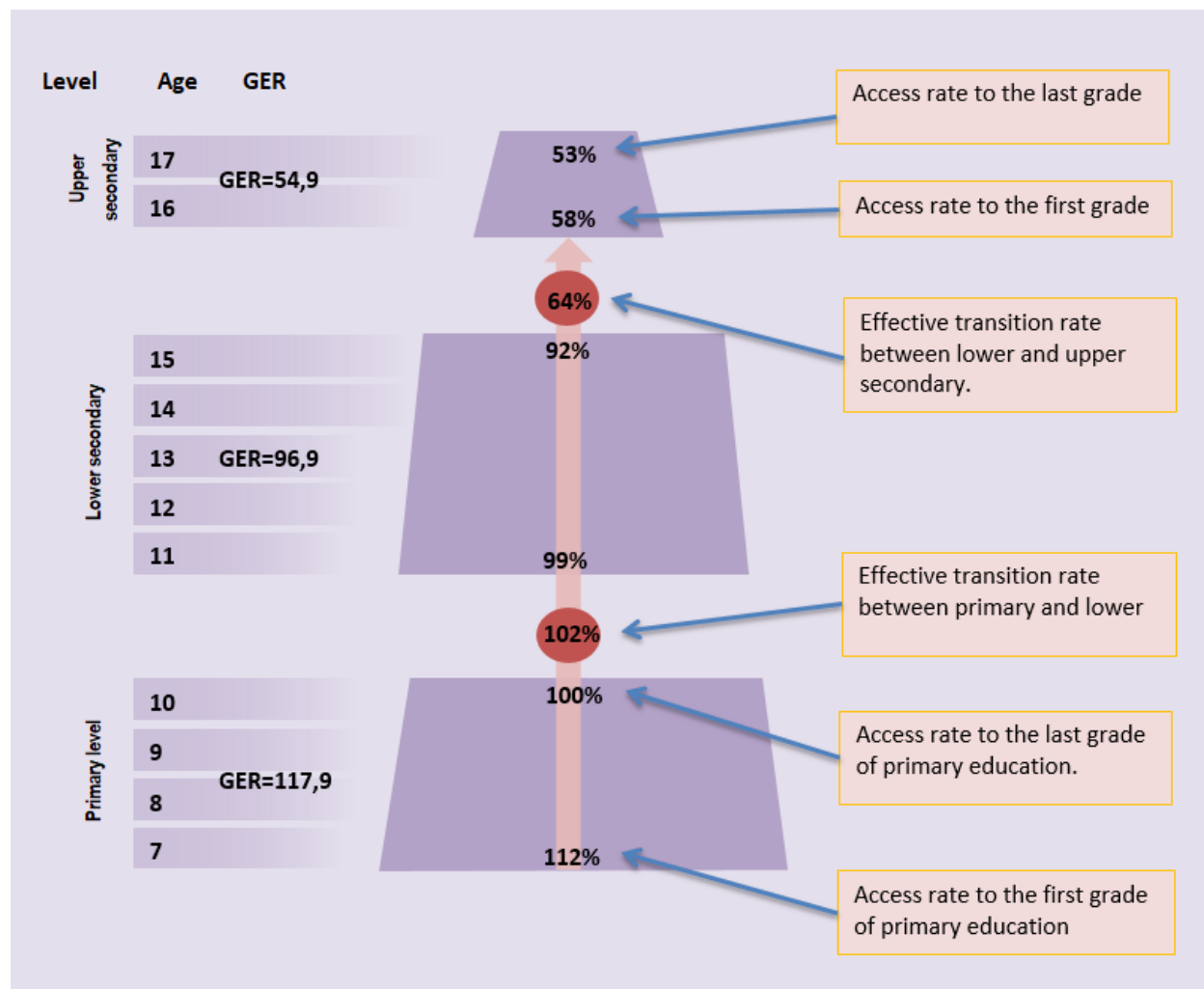
It should be noted that the administrative data on net coverage given in the analysis is confirmed by survey data, including the 2014 MICS.<sup>12</sup> In some cases, MICS shows higher rates, for example for gender parity indicators: Net enrolment rate in primary education (94.9), Primary school completion rate (103.7) and Gender parity index (1.00 in all levels of secondary education). However, the problem of data collection remains important. The MOES is trying to develop an electronic identity and records system so as to track individual children in school and follow their education trajectories since 2012. Under the new Taza Koom programme it is likely that the initiative will be developed through the education management information system (EMIS).

Education pyramid for secondary school education shows that in primary and lower secondary levels show there is a gradual decrease in children's enrolment and completion of all levels: primary, lower secondary and upper secondary. One can observe a sharp decrease at the upper secondary level. Effective transition rate between primary and upper secondary is 102%, but between lower secondary and upper secondary it is – 64%. Compulsory education ends at completion of lower secondary and many children leave school.

<sup>12</sup> MICS 2014

Due to the fact that transition to the professional education can take place after graduation of Grade 9, but also after completion of upper secondary level, the professional education level is not included in the pyramid. It needs to be noted that access rate to the primary education in 2016/2017 is 87%, which is lower from previous years and requires close study.

**Figure 2.14 Secondary Education Pyramid (2015-2016 years)**



## Supply and demand in access to school and retention of student enrolment

Demand and supply analysis is more relevant for preschool education as here we can see clearly high demand and insufficient supply based on the given data. Social and economic factors are also critical barriers for pre-school attendance. 50 per cent of the richest quintile attend pre-school institutions compare to 11,7 percent of children from the poorest households. Majority of children with disabilities do not go to kindergartens and those who attend do not receive sufficient attention of pre-school teachers due to the lack of required skills and possibilities to provide inclusive education.<sup>13</sup>

As per MICS 2014 results, preschool education is attended by 30 per cent of children from Russian speaking families, 23,8 per cent of from Kyrgyz speaking families, 18,3 per cent from Uzbek speaking families and 10,8 per cent from households speaking other languages. One of the reasons for low and unequal coverage is the weak potential of the system particularly of monitoring and quality assurance capacity, lack of inter-sectoral response coordination, lack of buildings for preschool facilities, lack of human resources, non-transparent use of funds, low awareness of parents about importance of quality early

<sup>13</sup> MICS. 2014

childhood development. Low supply is vivid in rural areas where only 10,6 per cent of children of ages 0-7 has access to pre-school education (not taking into consideration the pre-primary preparatory programmes in schools). Geographically, the lowest pre-school coverage is in Osh oblast (10.5%), which is one of the mostly populated provinces of the Kyrgyz Republic. Also, the lowest coverage in rural areas is in Jalal-Abad and Chui oblasts, whereas in urban area again Osh oblast is the lowest.

**Table 2.12 Pre-school coverage by provinces and rural/urban locations**

	Total number of children, 0-7 age	Urban	Rural	Total number of children in ECD institutions, 0-7 age	Urban	Rural	% of coverage	Urban	Rural
<b>Kyrgyz Republic</b>	<b>1198740</b>	<b>397474</b>	<b>801266</b>	<b>173633</b>	<b>88546</b>	<b>85087</b>	<b>14,5%</b>	<b>22,3%</b>	<b>10,6%</b>
Batken oblast	108606	28499	80107	16817	6400	10417	15,5%	22,5%	13,0%
Jalal-Abad oblast	235481	52147	183334	27895	10549	17346	11,8%	20,2%	9,5%
Issyk-Kul oblast	87630	30298	57332	13766	7981	5785	15,7%	26,3%	10,1%
Naryn oblast	53709	8213	45496	9475	2105	7370	17,6%	25,6%	16,2%
Osh oblast	271371	19206	252165	28561	1954	26607	10,5%	10,2%	10,6%
Talas oblast	52893	5508	47385	7047	2147	4900	13,3%	39,0%	10,3%
Chui oblast	167670	37669	130001	20444	7782	12662	12,2%	20,7%	9,7%
Bishkek city	172511	172511	-	34907	34907	-	20,2%	20,2%	-
Osh city	48869	48869	-	14721	14721	-	30,1%	30,1%	-

As for the secondary school education, we can note that increase in the number of children will continue in the next decade. Total growth of children in preschool age from 2007 to 2016 is 4 per cent with average annual growth at 3,7 per cent. Moreover the average growth of children in urban areas is two times higher than in rural areas – 5.3% and 2.9% correspondingly, which is most likely due to increased internal migration rather than the birth rate. Therefore the need in new pre-schools and schools will only increase particularly in urban areas. Considering the existing problem of overloaded schools and pre-schools in urban areas, especially in Bishkek, the construction of new state (and possibly private) schools and preschools will continue to become an acute issue which will need a prioritized attention and solution.

It should be noted also that the 5% of primary school functioning mainly in distant rural areas play an important role in ensuring the universal access to primary education – there are 10,5 thousand children learning there, out of them 8,0 thousand study in rural primary school (Grade 1-4). There is a risk for them of not transiting to the lower secondary school due to the distance of the latest. Urban schools do not have such problem but here it is worth to look at the optimization of financing and management. As for the urban schools of not.

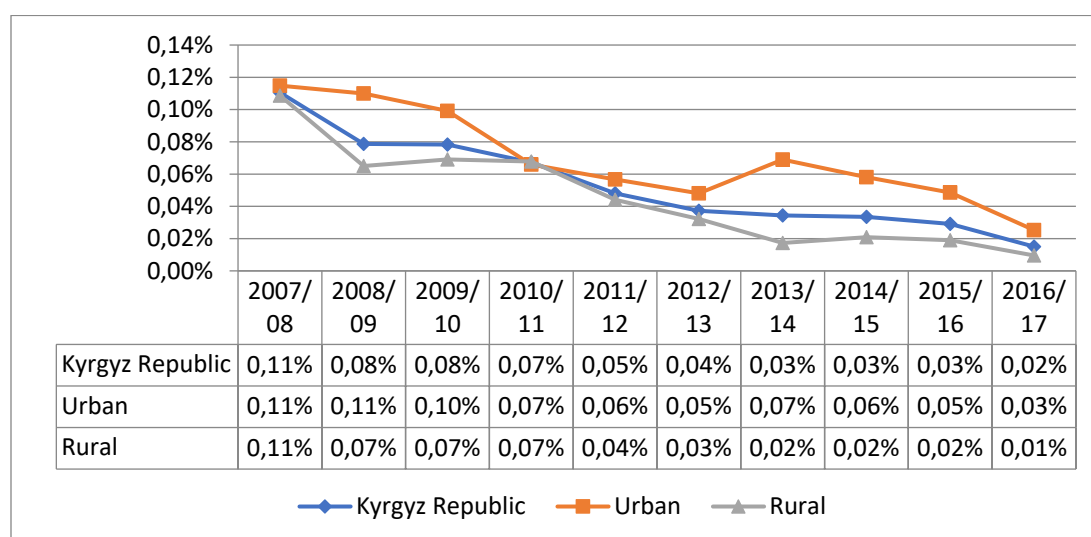
**Table 2.13 Distribution of primary, basic and secondary education schools for 2016-2017 school year**

Area	Total number of schools	Total number of students	Including in					
			Number of primary schools	Number of students	No of basic education schools (Grade 1-9)	Number of students	Number of secondary schools	Number of students
Urban	455	404752	21	2559	41	11339	393	390854
Rural	1781	771028	101	7935	167	27753	1513	735340
<b>Total</b>	<b>2236</b>	<b>1175780</b>	<b>122</b>	<b>10494</b>	<b>208</b>	<b>39092</b>	<b>1906</b>	<b>1126194</b>

## Internal efficiency

One measurement of school efficiency is to compare the number of children entering Grade 1 with the number completing school in the required number of years (without repeating any years). The maximum repetition rate occurred in 2007 and was about 0.1 per cent: since then it has been reducing steadily. By 2016 it was only 0.02 per cent. In figure is slightly higher in urban settlements than in rural areas. Repetition is not an efficient education practice, and the low figures imply high internal efficiency of education. However, these low indicators might also indicate that schools transfer students routinely to the next grade, including those who were unable in practice to master the programme. As a result of 2016-2017 geographical data comparison, then the majority of student repeaters in primary as well as lower and upper secondary school are in Bishkek and Chui oblast. Boys have to repeat more often than girls – 64% and 75% in primary and lower and upper secondary school accordingly.

**Figure 2.15 Changes in the proportion of children repeating years (2007-2016)**



**Table 2.14 Number of student repeaters in primary level (Grades 1-4)**

	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016
<b>Kyrgyz Republic</b>	<b>309</b>	<b>252</b>	<b>262</b>	<b>224</b>	<b>161</b>	<b>133</b>	<b>185</b>	<b>137</b>	<b>138</b>
Batken oblast	7	5	2	3	2	-	2	6	1
Jalal-Abad oblast	14	14	35	8	13	6	2	1	-
Issyk-Kul oblast	15	9	10	13	12	1	4	2	7
Naryn oblast	4	1	3	1	13	4	-	5	-
Osh oblast	15	7	1	-	7	-	4	-	1
Talas oblast	-	7	7	7	7	1	3	7	10
Chui oblast	217	172	176	166	68	69	97	64	76
Bishkek city	19	29	28	11	39	15	49	35	38
Osh city	18	8	-	15	-	37	24	17	5

**Table 2.15 Number of student repeaters in lower and upper secondary levels (Grades 5-11)**

	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016
<b>Kyrgyz Republic</b>	<b>520</b>	<b>560</b>	<b>423</b>	<b>264</b>	<b>216</b>	<b>220</b>	<b>164</b>	<b>181</b>	<b>92</b>
Batken oblast	10	10	38	11	11	5	12	13	12
Jalal-Abad oblast	39	34	50	5	11	2	1	7	-
Issyk-Kul oblast	10	19	15	20	23	10	9	17	7
Naryn oblast	11	9	10	-	11	3	-	15	1
Osh oblast	19	151	4	2	14	-	1	1	1
Talas oblast	-	7	20	5	19	1	4	6	9
Chui oblast	263	215	216	133	78	69	64	59	31
Bishkek city	123	106	69	55	44	59	42	32	31
Osh city	45	9	1	33	5	71	31	31	-

The survival rate in primary school is pretty high and for 2015-2016 school year (most recent year) is 97.8 per cent. The lowest survival rate is in Naryn and Osh oblasts and the highest (above 100%) is Osh and Bishkek cities, which again may be because of internal migration.

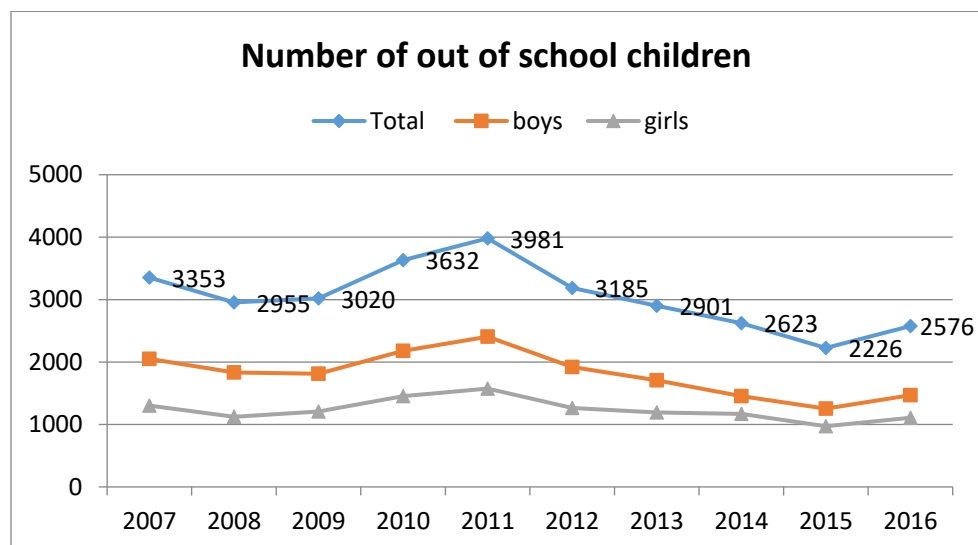
**Table 2.16 Survival rate in primary school (up to Grade 5)**

	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016
<b>Kyrgyz Republic</b>	<b>96,0</b>	<b>97,1</b>	<b>93,7</b>	<b>95,9</b>	<b>97,7</b>	<b>98,6</b>	<b>95,8</b>	<b>98,1</b>	<b>97,8</b>
Batken oblast	96,1	93,7	100,7	94,7	97,7	95,9	92,1	99,7	100,0
Jalal-Abad oblast	91,5	94,1	89,5	95,0	95,6	94,8	96,3	95,7	94,9
Issyk-Kul oblast	97,8	90,0	97,7	93,7	96,0	97,2	93,1	97,2	98,9
Naryn oblast	88,8	95,5	91,6	97,7	90,9	91,3	91,3	95,3	92,2
Osh oblast	93,6	95,1	94,2	89,1	94,8	98,8	87,1	97,3	92,1
Talas oblast	97,7	92,8	91,3	90,4	96,4	95,4	92,6	96,2	94,0
Chui oblast	98,0	98,6	99,4	98,4	103,6	102,2	102,7	99,9	97,6
Bishkek city	108,9	113,8	101,4	108,7	101,6	107,6	106,0	102,1	111,8
Osh city	95,8	102,1	65,1	106,3	105,0	102,0	105,7	97,6	101,0

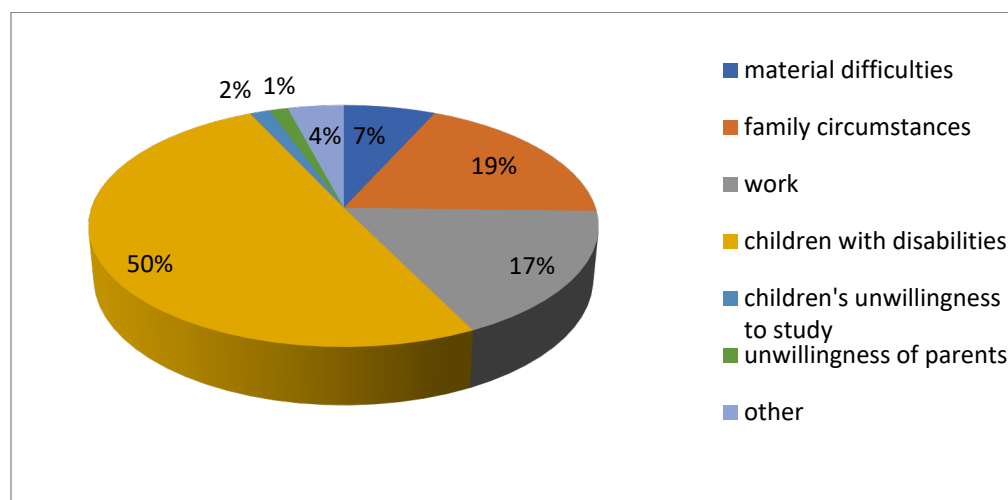
Due to the lack of data on early school leavers (dropouts), it was not possible to do the proper internal efficiency calculation. However high transition rate from primary to lower secondary level and the survival rate in primary school as well as low repetition rate allows us to conclude of relatively high internal efficient of primary school.

### Children out of school/not attending school

According to the data from Ministry of Education and Science, every year in the last 10 years has seen less than 4,000 children not commencing their education. As the figure below shows, slightly more boys are out of school than girls.

**Figure 2.16 Number of out-of-school children age 7-17 (2007-2016)**

The 2016/17 data disaggregated by regions indicate that the largest number of out-of-school children was registered in rural areas of Osh province, and the smallest in the cities of Bishkek and Osh. The biggest group of the OOSC (50%) are children with disabilities, out of whom the 60% are children with mental disability. Other factors for being out of school are financial constraints (7%), family circumstances (19%), and 17% of children are working children. ILO reports 32% children as working children.

**Figure 2.17 Reasons of being out of school (2016-2017)**

For working children and those who have big gaps in their education, there are 9 evening schools in the country with 2,5 thousand students enrolled. In addition 42 secondary education schools have enrolled 4,5 thousand students in 183 classes of evening and distant forms of education.

**Inclusion of children with special health abilities is the weakest point of the current system.** As per the data of the Ministry of Labour and Social Development about 28,000 children with disabilities of ages 0-18 are living in the country in 2016. As per the data of the Ministry of Education and Science, in 2016-2017 school year, 10,925 children were enrolled to preschool and school education which makes 40% of total population of children with disabilities. 3112 children of this number were learning in secondary education schools (564) and residential institutions (2548), whereas 2,268 children attended pre-school education institutions. An analysis of quantitative data for the last few years shows a trend of annual growth in the number of children with disabilities at 1-1,5 percent.

**The main challenges for introduction and development of inclusive education lack of enabling physical and psychological learning environment, lack of adapted teaching and learning materials, lack of professionals**

and insufficient capacity and motivation of teachers in identification and provision of responsive to individual learning and special education needs of children as well as solid monitoring and management of schools.

The system for measuring non-attendance of school by children remains one of the complex and methodologically uncoordinated issues. There are problems with the assessment methodology, reliability and frequency of monitoring of non-attendance by various agencies both at local and central levels. The information collected is inconsistent and non-comparable and does not give a complete picture of non-attendance.

A 2011 survey (UNICEF, 2012) suggested that more than 30,000 children do not attend school. These were primarily children living in Bishkek, Osh and other settlements in the south of the country. The main reasons for non-attendance of schools mentioned included financial difficulties, family problems, and reluctance to learn. Out-of-school children included children who start school later than they should, children with disabilities, working boys in rural areas and children of labour migrants. In 2017 it was announced that from the 2018/19 academic year the education authorities will register children aged 5 to 16 who miss school for 10 or more consecutive days as children who do not attend school.

So the lack of reliable data on children out of school or dropout and inconsistencies in the number of children enrolled in pre-school education programmes do not allow to completely assess the access of children to corresponding level of education. Nevertheless, review of the available data helped to fix several points of the system, which require further analysis and targeted measures within the education development plans.

Despite of support from the state, CSOs and international organizations about 74 per cent of 3-6 aged children do not have access to pre-school education. Only 11,7 per cent of children from the poorest household can attend kindergarten while 50 per cent come from the richest households. Children with disabilities are not attending the pre-schools as inclusive education is not fully introduced in schools.

Thanks to introduction of 480-hour school preparatory programme number of children coming to Grade 1 graduating the programme or with pre-school education experience have increased to 80 per cent. So still every fifth child is coming to school with no pre-school experience and is not starting their education equally with other kids.

The annual growth of children of pre-school age at 5.3 per cent strengthens the need on preschool education organizations especially in urban areas.

In 2016-2017 school year NER in primary education was 90.6 per cent, with the NER for Grade 1 as 87 per cent. Effective transition rate from primary to lower secondary level is 90 per cent, and NER in lower secondary education level (Grades 5-9) is 87.4 per cent. There is no significant dropout in primary and lower secondary levels, which shows the problem affecting NER exists in the number of children entering the primary school, and almost the same number of children is transiting to lower secondary school. The transition rate from lower secondary to upper secondary school is 65%, but it is mainly due the end of the compulsory education after Grade 9 and an opportunity for children to proceed to professional education. We will look closely how many children have chosen the trajectory of the professional development after lower secondary education in Chapter Four.

## Chapter Three. Quality of Education

Quality of education is a multifaceted concept that encompasses all aspects of educational undertakings, including inputs, processes and outcomes at all levels, from early childhood to post-tertiary and life-long learning. This means that analysis of quality should cover individuals (learners, educators, administrators and policy makers), institutions and contexts (kindergartens, schools, vocational colleges, universities, workplaces that offer learning, specific educational programmes, non-formal educational settings, and so forth), as well as norms and structures that underpin and sustain the educational system in any society (such as political and cultural values, and policies). The 2005 UNESCO Global Monitoring Report elaborated quality as follows:

*Although there is no single definition of quality, two principles characterize most attempts to define the objectives of education. The first, which identifies learners' cognitive development as the major explicit objective of all education systems, sees the success with which systems achieve this as one indicator of their quality. The second emphasizes the role of education in promoting commonly shared values along with creative and emotional development – objectives whose achievement is much more difficult to assess.* (UNESCO, 2005. [The Quality Imperative](#))

Even within the relatively narrowly defined meaning of education quality as learning, one can consider specific inputs and processes into the education system alongside learning outcomes. The discourse on results-based and accountability-driven approaches to education reform – of which GPE is a strong proponent – cautions against focusing too much on the quality of inputs or processes, and ignoring the notion of learning outcomes. While it is true that resources spent on inputs and processes of themselves do not necessarily lead to improved learning outcomes; the contrary is not deniable especially when one considers the public and private resources employed in some of the countries performing best in PISA. In the case of Kyrgyzstan, a country where the low absolute level of educational resources heavily affects basic educational inputs (such as textbooks and computers) and processes (such as quality instruction by adequately trained educators), national commitment to improve educational inputs and processes deserves particular attention.

The Education Development Strategy 2012-2020 have prioritized the change of the education content through development and introduction of the new competency based curriculum and teaching and learning materials. This process is currently actively being implemented. In parallel, there is a reform in teacher policy is ongoing as well: the teacher professional standards are being updated, teacher salary reform have taken place, the changes in the system of teacher professional development is declared to take place. Taking into consideration the timeframe needed to see the quality education results, still there small first efficiency signs of the reform changes and projects implementation. Also it should be noted that the system of the monitoring processes and results does not provide sufficient data for reliable conclusions, however this chapter suggests to look at the main three indicators of quality: learning results, the professional qualification of teachers, as well as learning environment and resources.

### Learning outcomes

#### Pre-school level

In Soviet times, the functions of pre-school education were seen as twofold: learning (the primary component), and supervision and care. However, the educational component has significantly lost its importance due to the limited access since the 1990s. Therefore, the priority criterion for development of preschool education has become, until recently, coverage. Therefore, the concept of quality was not important for the public, and often for teachers, and was often superseded by the concept of access to preschool education. Until now, the concept of “quality of preschool education” both at the level of normative legal, conceptual and strategic documents, and at the level of how preschool is perceived by the main users of the system is not clearly formulated and operationalized with criteria and indicators. However, in recent years, the quality of preschool education has been becoming topical because preschool education has been defined as one of the priorities of state education policy, coverage of preschool education has increased through various types of facilities, and expenditure on preschool has increased both by the state and by parents. Now it can be stated that learning (and thus the “quality of education” is again becoming seen as an important aspect of preschool education.



While the National Statistical Committee publishes **data** on education, including pre-school education, almost every year, these are primarily data on the coverage, financing and staffing of ECD institutions. At national level, there are some statistics on children's physical development of (nutrition, immunization, mortality, anaemia, and so on), but there is no data on other areas of child development (such as cognitive, socio-emotional and speech development). There is no robust national learning assessment and quality assurance framework.<sup>14</sup>

However, clear **learning standards** have been established for preschool education and are currently being revised. The State Standards for Preschool Education and Child Care (2005) set clear child development indicators and learning standards for each stage of children's development. The standards are disaggregated by month for each of the child's first 12 months; and then for two years; three to four years; five years; and six to seven years. The SABER report (2013) indicates that early development and learning tools have been developed and learning manuals for caregivers distributed by UNICEF on how to assess children's development. However, the extent and efficacy of their use in practice remains unclear. In other words, while infrastructure and service delivery standards have been established, there is no system in place to monitor the development of individual children.

A 2014 UNICEF report on the comparative quality of education in CBKs in 2012-2014 focused on indicators of **the educational environment** in pre-school institutions. These included indicators for the educational environment, teaching methods, educational content and parental involvement. Although the assessment did not focus on the achievements of individual children, the methodology (a composite weighted index) provided an effective way of assessing the overall quality of the programme offered.<sup>15</sup>

While the Nariste programme focuses on school-readiness, it de facto acts to compensate for lack of access to broader developmental enrichment that children may have missed because of not attending ECD/ECE programmes. Therefore, relying on **Grade 1 outcomes** may serve as an acceptable (although limited) proxy for assessing ECD/ECE quality.

In the absence of comprehensive input, process and outcome data, analysing the quality of early childhood development needs to rely on the few research studies that have taken place in this domain. The **Aga Khan Development Network** (AKDN), an organization that has made early childhood development a priority of its engagement in Central Asia **conducted one early study**.<sup>16</sup> Working in rural, remote and mountainous parts of Osh province, the AKDN introduced new models (half-day, double shift) that increased access to quality education and offered parents affordable preschool options. A second model was the establishment of satellite kindergartens that converted community spaces into extra classrooms, and schools and teachers' homes into centres of learning for young children. These innovations reduced costs, and offered families affordable options for their children's early education.

The AKDN study attempted to measure the **learning achievements** of children from ECD backgrounds and those that did not attend ECD programmes in Grade 1 (2007-2008). Interestingly, almost 50 per cent of children in areas with AKDN kindergartens entered primary school with ECD experience compared to 4 per cent in the overall region. In other words, provision and supply of early childhood development did increase take up by families.

More importantly, **children with ECD exposure performed significantly better** than children who did not have preparation before entering school. Another interesting finding was that children from satellite kindergartens scored significantly better than their central kindergarten counterparts, suggesting the strength of the satellite kindergarten model for delivering quality education outcomes for all children. However there is no evidence of whether this was impact of the programme itself or other factors such as size. This second finding highlights the point that irrespective of the level of formal structures, the **developmental and educational outcomes of early childhood programmes may vary significantly**. While the AKDN study did not go further at probing what caused these variations, it is highly likely that the principal reason for the differences was what the staff actually did in the stipulated times in their programmes – i.e. the quality of their pedagogical and developmental activities. In other words, the **quality**

<sup>14</sup> European Union, *Review of Education Quality Assessment System in the Kyrgyz Republic (EQAS): From Conceptual Framework to Quality Assurance Tools*, 2016

<sup>15</sup> Khamzina S., *Brief Report on the Results of UNICEF Comparative Assessment of Community Based Kindergartens, Early Childhood Development Program*, 2014

<sup>16</sup> Aga Khan Foundation, *Learning achievement of students in grade one in Alai and Chon-Alai districts, Osh*, 2009

**of the staff** – and the way they act not just in the kindergarten, but also outside it to ensure stronger and better parental engagement – could be the key driver of variation in quality.

The notion of uneven quality in early childhood development programmes is revealed with more clarity in one of the earliest rigorous **research studies conducted by Valkova et al** and commissioned by UNICEF.<sup>17</sup> The study attempted to measure the extent to which differential exposure to early childhood in preschool programmes resulted in different learning outcomes at later stages of school education. Particularly interesting for this analysis was the relationship revealed between exposure to early childhood and preschool education performance of fourth graders in the **National Sample-based Assessment of Student Achievements (NSBA)** in 2009 and 2014.

As background, NSBA was developed in parallel to PISA when the latter was rolled out for 15-year olds. Hence just like PISA, NSBA was also historically developed as reading comprehension, mathematics and science tests: to understand the academic performance of students with regard to the national curricula. NSBA was administered in 2007 (UNICEF) and 2009 (with support from the World Bank Rural Education project) and administered by the Center for Educational Assessment and Teaching Methodologies (CEATM). In 2014 NSBA was only conducted for Grade 4 students, while in 2017 it was conducted for Grades 4 and 8. Details on students' achievements will be provided below in the school section.

Unfortunately, student questionnaires with indicators on ECD participation were only included in the 2009 and 2014 tests. This meant that the effect of ECD could only be studied for two cohorts of fourth graders (2009 and 2014), and one cohort of eighth graders (2009).

To examine the effect of early childhood education, the schools where the NSBA was conducted were divided into three groups: Group 1: schools where students had not generally attended any previous early childhood programmes; Group 2: schools where students had generally attended up to one year of early childhood programming; and Group 3: schools where children had generally attended more than one year of early childhood programming. Therefore, the extent of participation in ECD programmes was used as an independent variable, and the learning outcomes of students in the NSBA were used as a dependent variable. **Overall, there were rather unexpected findings.** First, the gradient of NSBA performance differential in reading comprehension between 4<sup>th</sup> graders who were exposed to ECD and those who were not were minimal.

Importantly, the researchers analysed the school characteristics further to shed light on the differential impact of ECD on children attending urban schools (in Bishkek city), rural schools, and schools in regional centres and smaller towns in the regions. For example, for children in rural schools, participation in ECD had a negligible effect – perhaps signifying a lack of high quality ECD in rural areas. On the other hand, participation in ECD had a greater impact on students in Bishkek schools – suggesting better quality of and resources available for ECD in the city.

Of particular importance – based on the analysis of NSBA 2014 – is the fact that in smaller cities, absence of ECD participation put children at greater risk of lower performance. This might imply that ECD in smaller towns has a more compensatory impact on students who may be otherwise receiving a less-than-adequate quality of education in the schools. This may have significant policy implication. In other words, the study sheds important insights on the joint effect of ECD and quality of schooling of children in different parts of the country. All these issues require further and continued investigation and monitoring- to develop informed and evidence-based policy decisions. An important vehicle for this would be longitudinal data processed through a robust information management system.

The NSBA 2014 mathematics results for 4<sup>th</sup> graders reveal almost no effect of ECD participation. Indeed, a striking conclusion from this analysis, given the NSBA 2014 results, is that children attending rural schools who were exposed to ECD actually performed lower in mathematics than those who did not attend ECD. This also held true – although to a lesser degree – for the other kinds of schools (in big cities and small towns). **This indicates that ECD attendance had no clear impact on the performance of 4<sup>th</sup> graders in mathematics. This may be because** quality of ECD is varied, leading to varied long-term effects (with no noticeable gains overall). Another interpretation may be that the benefits of ECD exposure are subsequently lost during school years – pointing to inadequate quality of schooling (as opposed to a lack

<sup>17</sup> Valkova, I and K Titov. 2014. Impact of pre-school education on school student achievements. (based on the data, obtained through 2009 PISA Survey и 2014 HOODY Survey in Kyrgyzstan.)

of benefits of ECD per se). Regardless of what caused the decline, these results point to the need for a robust outcome monitoring system.

One important effort in this regard has been **a study supported by the World Bank to measure the Early Development Index (EDI) of children in community-based kindergartens.**

*“The EDI is a reliable and valid measurement tool of developmental status completed on individual children between 3.5 and 6.5 years of age. It is a 103-item questionnaire completed by kindergarten teachers in the second half of the school year that measures children’s ability to meet age-appropriate developmental expectations in five general domains: Physical Health and Well-Being, Social Competence, Emotional Maturity, Language and Cognitive Development, Communication Skills and General Knowledge.”*

<https://edi.offordcentre.com/about/what-is-the-edi/>

A cohort of 2,208 children in schools in 13 districts participated in EDI twice in the 2015/16 school year: in November 2015, and February/May 2016. **The EDI results showed that on average, children’s EDI scores had improved over the timeframe of the programme.** This improvement was particularly large in the Language and Cognitive Development domain of the EDI, a known precursor to academic achievement later in life. In addition, several social and demographic inequalities observed between the children in the sample diminished over the course of the programme. Ideally, the EDI data on the children in the sample should be linked to assessments of learning in primary grades, such as the Early Grade Reading Assessment (EGRA) and the Early Grade Maths Assessment (EGMA), to allow for further insights to be made on the long-term effects of the CBK. (the vulnerabilities considered were gender, age, and mother’s employment).<sup>18</sup>

## Primary school

Under the Strategy for the Development of Education 2020, it is planned by 2020 to introduce standardized testing for Grade 4 students to assess their results at primary school. Currently, as mentioned above, the NSBA sample-based assessment is using to monitor educational achievement according the national standards. To date, it has been conducted for Grade 4 four times: in 2007, 2009, 2014 and 2017.

One of the focuses of the NSBA is to assess reading and comprehension, because these are basic competence that develop during primary grades which are key for further learning. In Kyrgyzstan, these abilities are also the focus of several nationwide studies, including the National Sample-Based Assessment, the PISA international study of functional literacy of 15-year-old students, and the Early Grade Reading Achievements (EGRA) conducted between 2012 and 2017 in the framework of USAID projects. These studies show that the Kyrgyz Republic’s educational system faces serious problems with teaching students to read and comprehend texts; beginning from Grade 1 of primary school.

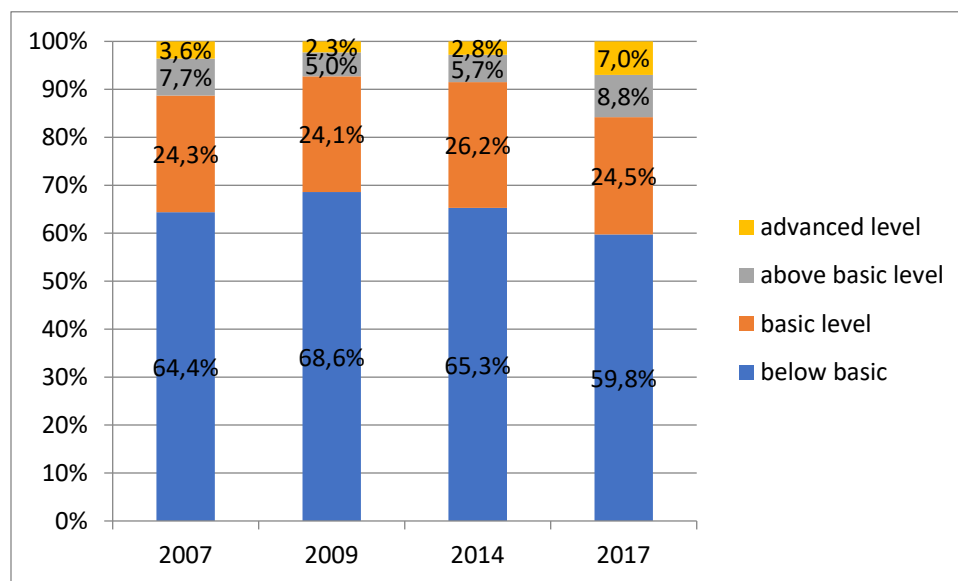
Four published reports of the National Sample-Based Assessment (2007, 2009, 2014) of the academic achievements of students who had completed their primary education (the surveys were conducted at the end of the academic year) demonstrated that over 60 per cent of students did not accomplish even the minimal acceptable reading and comprehension skills when dealing with texts similar to those they read in classrooms daily.

In 2007 the results of students in Reading Comprehension were the highest of the three rounds. But even then, only 35.6 per cent of participating students performed at Level 2 or above, while 64.4 per cent were not able to achieve the minimal acceptable level: students lacked the knowledge and skills sufficient to successfully master the school academic programme. They require additional assistance with their learning. Only about 8 per cent of the students performed above basic level, and only 3 per cent achieved advanced level. The survey conducted two years later, in 2009, showed a decrease in students’ abilities to read and comprehend texts. The percentage of students not achieving the basic level increased by 4.2 percentage points to 68.6 per cent. There was also a decrease of the percentage of students reaching Levels 3 and 4. By 2014 there had been a slight improvement in reading comprehension, compared to the 2009 results. The percentage of students below basic level fell by 3.3 percentage points, almost to the 2007 result. Levels

<sup>18</sup> Offord Centre for Child Studies, *Monitoring Progress on the Objectives of the Kyrgyz Early Education Project (KEEP): Results of the Early Development Instrument in the Kyrgyz Republic, 2017*

3 and 4 (above basic and advanced) did not change significantly, and 34.7 per cent of participating students achieved Level 2 or above. However, the total percentage of students at Levels 3 and 4 (the strongest students) was only 8.5 per cent of all participating students.<sup>19</sup> Results of 2017 study demonstrates good progress in reading and comprehension of Grade 4 students. So we can see that the percentage of students demonstrating reading skills below minimum basic level have decreased to 59, 8 per cent, and the number of students demonstrating skills at the level above basic has increased.

**Figure 3.1 Grade 4 students' achievements in in Reading and Comprehension, NSBA results**



Source: CEATM, NSBA 2017

The maths results for 2017, also demonstrate positive dynamics in relation to results of 2014. If in 2014 63.8 per cent of students were below the basic (standard) level, 28.2 per cent at basic level and only 8 per cent above basic level, in 2017 the percentage of children at below basic level has decreased till 60,3 per cent, so the portion of children at the basic level increased 31%.

The 2017 report on students' results on Motherland [*Rodinovedenie*] Studies (which is focused on science and knowledge of Kyrgyzstan) also found that 53.1 per cent of students were below basic level, while 37.3 per cent were at basic level, and 9.6 per cent above basic level. Results of 2017 demonstrate significant decrease in the cohort of students who are at below basic level compare to the results of 2014 (61,7 per cent) and 2017 (53,1 per cent). The Motherland subject focuses on environmental science and basic skills and knowledge for further learning of the natural sciences at secondary and higher levels.<sup>20</sup>

Another rigorous study on early grade learning outcomes in school comes from the USAID-funded Quality Reading Project. The main goal of the Project was to increase the reading skills of pupils in Grades 1–4 using a standards-based approach built on national standards, while supporting and improving existing school system structures. The Quality Reading Project's in-service teacher training and support activities primarily focused on improving instructional practices related to reading comprehension and fluency.

The Early Grade Reading Assessment (EGRA) evaluated pupils' reading ability by using nine short assessments of specific reading skills, called "subtasks". Data collection occurred at the baseline (2014), at two midline points (2015 and 2016), and at the endline (2017) in Grades 1, 2 and 4 in all regions of the country in both Kyrgyz-medium and Russian-medium classes in the same schools.

EGRA 2017 did not demonstrate a statistically significant difference between the control and intervention groups as such, within the area of reading comprehension, the study did not find a programme impact, with one large and notable exception: Grade 2 urban pupils' scores (both languages combined) for reading comprehension increased by 15.3 percentage points because of the programme.

<sup>19</sup> CEATM, NSBA 2014: *Report on the Results of the Survey, 2014*

<sup>20</sup> CEATM, NSBA 2014: *Report on the Results of the Survey, 2014*

At the same time the report demonstrated increasing reading achievements in all the sample (the control and intervention sample was 130 schools and more than 5,000 students). For this review, it is important to see overall data for all the sample.

In 2017, 44 per cent of all sampled Grade 2 pupils and 47 per cent of all sampled Grade 4 pupils attained grade-level proficiency in oral reading fluency, increases of 10 and 13 percentage points, respectively compare to results of 2014. Fluency and comprehension overall results are presented in the table below.<sup>21</sup>

**Table 3.1 Students meeting Oral Reading Fluency (ORF) with full reading comprehension**

Reading Fluency	Attaining Fluency Standard with Full Reading Comprehension	Kyrgyz		Russian	
		2014 Baseline	2017 Endline	2014 Baseline	2017 Endline
Grade 2	ORF is 40 words or above with full reading comprehension	20.4	* 33.5	25.6	31.5
Grade 4	ORF is 80 words or above with full reading comprehension	25.7	25.7	20.6	34.3

\* The full reading comprehension standard was defined as meeting the oral reading fluency standard and answering all or all but one of the reading comprehension questions correctly

EGRA confirmed the NSBA concern on a gender gap in reading and comprehension favouring girls. In Grade 2, the proportions of boys and girls attaining grade-level proficiency (reading 40 wpm) increased from baseline to endline (for both languages combined). Growth was 11 percentage points for girls and 8 percentage points for boys. Other gender results for Grade 2 are presented below.

**Table 3.2 EGRA 2017: Grade 2 Kyrgyz Mean Scores by Gender (All Sampled Schools)**

Subtask	Mean	
	Boys	Girls
Initial Letter Sounds (% correct)	95.3	96.1
Oral Vocabulary (% correct)	93.5	93.7
Reading Comprehension (% correct)	64.2	70.9
Listening Comprehension (% correct)	63.2	63.3
Letter Name Recognition (lpm)	64.6	70.9
Familiar Word Recognition (wpm)	51.4	65.1
Oral Reading Fluency (wpm)	32.4	41.7

As in Grade 2, there was a large gender gap at Grade 4. This Grade 4 gap was larger than the Grade 2 gap, increasing from 20 percentage points at baseline to 24 percentage points at endline in favour of girls. This indicates that the gender gap continued to widen as pupils moved from Grade 2 to Grade 4.

Another important point is that statistically significant differences were found between urban and rural pupils on 6 of 16 subtasks, three in Grade 2 and three in Grade 4. All six differences favoured urban pupils (meaning that their scores were higher).

However, while the trends in fluency proficiency attainment were positive, overall attainment levels remained unexceptional. At the endline, just under half of all the pupils surveyed in the country were attaining proficiency (that is, the proportion of pupils reading at the standard of proficiency required remained below 50 per cent for both grade levels).

Based on the given data we can conclude that the primary school education focuses on the basic levels of literacy, reading and math skills but does not reach the education curriculum standard sufficiently so children are able to continue learning successfully other subjects while proceeding to secondary education. Taken this into consideration, reading, comprehension and literacy skills as well as forming foundations of

<sup>21</sup> EGRA report. USAID, 2017

the natural science are the priority primary objectives which require teacher professional development and availability of corresponding teaching and learning materials.

### Lower secondary school

There are no regular national standardized tests that measure learning outcomes for higher grades in school except those NSBA tests mentioned above for Grade 8. Another independent measure is the National University Admissions Test, which is known in the country as ORT from its Russian acronym. The other norm-referenced learning outcome measure for school level is the set of tests – subject-specific and for different grades – that are developed and administered occasionally for small samples of schools by the National Testing Centre (NTC), an agency within the MOES<sup>22</sup>.

As noted above, the NSBA's objective is to obtain an objective and scientifically grounded understanding of what Grade 8 students know and are able to do in accordance with the current national Educational Standard. The assessment was conducted in eight classes in three languages (Kyrgyz, Russian and Uzbek) throughout Kyrgyzstan. As in previous cycles, three subject areas were defined for assessment: mathematics, reading and understanding/comprehension of a text, and natural sciences (chemistry, physics, biology and physical geography). In this assessment, four levels of educational achievement are recognized: below basic, basic level, above basic, and advanced. These levels were defined in 2007 for each grade and each subject area, taking into account the requirements for student's knowledge and abilities under national standards and programmes. The following are the most common requirements for students at each of the four levels, as defined in the NSBA.

**Table 3.3 Description of the NSBA levels**

Level	Description of the level
Below basic	The student has some fragmentary, often unrelated knowledge of certain topics. She/He may partially possess some separate procedural skills and practical skills, nevertheless, she/he does not demonstrate understanding/comprehension of the basic concepts in the subject area, and allows errors even in simple standard procedures when solving and performing tasks. The student often does not know how to solve the simple tasks of real life using the knowledge and skills acquired at school. Thus, the student lacks the knowledge and skills required for further independent successful learning and for successful life in society.
Basic	The student has an idea of discipline in general. She/he has the basic concepts for discipline and operates them mainly at reproductive level. The student can follow standard procedures for solving tasks, and understands simple graphs and figures. The student can express her/his thoughts in writing, albeit briefly, and find some supporting information. Can determine the main idea of what has been read. She/he is able to solve simple tasks from real life, using the knowledge and skills acquired at school. The student has the basic knowledge, abilities and skills necessary to continue studying/learning.
Above basic	The student has all the necessary conceptual knowledge and consistently applies integrated procedural knowledge to solve tasks or problems. Is able to analyse the data and draw conclusions from the analysis of information, express her/his thoughts and support them with relevant information and relevant arguments. The student actively uses the acquired knowledge to solve tasks in real life.
Advanced	The student has all the conceptual knowledge, abilities and skills necessary for successful study. She/he successfully applies integrated knowledge and skills to solve complex and non-standard tasks in the context of all sections provided for in the NSBA. The student analyses the information and draws logical conclusions, and can explain how to solve a particular task step-by-step (task performance). In her/his discourse, the student goes beyond the information provided to her/him, making reasonable assumptions. The student accurately and consistently expresses her/his thoughts, and brings relevant arguments to justify or defend the presented position.

<sup>22</sup> The data for ORT has been sourced from the CEATM's website testing.kg. Data for NTC administered tests were received from NTC databases, courtesy MOES.

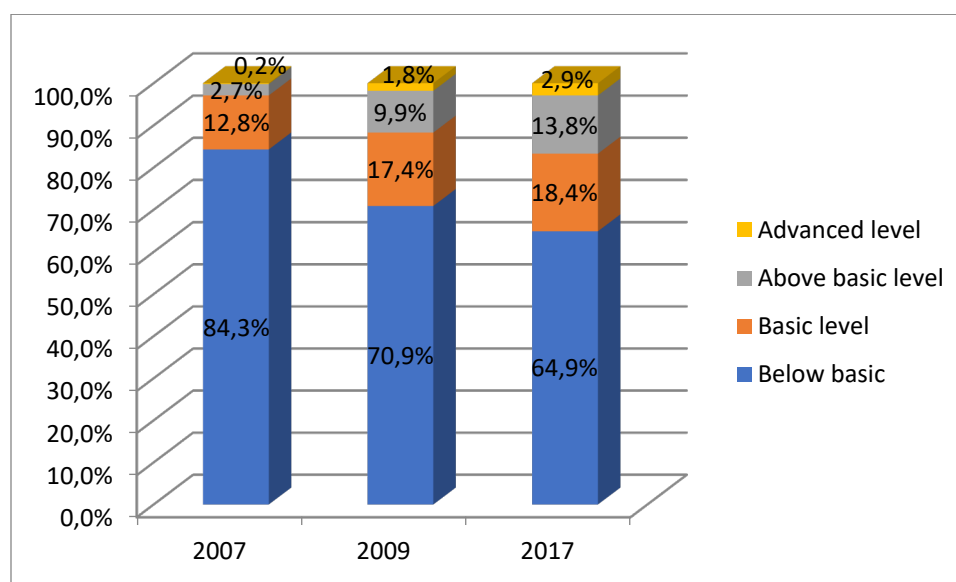
The 2017 maths results found that 64.9 per cent of students were below basic level, less than in previous years (84.3 per cent and 70.9 per cent in 2007 and 2009 respectively). However this was still a low result, with only 18.4 per cent of students having results at basic level, 13.8 per cent above basic and 2.9 per cent advanced level. The mean score in 2017 was 524.4, higher than in previous years.

**Table 3.4 Comparative NSBA data 2007, 2009 and 2017. Mathematics, Grade 8**

	Size of school sample	Size of student sample	Average score	Standard deviation
2007	101	3,553	498.9	1.5
2009	102	3,685	527.6	1.8
2017	186	5,110	524.4	0.8

The greatest improvements were again recorded in schools in small towns. These schools recorded a 10 percentage point decrease in 2017 in the percentage of students who had not reached the basic level. In 2007, the percentage of such students was 85 per cent, in 2009 70 per cent, and in 2017 60 per cent. This is a significant improvement, especially given that, the percentage of students also increased significantly at levels above basic. At the level above basic, the percentage of students increased by 7 per cent, while at advanced level it increased by 2 per cent. This was the biggest increase in any category. Rural schools also saw notable improvements, though these mostly relate to basic level 1. The percentage of students who did not achieve the basic level fell by 8 percentage points in 2017. Given that most schools in the country are rural, this is very significant. As in the previous cycle pupils from Russian-medium schools achieved the best results. Here we observe the lowest percentage of students who did not achieve the basic level (56 per cent) and the highest percentage of students at the levels above basic level (25 per cent). Gender differences are not significant for maths, 4 percentage points in favour of boys at basic level, and 2 percentage points for Levels 3 and 4.

**Figure 3.2 Grade 8 students' achievements in Math, NSBA results**



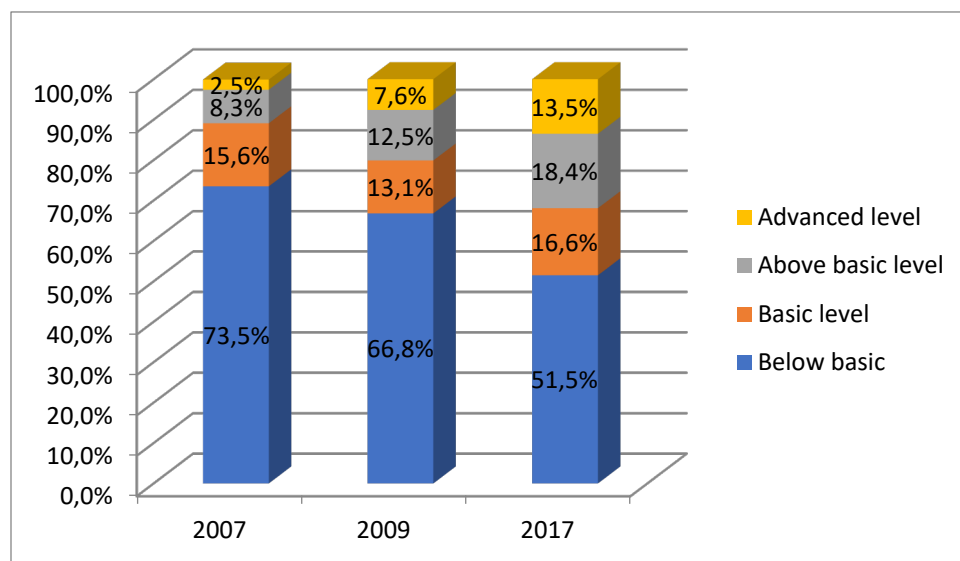
Source: NSBA report, CEATM 2017

NSBA found progress in reading and comprehension: 51.5 per cent students were below basic level in 2017, compared to 66.8 per cent in 2009 and 73.5 per cent in 2007. There were thus increases at basic and above basic levels: 16.6 percentage points at basic level, 18.4 at above basic and 13.5 at advanced level. Significant improvements occurred in schools in Bishkek city, regional centres and small towns, and also rural schools in educational achievements in reading and comprehension. The changes occurred due to less students not reaching basic level (the percentage decreased significantly in each of these categories), and due to a greater proportion of students at levels above basic (by 12 per cent to 17 per cent).

At the level below basic, the difference between the results of eighth graders from rural schools and Bishkek schools has noticeably reduced. In 2007, 83 per cent of students were below basic level in rural schools, and only 41 per cent in Bishkek schools, a difference of 42 percentage points. In 2009, this difference was 37 percentage points and in 2017 it had fallen to 34 percentage points.

There is still a big gap between schools in terms of language of instruction. In Kyrgyz- and Uzbek-medium schools, more than 80 per cent of students remain below basic level, while in Russian-medium schools the figure is 55 per cent. The gender gap also remains quite high: with 15 percentage points less girls than boys below basic level. Also in 2017, the gender gap between girls and boys increased at advanced levels from 6 percentage points in 2009 to 12 percentage points in 2017.

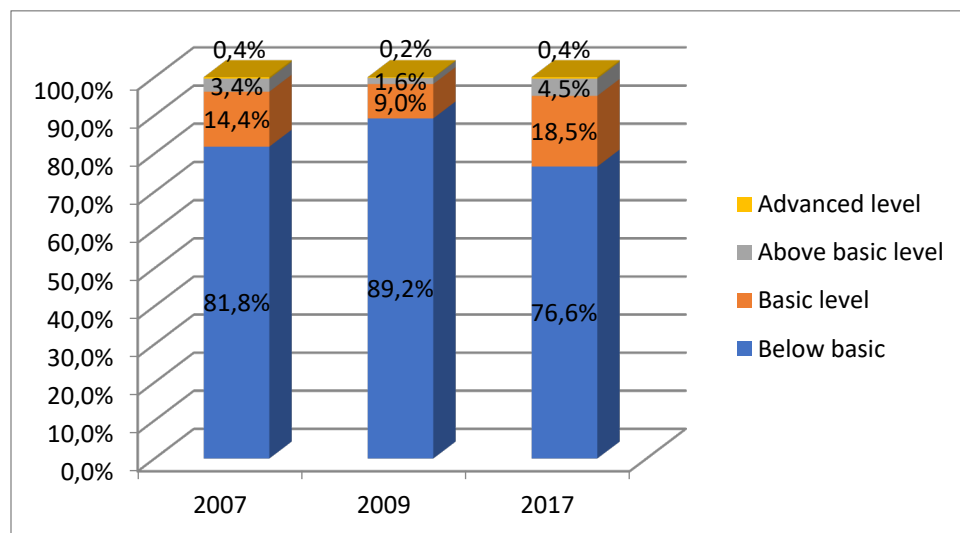
**Figure 3.3 Grade 8 students' achievements in Reading and Comprehension, NSBA results**



Source: NSBA report, CEATM 2017

The lowest scores in Grade 8 in the 2017 NSBA were obtained in natural sciences, although the biggest improvement was achieved here. In 2009, almost 90 per cent of eighth graders did not reach basic level, in 2007 81.8 per cent, and in 2017 76.6 per cent. The percentage of eighth graders above basic level in 2017 increased to 4.5 per cent, not only higher than 2009, but also than 2007. At advanced level, the indicator remained insignificant, like in 2007.

**Figure 3.4 Grade 8 students' achievements in Natural Sciences, NSBA results**



Source: NSBA report, CEATM 2017

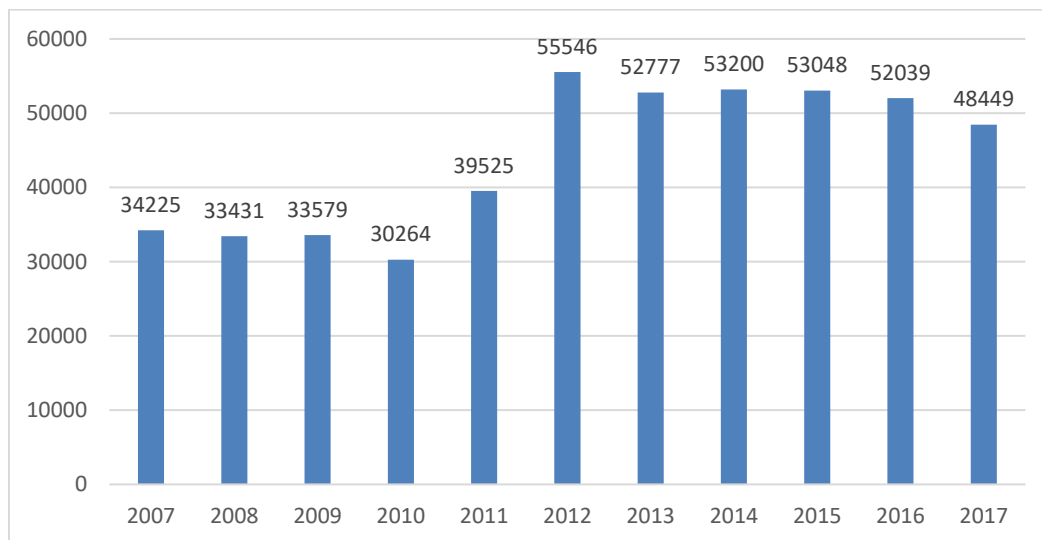


The “*Obsherespublikanskoe testirovanie*” (ORT), modelled on the American SAT, has been administered since 2002 and has gained wide acceptance in the country. It was developed and is run by an independent NGO – the Centre for Educational Assessment and Teaching Methods (CEATM). Until 2014, the test was administered in three languages (Kyrgyz, Russian, and Uzbek): now it is administered in two languages (Kyrgyz and Russian).

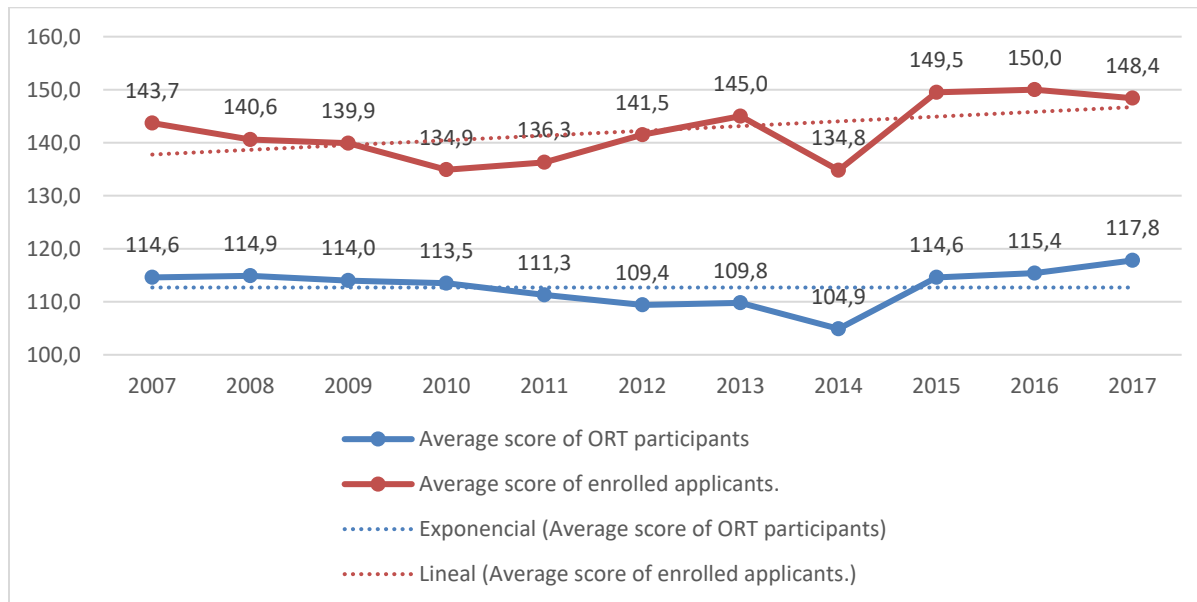
The advantages of the ORT are that it provides an independent and transparent basis for the enrolment of students in higher education institutions and reduces risk of corruption. This has an important equity effect in that it provides an opportunity for capable and well-prepared applicants to enter university regardless of their place of residence and family income. Indeed, the number of students from rural and remote areas has increased over the years. ORT also potentially raises teachers’ and students’ awareness of the importance of reading as a basic tool of learning, as one of the test sections is aimed at checking students’ reading comprehension. In keeping with its objective of being a valid university entrance exam, the ORT test stresses the application of knowledge rather than simple memorization of facts. By the same token, however, ORT is not strictly a measure of what is taught and supposed to be learned in the school curriculum. This is a barrier to ORT being used as a national assessment of school curriculum learning.

Additionally, only those students who are planning to enter university take the ORT; this also limits the extent of use of ORT results (anecdotally, a side-effect is reported in that motivation to study subjects not tested by ORT appears to be decreasing among high school students). Despite these concerns, ORT is a valid aptitude test, and hence needs to be analysed as part of any discussion on the quality of education in Kyrgyzstan.

**Figure 3.5 Number of ORT applicants by year**



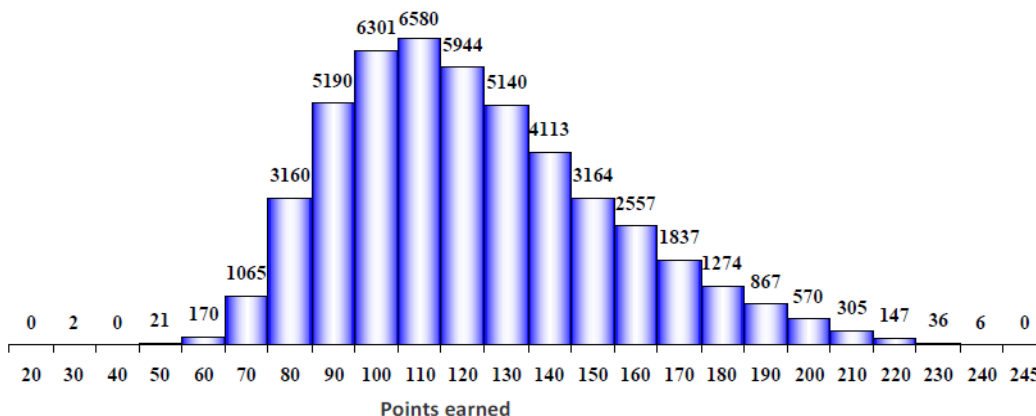
**Figure 3.6 Trendlines for average scores of ORT participants by year**



For entering universities, the results of two tests are taken into account: the general test and the subject test. The general test is mandatory for all applicants who wish to study at universities in the Kyrgyz Republic. This test assesses comprehension, use of educational materials studied at school, and application of skills, acquired during the study. The test consists of three sections: mathematical (solving problems and multiple choice questions), verbal (analogies, completing sentences, and reading and comprehension), and practical grammar of the Kyrgyz or Russian language. Subject tests are conducted in chemistry, biology, physics, mathematics, history and English. In order to select students, this measurement uses a normative approach. The average score of 2017 nationwide was 117.8, with a maximum of 236. However, the maximum score does not indicate that the student who got it answered all the test questions correctly. The threshold scores, determined by the Ministry of Education and Science in 2017, were 110 for the general test and 60 for subject tests (chemistry, biology, physics, mathematics, English and history).

**Figure 3.7 Distribution of Score: general test**

The distribution of applicants, depending on the amount of points earned in the main test (ORT 2017)

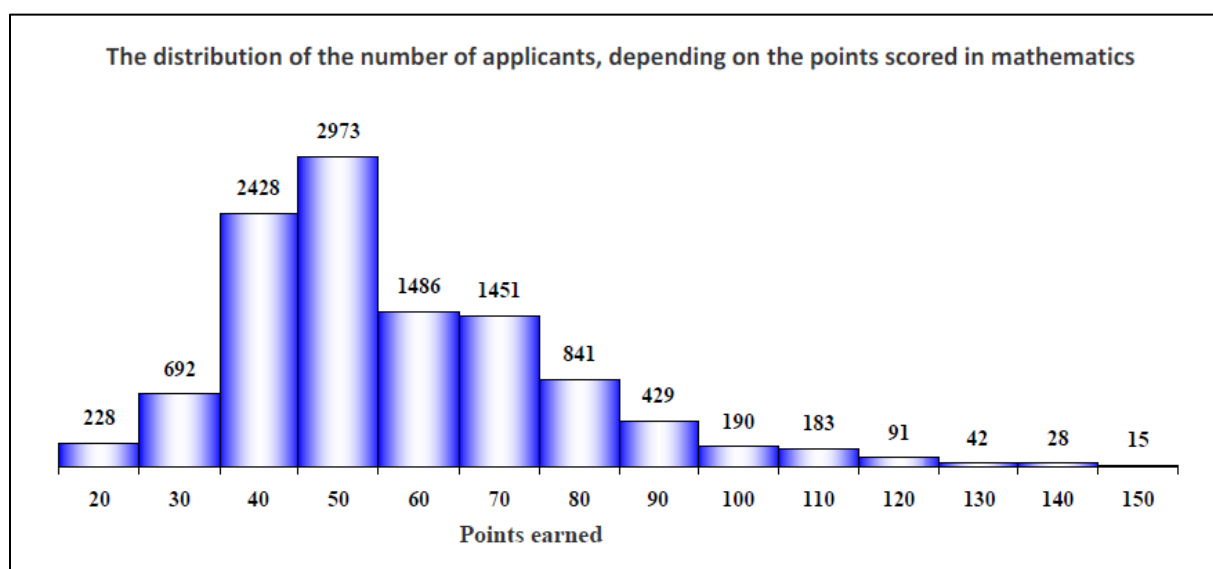


The table below gives on the language of testing. The applicant could choose the language of testing. For example, students at Uzbek-medium schools could take the test in either Russian or Kyrgyz.

**Table 3.5 Differential in ORT General Test: Russian vs. Kyrgyz language**

Test language	Number of ORT 2017 participants	Average value of test score	Standard deviation of test scores	Coefficient of reliability of Alfa Cronbach
Kyrgyz	30,825	110.8	26.5	0.88
Russian	17,624	130.2	34.0	0.93
Total	48,449	117.8	30.9	0.92

The vast majority of entrants chose history for their subject tests and the least physics and English. The same trend was noted in 2014-2016. In general, it can be said that subject tests cause more difficulties for entrants than the general test. The lowest average score was shown by applicants who sat the maths test (49.7 points) and physics test (54.1 points). It should be emphasized that mathematics as a subject was only introduced in 2012. The average scores on subject tests are still not high, but the results of the 2017 subject tests on biology, chemistry and history were slightly higher than those of 2016. As can be seen, the curve for the normal distribution of results in mathematics is significantly shifted to the left, i.e. most graduates demonstrate poor test results.

**Figure 3.8 Distribution of Score in ORT Subject Test - Math (2017)****Table 3.6 Differential in ORT Subject Test – Math**

Subject test on mathematics(ORT 2017)				
Test language	number of participants in math subject test	averages test scores	maximum value of test scores	minimum value of test scores
Kyrgyz	6608	49.7	142	10
Russian	4469	56.9	150	10
Total:	11077	52.6	150	10

Another finding is that across the board, female candidates outperform their male counterparts.

**Table 3.7 Gender differences in ORT scholarship performance**

ORT 2017	Number of received scholarships	Average value of test scores
Female	2725	149.5
Male	1836	146.7

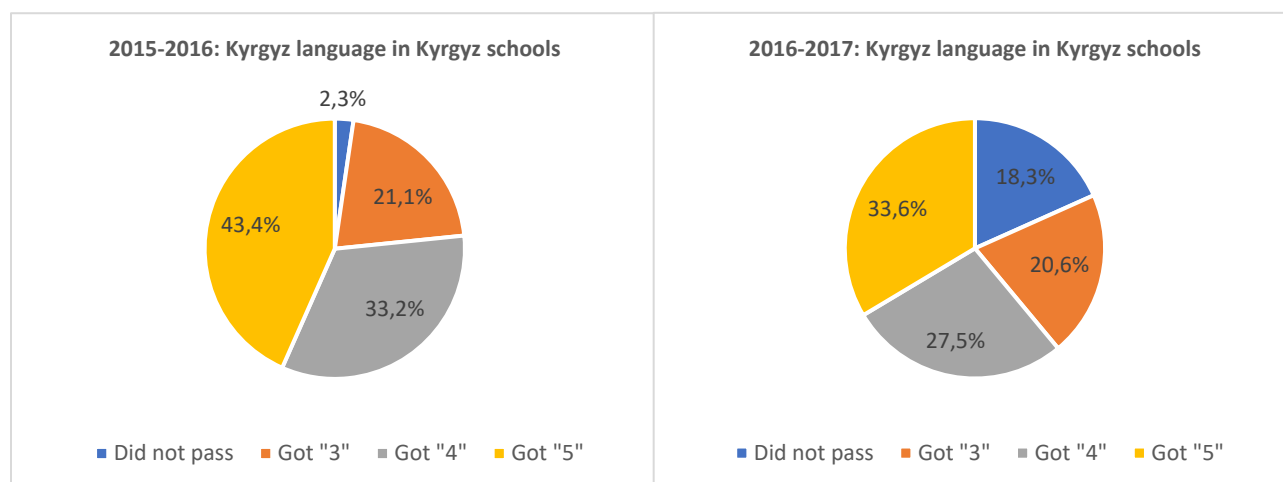
**Table 3.8 Gender differences in ORT 2017 performance**

ORT Test Component	Average value of test scores - Females	standard deviation	Average value of test scores - Males	standard deviation
ORT 2017 main test	122	29.9	113	31.3
ORT 2017 main test sections "mathematics"	23.2	9.1	22.9	9.7
ORT 2017 main test section "Analogies and completion of sentences"	36.8	9.2	34.5	9.8
ORT 2017 main test section "Practical grammar of native language" females	30.2	8.2	26.4	7.9

Another source of data is the National Testing Centre (NTC) pilot leaving exams for students conducted for Grade 11 students in piloting areas.

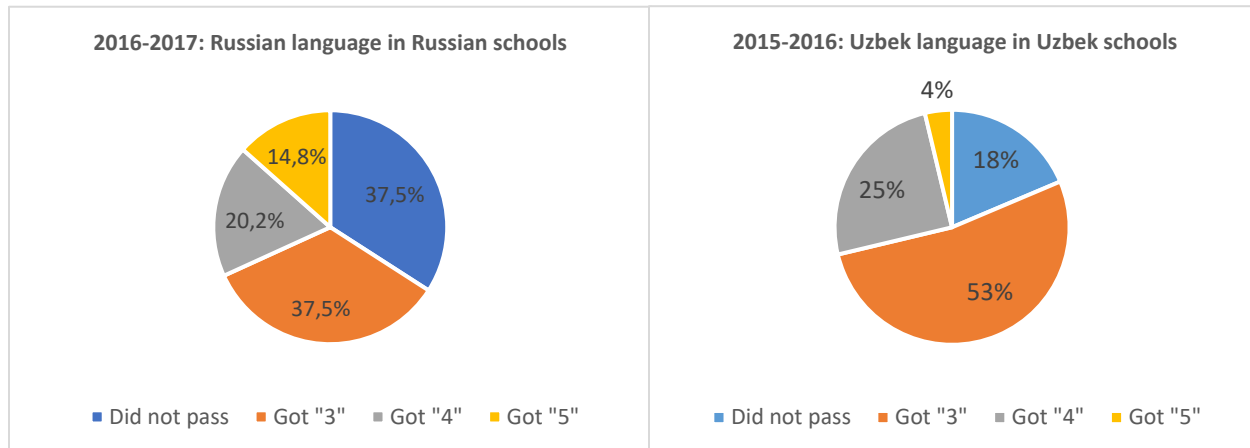
NTC tests were conceived of as an independent measure to address internal bias and grade inflation by school teachers, who would typically assess their own students and allow them to graduate from school. NTC developed subject specific tests that, like examination questions, aimed to assess academic knowledge. The tests were first piloted in Talas province as part of the READ project in 2014. They were then planned for all provincial centres for Grade 11 pupils as a form of independent assessment. Thus, the NTC test serves as a tool to measure how well students mastered the curriculum and the content of schooling after 11 years.

Significantly, for two years in a row, NTC has conducted mandatory tests for Grade 11 students for all provincial centres, with about 2,000 Grade 11 students tested. This was a graduation requirement – and therefore the students from the participating schools saw it as a mandatory assessment. The NTC test is mainly based on subject knowledge and results of two years could not be compared, because the tool was changed. It is clear from the two graphs below on Kyrgyz language in Kyrgyz schools that there are big differences between the two cohorts' results.

**Figure 3.9 Score distribution for Kyrgyz language, NTC results**

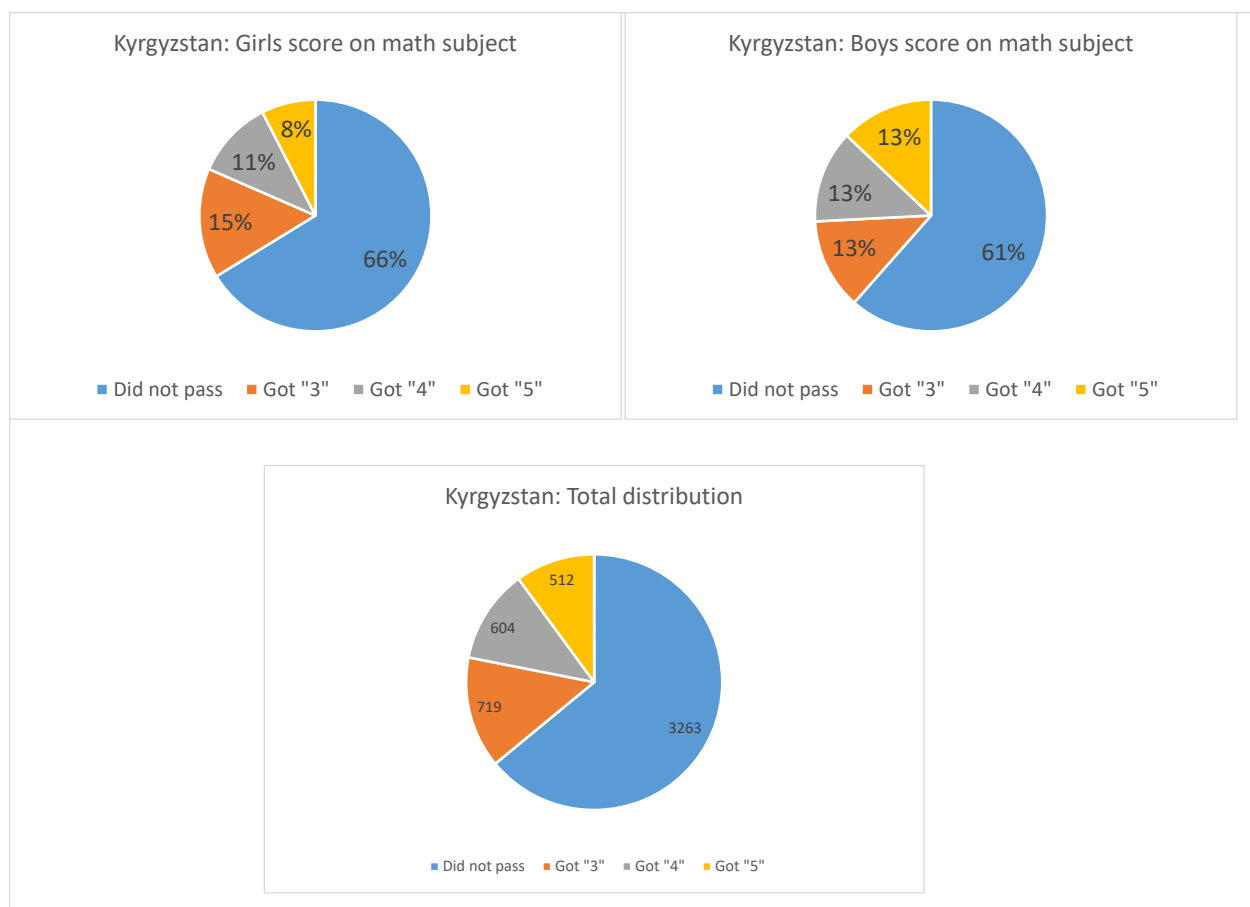
There was a somewhat weaker performance in 2016/17, with the proportion of students not passing the test increasing from 2 per cent to 18 per cent.

**Figure 3.10 Score distribution for Russian and Uzbek languages, NTC results**



Performance in Russian language in Russian schools in 2016/17 was very low, with more than a third of students not passing the exam. It is not possible to compare schools by medium of instruction because of the totally different test provided. The NTC test results in schools with Uzbek medium instruction also show poor performance in the native language: 18 per cent of students did not pass the exam.

**Figure 3.11 Score distribution for Math subject by gender, as per NTC results**



Overall results for maths were also very low, and more than 60 per cent of students did not pass the exam. Boys had a better performance for maths, with 26 per cent achieving Levels 4 or 5 compared to 19 per cent of girls.

Therefore, in the secondary education system there is a sufficiently stable monitoring tool – National Sample Based Assessment (NSBA) which has been undertaken three times for the last decade. It gives a picture of progress in three main domains of quality learning: reading and comprehension, mathematics and natural-science literacy. Other sources, such as ORT and various pilot project testing can be used as additional data sources due to its purposes, sampling, areas of assessment, etc. Since the country did not participate in international comparative assessments (like PISA) since 2009, there are no new data which could show a comparative level of students of the Kyrgyz Republic.

Overall the results of all the quoted above assessments show low level of students learning achievements in secondary school in all key areas: so, from half to quarter of students does not reach the basic level (NSBA). At the same time, within the last decade we note an obvious progress in math literacy and reading and comprehension skills of students, which may be credited due to the change of the education content from one side and change of the information environment, which require children to use different type of skills for working with information.

## Adult literacy

Education is the key resource for developing the human potential, economy and the wellbeing of the population and is the most important driving factor for poverty reduction. Therefore, the education indicators are often used as one of the measures for a country's social progress and economic achievements.

The last population registry data given below (Table 3.9) shows that 58 per cent of population above age 15 has obtained secondary general education (Grades 1-11) and 23 per cent has education above secondary education.

**Table 3.9 Education level of population**

Education level obtained	1990	1999	2009	2009 in %
Higher education	251246	324414	463318	12,4%
Unfinished higher education	43245	47706	133204	3,6%
Secondary special (vocational)	418716	333181	263930	7,1%
Secondary general (grades 10-11)	1040494	1545626	2166912	58,0%
Basic education (grades 5-9)	489786	566351	443138	11,9%
Primary education (grades 1-4)	240922	193767	203762	5,5%
No primary education (grades 1-4)	97075	39506	63960	1,7%
<b>Total population of 15 years old and above</b>	<b>2661901</b>	<b>3090680</b>	<b>3738224</b>	<b>-</b>

Adult (15+) literacy rate (%). Total is the percentage of the population age 15 and above who can, with understanding, read and write a short, simple statement on their everyday life. Generally, 'literacy' also encompasses 'numeracy', the ability to make simple arithmetic calculations. This indicator is calculated by dividing the number of literates aged 15 years and over by the corresponding age group population and multiplying the result by 100.

In 2015, adult literacy rate for Kyrgyzstan was 99.5 %. Adult literacy rate of Kyrgyzstan increased from 98.7 % in 1999 to 99.5 % in 2015 growing at an average annual rate of 0.40 %.

Date	Value	Change, %
2015	99.5	0.26 %
2009	99.2	0.55 %
1999	98.7	

In MICS 2014 used adult literacy questionnaire only for women of 15-24 ages. The literacy was assessed by requesting women to read simple short text or based on the highest education level obtained. So, the literacy rate of women in the Kyrgyz Republic (15-24) is 99.3 per cent. There are some

differences in geographical locations – so the literacy rate in Osh oblast is the lowest – 97.3 per cent. Also in households of minority languages, women literacy rate is significantly low – 88.7 per cent.

## Teaching Workforce

Teaching as a career in the Kyrgyz Republic is experiencing major problems which, if not addressed, will undermine other efforts. In recent years, the salaries of teachers have been about 90 per cent of the average wage. However, as this is still low many teachers have to take additional hours to earn more money. Recruitment of high-quality candidates in teaching is very inadequate, and retention of good teachers in the career is proving very difficult. Women make up the vast majority of the teaching force, which is also an aging profession. The MOES reported that there are almost no vacancies, particularly in regions where the teacher is the only professional with a stable salary and respect. Nevertheless, the issues of quality of pedagogical education, prestige and social status of the teacher, the general educational level of students entering pedagogical specialties, professional level assessments, continuous professional development and career opportunities are critical.<sup>23</sup> The main problems in this area include:

**1. Problems related to entering the profession:** the low average ORT score of applicants for pedagogical programmes and the lack of opportunities to select entrants motivated for pedagogical activity, for the specialties and areas of training teachers; the low proportion of specialized employment of pedagogical programme graduates in the education system. In fact, the students with the lowest ORT results enter pedagogical faculties. According to CEATM 2016 data, the average score in the general test for student teachers in the Arbaev State University teacher training programme (the central state university in the field of pedagogical education) in 2016 was only 140 points. In general, across all pedagogical specialties nationwide, to receive a funded university place requires 123 points, compared to the average result nationwide of 115.4 points and the maximum of 237 points. During their period of study in pedagogical specialties, 37 per cent of enrolled students either drop out of university or are transferred to other specialties. As a result, only 63 per cent of those who begin studying in pedagogical departments actually complete their studies and receive higher education diplomas in the pedagogical specialty. As a result, only 20 per cent stay in the profession in schools. This practice of “double negative selection”, at entrance to university and on entering school, has a negative impact on the present and future of school education in the country. As global educational systems show, the main selection should be carried out at the stage of entering the profession, when selecting students for training programmes in pedagogical specialties. Thus, in the USA, 23 per cent of first-year students in higher pedagogical institutions come from the top third of the school's graduates' performance. In Finland, Singapore and South Korea, this figure is 100 per cent.

**2. Problems of teacher trainer workforce.** Many universities in the country train students in pedagogical specialties. In 2016, 12 universities admitted students with state-funded places to study in pedagogical specialties, including state provincial universities in each of the provincial centres. In 2016, the Government approved the New Generation Educational Standards, but their implementation requires time and effort. In the meantime, outdated methods and technologies are used in universities, there is not enough time allocated for practice and internship, there is no activity-based approach for training of students, there is no connection between studying disciplines and the needs of a real school, no involvement of students in research activities, and inadequate provision of educational process in pedagogical programmes. The professional development system for teachers to train future teachers does not meet the needs of modern schools and universities: it is theoretical and does not study the processes taking place in the practice of teaching in schools. There are no professional pedagogical communities and associations in the country, with the exception of a few, such as the Association of English Teachers, to support the professional development of teachers and heads of general educational organizations.

**3. Problems of attracting staff to and retaining them in teaching.** In 2016, about 77,000 teachers worked in Kyrgyzstan's educational system. As Table 3.13 below shows, the number of teachers in Kyrgyzstan's public education sector, for all categories and levels, has steadily increased over the past 10 years.

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<sup>23</sup> MOES programme on teacher professional development “New teacher”, 2017

**Table 3.10 Number of Teachers**

School type / Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Pre-school institutions	2,478	2,519	2,766	3,007	3,476	3,835	4,269	4,833	5,374	6,045
General education schools	70,677	69,565	69,871	67,774	74,021	74,053	72,684	71,014	73,543	79,472
Schools for children with learning disabilities	457	388	672	605	646	597	466	502	488	508
Primary vocational schools	3,305	3,516	3,165	3,608	3,983	3,920	3,405	3,505	3,548	3,680
Secondary vocational colleges	3,187	3,738	4,311	4,437	4,759	5,380	6,154	6,506	5,794	6,407
Higher educational institutions	12,925	11,423	10,942	10,245	11,204	10,990	12,447	11,697	12,675	9,303

Source: NSC

Wage reform in 2011 reduced teacher shortages in schools by 14.5 per cent; then under Government Decision 473 of 9 July 2015, the hourly wage rates for primary school teachers were increased by 80 per cent, and for Grade 5-11 teachers by 50 per cent. These measures contributed to addressing the shortage of teachers in schools, especially in rural areas, and increasing the prestige of the profession. According to 2016 data, 19.8 per cent of teachers in schools are young professionals. In the 2016/17 academic year, 3,030 young specialists entered the national education system. The average salary of teachers has almost reached the average salary in Kyrgyzstan, though it remains below the average wage in public sector. At the same time, the issue of the qualitative and age composition of the pedagogical corps still remains open. In 2015, salaries were also raised for teachers at pre-school facilities and primary vocational education teachers.

At all levels of the system, a significant gender imbalance remains among the teaching staff: this affects education and upbringing, including the formation of values and attitudes.

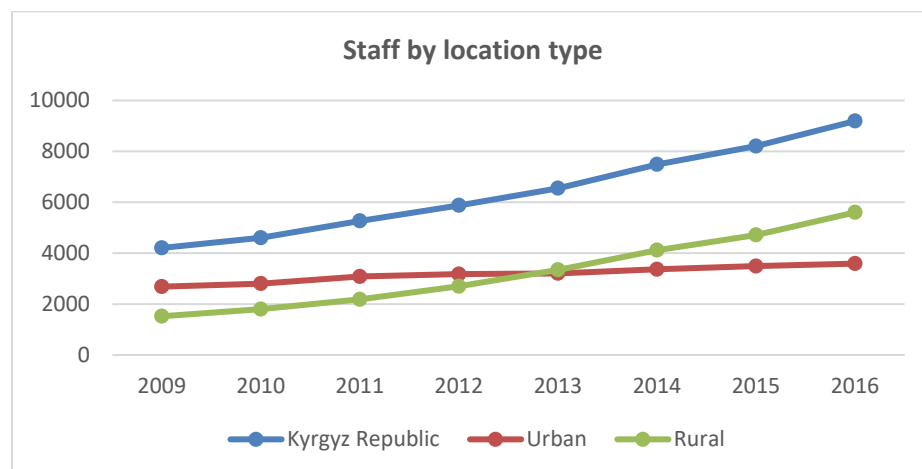
### Pre-school level

Beyond the picture above for the overall system, there are many more nuances at each level of education. For example, in the domain of **early childhood development** (ECD), the principal focus of the Government and its development partners has been the issue of access. This is rightly so, as there is an overwhelming consensus in the research and policy community that quality early childhood is not only the strongest foundation of a young person's education and development trajectory, but is also the most cost-effective public investment with the highest rate of return for social welfare. With so much pressure to extend and expand access to early childhood beyond its current level of 20 per cent nationally, it is not surprising that the issue of quality has received relatively less attention at ECD level.

The total number of ECD staff has been growing in both urban and rural parts of the country, with the rural growth at a higher rate (given the higher proportion of children living in rural areas).



Figure 3.12 ECD Staff by Location Type



Much of this growth has been driven by a higher increase in the number of people in the caregiving / educator category than in any other; implying that more front-line professionals are available to work with children.

Table 3.11 Number and level of education of ECD Staff in state kindergartens, by Location

	2009	2010	2011	2012	2013	2014	2015	2016
<b>Kyrgyz Republic</b>	<b>4206</b>	<b>4605</b>	<b>5269</b>	<b>5877</b>	<b>6550</b>	<b>7486</b>	<b>8207</b>	<b>9192</b>
Higher Professional Education Completed	2198	2486	3074	3388	3911	4531	5072	5860
Among Higher Professional Education - Defectologists	23	35	49	65	47	61	46	-
Incomplete Higher Education	413	425	491	595	656	700	758	755
Secondary Vocational Education	1412	1552	1625	1736	1891	2185	2331	2542
Among Secondary Vocational Education - Pedagogy	1029	1180	1235	1257	1514	1726	1917	2184
General Secondary Education	183	142	79	158	92	70	46	35
<b>Urban</b>	<b>2685</b>	<b>2804</b>	<b>3083</b>	<b>3178</b>	<b>3205</b>	<b>3367</b>	<b>3492</b>	<b>3590</b>
Higher Professional Education Completed	1621	1741	2012	2066	2159	2295	2409	2534
Among Higher Professional Education - Defectologists	23	34	49	65	47	61	46	-
Incomplete Higher Education	223	220	243	236	235	223	232	234
Secondary Vocational Education	722	750	782	792	769	812	837	808
Among Secondary Vocational Education - Pedagogy	514	557	561	539	585	580	634	628
General Secondary Education	119	93	46	84	42	37	14	14
<b>Rural</b>	<b>1521</b>	<b>1801</b>	<b>2186</b>	<b>2699</b>	<b>3345</b>	<b>4119</b>	<b>4715</b>	<b>5602</b>
Higher Professional Education Completed	577	745	1062	1322	1752	2236	2663	3326
Among Higher Professional Education - Defectologists	-	1	-	-	-	-	-	-
Incomplete Higher Education	190	205	248	359	421	477	526	521
Secondary Vocational Education	680	802	843	944	1122	1373	1494	1734
Among Secondary Vocational Education - Pedagogy	515	623	674	718	929	1146	1283	1556
General Secondary Education	64	49	33	74	50	33	32	21

## School level

At the **school education level** the absolute number of teachers in government schools has been increasing over time (Figure 3.1) The number of teachers was falling until 2010 (when there was a large shortage of teachers), and after the reform of the wage system and the increase in teacher salaries (particularly for young teachers), their number increased sharply. In 2016/17 year there was 79,472 teachers, of whom 84 per cent were women.

**Table 3.12. Number of teachers in secondary education schools**

	Total	Teachers of primary school (Grade 1-4)	Teachers of secondary school* (Gr 5-11)	Teachers of music, physical education, drawing, military	School principals*	Deputy principals*
Total	79,472	20,110	43,518	8,711	2,228	4,905
Urban	21,641	5,220	12,189	2,382	454	1,396
Rural	57,831	14,890	31,329	6,329	1,774	30,509

\*excluding the next column

\*\*Principals and deputy principals included in the total teacher number because all of them have teaching hours

The student-teacher ratio (STR) is also often seen as a proxy of education process quality. If one were to simply calculate the STR by looking at number of students and teachers in the system, one would arrive at a low STR number, much lower than the OECD average (Table 3.4).

**Table 3.13 Student-Teacher Ratio (STR)**

Year	Total Students	Total Teachers	STR (Country Average)	STR for Chong-Alai district	STR for Tokmok town
2007	1080061	72097	15	10	25
2008	1053668	70849	15	10	24
2009	1036834	71172	15	9	25
2010	1018868	69062	15	10	25
2011	1015172	75502	13	8	22
2012	1104105	82851	13	8	23
2013	1027123	74407	14	7	25
2014	1043629	72928	14	7	26
2015	1091260	75529	14	7	25
2016	1175780	79472	15	7	23

Surprisingly, it is the town of Tokmok that appears to have the highest STR, rather than Bishkek city. However, looking at STR at various levels of schooling presents a more nuanced picture. The STR in primary grades varies greatly depending on the regions. Thus, the highest ratio is observed in the two main cities of Bishkek and Osh, as well as in Chuy province, suggesting a high level of occupancy in primary school. In other regions, the STR does not exceed the national average.

**Table 3.14 Student teacher ratio in primary school (Grades 1-4)***(at the beginning of the school year)*

	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017
<i>Kyrgyz Republic</i>	24	24	25	25	24	25	26	27	26	28
Batken province	24	23	22	22	22	22	23	23	24	25
Jalalabad prov.	24	24	23	24	23	23	24	24	22	27
Issyk Kul prov.	23	23	23	23	22	24	24	24	26	26
Naryn province	22	20	20	21	20	20	21	20	20	22
Osh province	22	22	22	23	23	23	23	24	23	25
Talas province	21	21	22	23	22	22	23	22	25	25
Chuy province	26	26	28	29	26	27	28	30	30	32
Bishkek city	37	35	36	37	35	36	39	40	40	41
Osh city	30	33	34	34	35	34	40	43	39	39

The STR at secondary school has significantly lower rates. Because at primary level there is one teacher for a whole class, while at secondary level there are multiple teachers for different subjects. Again, there is greater occupancy of schools in Bishkek and Osh, as well as in Chuy province. At the same time correlation is not observed between STR and the quality of teaching, as all the studies cited above confirm that students in cities demonstrate higher achievements. However, to understand better the situation in future it is recommended to look at the STR separately in primary education level and separately for lower secondary education level, because in primary school teaching of all main subjects are done by one teacher for all four and five years (school preparatory year and Grade 1-4).

**Table 3.15 Student teacher ratio in secondary school (Grades 5-11)**

	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017
<b>Kyrgyz Republic</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>
Batken prov.	16	17	16	16	14	14	14	14	13	13
Jalalabad prov.	17	18	17	18	14	14	14	15	14	14
Issyk Kul prov.	14	14	13	13	13	12	13	13	14	13
Naryn province	11	11	11	10	10	10	9	10	10	10
Osh province	16	16	15	15	13	13	13	13	13	12
Talas province	15	15	14	14	12	12	13	13	14	14
Chuy province	20	20	20	20	17	17	18	18	19	18
Bishkek city	19	18	18	18	15	15	16	16	17	17
Osh city	19	19	18	18	15	16	16	17	17	16

The average STR in secondary school remains relatively low, compared to most developing countries. Some have observed that this is unaffordable for a resource-constrained education sector like that of Kyrgyzstan, and needs to be addressed with more efficient allocation of teachers and resources. This concern is understandable given that to keep up with a growing student population more teachers would be needed, creating additional financial pressures on the government budget. Consequently, rationalization

of the teaching force – in step with consolidation of schools with severe under-enrolment – and validation of multi-subject teaching (particularly in lower grades) may be desirable.

Ultimately, while the averages may seem favourable, but they may be hiding important variations, with serious consequences for the quality of teaching. The issue of over-crowding in certain urban schools – especially in Bishkek may worsen instruction because teachers have too many students in their classrooms. In addition, the issue of large class size may also be a manufactured scenario, in which “strategic vacancies” are kept for teacher shortages, only to have these vacancies later allocated on a preferential among few teachers.<sup>24</sup> This allows those ‘preferred’ teachers to pick up extra teaching hours. Given that the system of teacher pay is associated with hours of teaching load, the incentive for teachers to have more hours may result into certain teachers with overload, and/or combining classes to double count hours (for example language). Both these factors may affect the quality of classroom instruction.

According to the MOES data, as of November 2017, the teacher shortage in schools was 814, whereas 10 years ago the number was 3800. This positive trend is a result of one of the system reforms taken towards supporting teachers. In 2007 the average teacher salary was 3500 KGS, by 2017 it increased to 13,800 KGS. The highly demanded teachers are primary school teachers, teachers of Russian language, physical education, English language, music, chemistry and physics subjects.<sup>25</sup> Also, the highest vacancy was reported in Chui (190) and Jalal-Abad (166) provinces, especially those who can teach in Russian language.

NSBA 2017 report includes results of survey among school management, which revealed that 38 per cent of schools lack teachers of primary grades and math subject, 31 per cent of schools lack teachers of Russian and Kyrgyz languages and literature, the 30,4 percent lack teachers of physics, the 28.8 percent lack chemistry teachers and the 22.8 percent of schools lack teachers of geography subject.

The highest shortage numbers are in schools with Russian language of instruction. Here teachers of primary school and teachers of math are vacant in 45.6 percent of schools, i.e. in every second school. In schools with Uzbek language of instruction the most demanded are teachers of Kyrgyz language and literature (40%), chemistry and biology (40%), and teachers of primary school, math, geography and physics (each of them by 30%). Similar picture is in schools with Kyrgyz language of instructions – vacancies are reported for teachers of primary school and math (35% each), and teachers of chemistry and physics (about 30% each).<sup>26</sup>

To address teacher shortage the graduates of the teacher specialties are distributed as per the reported teacher vacancies received from district and city education departments. These departments collect and report these vacancy reports monthly in accordance with the needs of each school and in accordance with the basic curriculum, as well as taking into account the staffing of schools, distance from the district center, load, language of instruction, allowances that provide incentives for young professionals and housing. The order of the minister approves the distribution schedule and composition of the commission, then the state distribution is carried out.

**Table 3.16 Graduation, distribution, coming to schools of young teachers (Nov.2017)**

No	Academic year	Graduated	Distributed	Came to school to work	Did not came to school to work
1	2014-2015	2381	1845	1487	358
2	2015-2016	3868	3030	2477	553
3	2016-2017	2271	1816	1436	380

Policy analysis in the CEE/CIS region<sup>27</sup> frequently mention three reasons for low teaching quality:

- Inappropriate teaching environment: The class and school setting – ranging from challenging class size to scarce school resources – make it difficult for teachers to work effectively.
- Inadequate qualification: The quality of pre-service teacher education is poor and, as a result, qualified teachers are ill prepared for their work.

<sup>24</sup> G.Steiner-Khamsi, 2014

<sup>25</sup> <https://bilim.akipress.org/ru/news:1429191?from=bilim&place=tags>

<sup>26</sup> NSBA report. CEATM, 2017

<sup>27</sup> A Regional Study on Recruitment, Development and Salaries of Teachers in the CEE/CIS Region. UNICEF 2011

- **Teacher shortage:** Schools face difficulties filling their vacancies with qualified teachers and therefore hire unqualified or underqualified teachers. In addition, qualified teachers are often asked to teach additional hours in subjects for which they have no training.

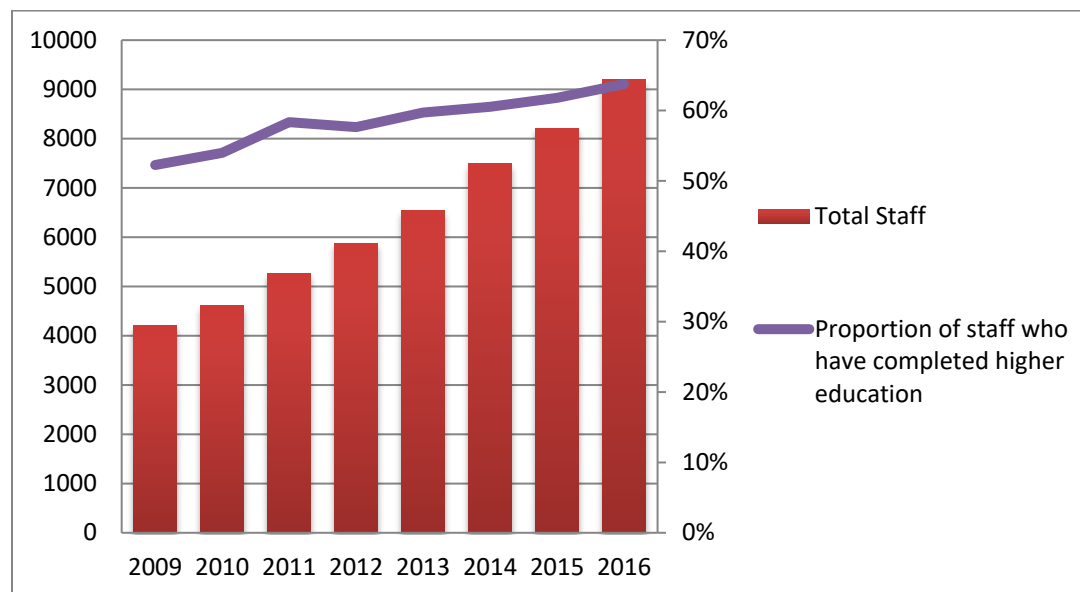
Taking into consideration of student annual growth rate, we can forecast an increased need in teachers at least for the next five years. So having student population in primary schools forecasted in five years as 651,136 children (number of children of corresponding ages multiplied to 107, which is the average GER for five years), the required number of primary school teachers will be 23,255. This exceeds the current available quantity of primary school teachers for 3,145. So, in five years we need more than three thousand more of primary school teachers, in addition to the current shortage of them and relatively high student teacher ratio in primary school. Pedagogical universities should take into account this forecasted demand and start enrolling into 5-year primary school teacher preparation programmes already this year. It needs to be noted that forecasting of teachers will depend also on changes in the curriculum and basic education plan (a plan of subjects and hours per week).

## Teacher qualifications

Currently, there are no clear qualification frameworks and professional standards for teachers in Kyrgyzstan. Teacher attestation system based on performance criteria was developed and piloted in 2016 and planned to be implemented. But later it was cancelled (or postponed till 2020) and substituted by school accreditation system. Therefore, it is not possible to assess teacher qualifications, other than their level of education. This section will also include data on professional development of teachers.

At ECD level, one can see the growth of ECD staff by training and education levels (Table 3). Encouragingly, the proportion of ECD staff who have completed post-secondary level professional education has been slowly but steadily rising over the last 10 years.

**Figure 3.13 Proportion of ECD staff who have completed higher education**



Based on available data (until 2014) the proportion of School Teachers, at primary and secondary levels who have completed higher professional education is already above 90 per cent and still rising, although slowly (Table 3.7). It should be noted however that being a graduate is not necessarily an assurance of better instruction because a teacher may be asked to teach a subject that is not her/his specialization. This occurs frequently in schools with shortages of subject teachers, particularly in rural regions and particularly at secondary grade levels.

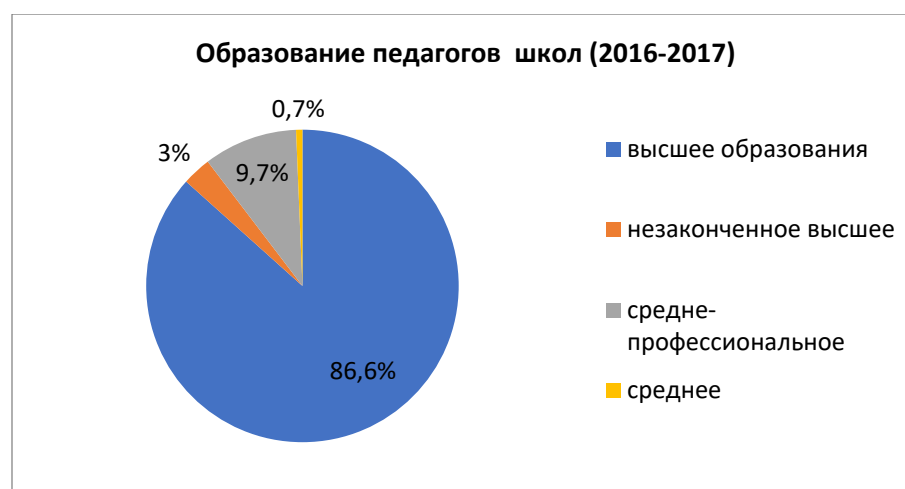
Table 3.18 Educational Profile of School Teachers

<b>Percentage of primary school teachers with university qualifications</b>	<b>2009/10</b>	<b>2010/11</b>	<b>2011/12</b>	<b>2012/13</b>	<b>2013/14</b>
Total	93.1	93.6	93.3	93.9	94.3
Urban settlements	94.8	95.2	95.1	95.3	95.5
Rural areas	92.6	93.1	92.7	93.4	93.9
<b>Percentage of secondary school teachers (Grades 5-11) with university qualifications</b>					
Total	92.5	92.9	93.1	94.1	94.8
Urban settlements	95.3	95.4	95.7	96.4	96.9
Rural areas	91.5	92	92.1	93.3	94

Source: MOES 2014 (Education & Science)

Thus, most teachers have higher education, in 2016-2017 years 86,6 percent of teachers had higher education and 3 percent uncompleted higher education level.

Figure 3.14 Proportion of teachers who have completed higher education



Only 12 per cent of teachers in the 2015/16 academic year have taken a professional development course instead of the statutory rate of 20 per cent. The centralized nature of professional development in terms of content and forms of education does not meet the needs for training teachers, does not fully reflect current trends in the development of education and does not ensure the governmental order for introduction of new generation standards, including the transition to competence-based training, active introduction of information and communication technologies into the educational process, and emphasis on mastering languages and natural science. There is no unified approach to developing module-based curricula with variable components, in the various professional development institutions.

The lack of detailed statistics on teachers prevents effective management of human resources. The 2017 adoption by the MOES of the “New Teacher” programme for professional development and teacher support creates some hope for development of a consistent policy on teachers, including the training system, and improving qualifications, attestation, incentives and wages. However, the Programme is not financially supported, and is not reflected in the Strategy Implementation Plan for 2018-2020.

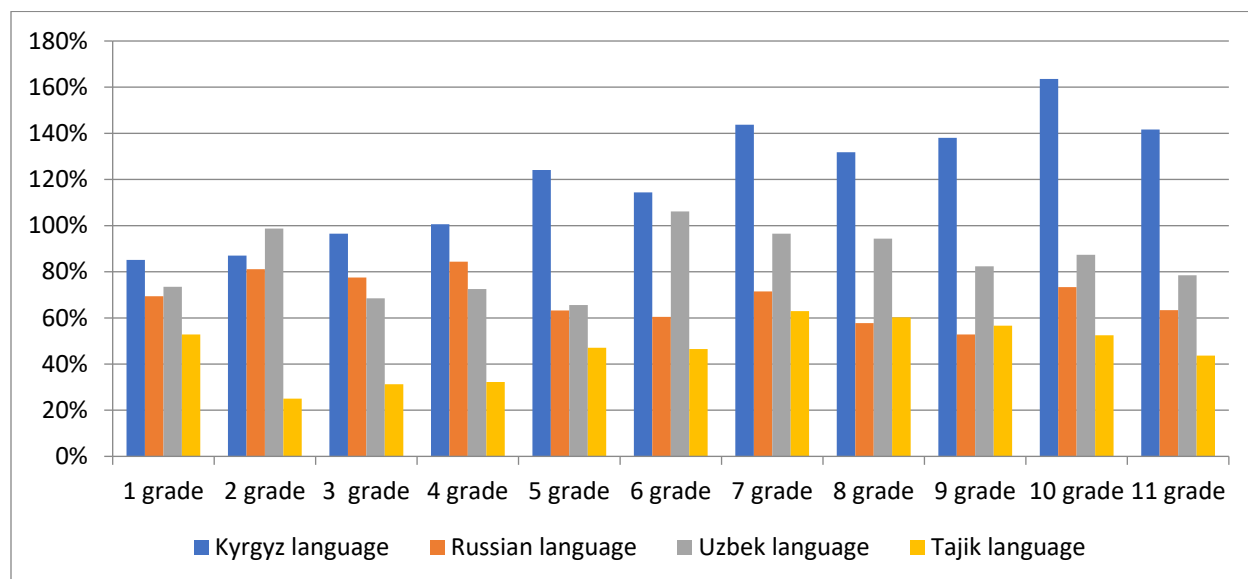
## Resources and Learning Environment

While research reveals teachers to be the most important input into a learner's educational outcomes, to be effective teachers need other vital educational inputs, most notably **teaching and learning materials**. Thus, availability of relevant teaching and learning materials is a key aspect of the educational inputs at school education level. Perhaps nothing embodies this more than the **availability of textbooks**, and increasingly access to the internet. On both fronts, important efforts are underway in Kyrgyzstan, led by the MOES and supported by development partners. However, significant challenges still need to be overcome.

Indeed, the issue of textbook production has been a contentious issue in Kyrgyzstan, with various institutions (including units within MOES, the Kyrgyz Academy of Education (KAE), development partners, and so on) having overlapping mandates and authority. A recent ADB study provides the most up-to-date information on textbook production, distribution and utilization in the schools of Kyrgyzstan. Using a sample of 71 schools – a mix of rural and urban schools from every region of the country – the study presents valuable insights on how the different components of the production-distribution-utilization system work (or otherwise) through the various levels of national and subnational institutions.

To their credit the ADB, MOES and the KAE have worked together to create a more transparent, competitive and quality-controlled textbook production system, from the mapping of academic standards, the tendering process, evaluating author proposals and eventual publication of the titles. However, there are several weak links where the system seems to break down between ordering, production, and distribution. In other words, the issue of textbook availability is a resource and governance problem, rather than a problem of lack of textbook content, authorship, or production expertise. While an ADB-supported textbook rental scheme is rolling out, as the figures below (based on official MOES data) demonstrate, coverage of textbooks for various subjects and grade levels continues to be a challenge. Values higher than 100 per cent imply greater availability than estimated demand.

**Figure 3.15 Textbook coverage – by schools with different mediums of Instruction**



As these official figures demonstrate, in higher grades and particularly in minority languages (Uzbek, Tajik and to some extent Russian) shortages are mild to severe. School management survey of NSBA 2017 also showed that in general schools in Kyrgyzstan have better supplied with textbooks. The textbook supply in 2017 in average was 74.2 percent, whereas in 2017 the average increased till 80.1 percent. Some schools have reported 100% supply of textbooks and some are equipped at 30 percent only (minority language schools)<sup>28</sup>. It needs to be noted that about third of schools currently use textbooks printed out during Soviet Union period and 72.8 percent of schools also use textbooks printed out before 2000. Russian Federation textbooks (both printed before 2000 and after) are used in 82.8 percent of schools. 95.7 percent of schools use textbooks printed out after 2000.

<sup>28</sup> NSBA report. CEATM 2017

But high textbook coverage in Kyrgyz-medium schools does not guarantee good student results. Availability of textbooks only positively reinforces education when the content of the textbooks is suitable and of high quality. This relates to the learning standards that guide the teaching and learning content in school textbooks. There has not been a full content analysis of textbooks, although the Government is making on-going efforts to revamp the curricular standards at all levels of schooling and align them with international good practice. The core idea has been to move away from content-based to competency-based standards, and a small group of development partners (particularly the World Bank, ADB and USAID) have invested in complementary efforts to support the MOES to move towards competency-based standards for all grades. Given the time lag between text approval and distribution, alternative and innovative approaches are required, including shared digital books, to address this challenge.

The review of the available policy and policy-related documents indicates awareness of the shift that must be made in thinking about education quality, from narrow “subject-specific” outcomes (based on test scores and subject grades) to thinking about quality from the perspective of social outcomes and individual outcomes, beyond narrowly understood skills in subject areas. This is evident in the language of the curriculum, with the emergence of terms such as “functional literacy”, “sustainability of results”, “competence”, and so on. These all suggest an understanding of quality of learning in terms of more foundational outcomes (analytical and critical thinking abilities, communication skills, ability to conduct research and respond to unfamiliar problems, and so on) that may be helpful for further study or adult life. These new competency-based standards for school education were adopted in 2014, and the World Bank and ADB supported the MOES to finalize and adopt subject standards (except for social studies) in 2015. The same management survey of NSBA 2017 report noted that supply of schools with various methodological literature remains low. If in 2009 schools were supplied by this literature for 42.9 percent, then in 2017 it was 48.5%. There are schools which practically do not have any methodological literature, schools with Russian language of instruction are in better position (54 percent). Also, the comparison shows that state schools have poor supply of literature (45.1 percent) than private schools (84.9 percent).

It is impossible to talk about a world-class 21<sup>st</sup> century education today without talking about **access to information technology** and **libraries** in schools. As the figures below demonstrate, coverage of computers in schools is increasing, although MOES figures indicate that the student to computer ratio nationally remains high at 25 to 1. With the Government’s Taza Koom Programme emphasising digital knowledge and e-governance, there is policy momentum to significantly improve coverage in the near term. In 2017-2018 school year, 775 (35 percent) schools were planned to be connected to internet.

**Table 3.18 Proportion of Schools with Computers and Libraries**

Year	Proportion of schools with Computer and Information Technology Skills classrooms	Proportion of schools with libraries	Number of schools provided with libraries	Total Number of general education schools	Number of general schools with classrooms of Computer and Information Technology Skills <sup>1</sup>
2007	68.73	97.51	2114	2168	1490
2008	76.37	97.30	2129	2188	1671
2009	78.05	98.72	2163	2191	1710
2010	78.61	98.63	2167	2197	1727
2011	80.40	98.87	2179	2204	1772
2012	82.51	97.73	2151	2201	1816
2013	87.22	98.10	2165	2207	1925
2014	88.48	98.14	2164	2205	1951
2015	87.02	98.15	2177	2218	1930
2016	88.82	96.82	2165	2236	1986

There is a good deal of literature that emphasizes the importance of a nurturing and child-friendly physical environment for all levels of education, particularly early childhood when children are at their most vulnerable and when the natural cycle of brain development can have life-long consequences for cognitive and socio-emotional development.

The quality of the learning environment for early childhood development is of particular importance, given the diversity of formats and contexts in which it is offered in the country. Even at the level of input and process indicators, there is little systematic data that captures the various attributes of a preschool facility that make it a truly developmental and reaching learning environment for young children. These attributes

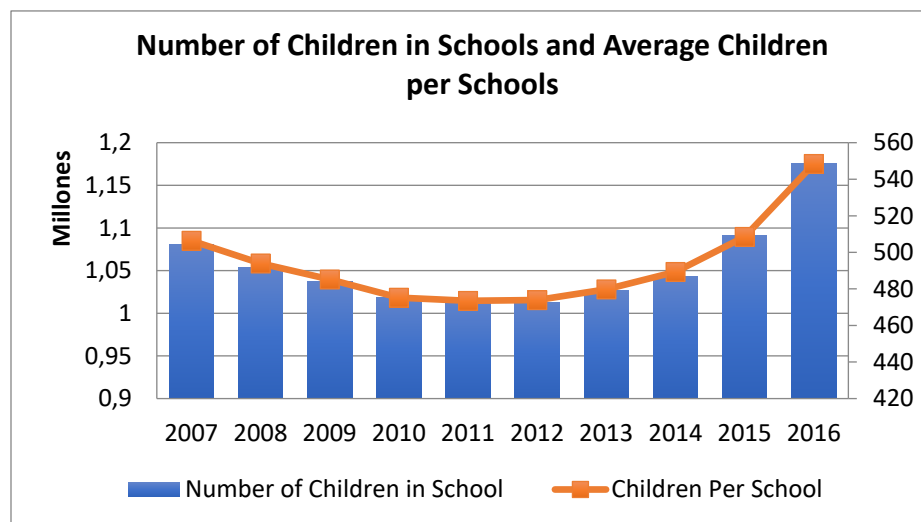


could include cleanliness and observing rules of hygiene, appropriate furnishing, age-appropriate teaching and learning materials (especially toys), availability of nutritious snacks, approachability for engagement with parents, and well-trained early childhood educators who can stimulate learning and model socialization for the young children in their care. Given the diverse forms of early education provision for 3-6 year olds, it would be particularly important to have a consistent mechanism to collect indicators of input quality on the educational environments in government early childhood centres, community-based kindergartens, and other modes of early care and education.

Even when detailed inventories of input and process indicators are available in certain localities and jurisdictions, the exact dynamics of children and their adult caregivers/educators in various settings and formats will vary. Undoubtedly, these variations lead to differing educational and developmental outcomes for children participating in these early development facilities. All of this make the need for monitoring and studying the process dimensions of quality in early childhood development particularly important in Kyrgyzstan.

Similarly, when it comes to input and process quality indicators at the level of school education, school size can be an indicator of quality of learning environment, especially as there is considerable debate about the efficacy of small schools versus large schools. As Figure 4.b below demonstrates, the average school size has increased. This may either indicate more efficient utilization of school space, or in some instances (such as in Bishkek city) overcrowding of schools. In the 2016/17 school year 80 per cent of the country's schools had two or three shifts, with 73 per cent having two shifts.

**Figure 3.16 Average School Size**



The databases that are readily available in Kyrgyz Republic mostly provide quantitative data such as enrolment, number of teachers, and number of schools, as well as inventories of equipment and facilities and other budget-level information: this is all important for budget management.<sup>29</sup>

Official NSC statistics report that the total number of computers for students' usage was 19,079, giving an average number of computers per school as 8.5. Only 30 per cent of schools had internet access (urban 40 per cent, rural 21 per cent). The MOES planned to connect more than 700 schools to the internet in 2017/18, but progress is very slow.

While "input-side" data provides proxy information for education quality in schools in Kyrgyzstan, it also gives a good idea of the context in which quality teaching and learning are currently held.

<sup>29</sup> Hugh McLean, London, January 2013

## Chapter Four. Professional education

### Structure of professional education

#### Programmes and educational trajectories

According to national legislation<sup>30</sup> the professional education system in Kyrgyzstan has four levels of major programmes: *primary, secondary, higher and postgraduate professional education*, and additional professional education programmes: *retraining and professional development*, which provide the population with opportunities for consistent and life-long professional development or for changing qualifications, and are offered in various educational institutions of professional education.

The main professional education programmes are in the formal education sector (under international classifications), where the mandatory minimum for education content and statutory deadlines for completion of programmes are established by the relevant state education standard, while the additional programmes refer to the informal sector, in which the content and time limits for completing programs are determined by the educational institutions themselves depending on the needs of trainees for additional skills in the framework of the major respective programme. The informal education sector also includes professional training, and its content is developed under the key programme of initial professional education for obtaining certain skills, and the study period is defined depending on the complexity of the skill.

**Table 4.1** presents various trajectories for obtaining professional education within main and additional programmes. Depending on the available level of education, young people can acquire the subsequent level of professional education in line with statutory deadlines or in shorter periods if, when continuing professional education in their previous field of study, knowledge and skills acquired earlier that are required for continuation of education are accepted. The fact the educational institution has this right increases its accountability to the state and population for the quality of training. On successful completion of major education professional programmes, educational establishments provide the graduates with documents about state standards or official documents setting out their own standards.<sup>31</sup> As the volatile labour market requires constant development or increasing professional skills, all educational institutions can provide retraining and professional development programmes at various levels. Professional development programmes provide opportunities to improve the qualifications of specialists to assist their adaptation to changes in the economic and sociocultural environment and give them opportunities to practice new professional activities by obtaining additional qualifications through education. Professional development programmes can increase the qualification level of specialists if there are changes in requirements, and upgrade their theoretical knowledge and practical skills.<sup>32</sup> Professional development programmes are offered by educational establishments at initial and secondary professional levels, as well as by various private education providers through short-term courses and issue the qualification of skilled worker.

30 Law 92 "On Education" of 30 April 2003 (as revised on 8 June 2017)

31 Article 40 of Law 92 "On Education" of 30 April 2003 (as revised on 8 June 2017)

32 Government Order 53 "Regulation on additional professional education of Kyrgyz Republic", of 3 February.2004

Table 4.1 Trajectories for obtaining professional education (main and additional programmes)

MAIN PROGRAMMES	Required level of education	Study periods	Document issued on graduation	Types of educational institution offering programmes	ADDITIONAL PROGRAMMES	Document issued on graduation
Post-graduate professional education	Candidate of science	-	Diploma of Candidate of Science	Academy of Sciences, Institutions of additional professional education, HEI	-	
	Master Specialist	2-3 years	Diploma of Candidate of Science		-	
Higher education (HE)	Specialist Bachelor	2 years	Master's degree diploma	HEI Institutions of additional professional education	Retraining	Diploma (> 500 hours, > 1000 hours with additional qualification)
	Bachelor	1 years	Diploma of specialist			
	Secondary professional education (reduced period)	3 years				
	11 grades	5-6 years	Diploma of bachelor's degree		Professional development	Certificate (72-100 hours)
	SPE (reduced period)	3 years				
	11 grades	4 years				
Secondary professional education (SPE)	11 grades	2 years	SPE Diploma	SPEI HEI	Retraining	Diploma (> 500 hours, > 1000 hours with additional qualification)
	9 grades	4 years	SPE Diploma + certificate of completion of secondary general education		Professional development	Certificate (72-100 hours)
Primary professional education (PPE)	11 grades 9 grades	10 months	PPE Diploma	Professional lyceum	Retraining	Diploma (> 500 hours, > 1000 hours with additional qualification)
	9 grades	3 years	PPE Diploma + certificate of completion of secondary general education	Professional lyceum SPEI Centre, courses, schools <sup>33</sup>	Professional development	Certificate (72-100 hours)
					Professional training	Licence Certificate of issuance of qualification

<sup>33</sup> Various private providers, names of types of which are not classified, but as per mode of education – professional schools, courses

The multiple opportunities for obtaining professional education in Kyrgyzstan mean that various types of educational institutions offer professional programmes – higher education institutions (including universities, institutes, academies and conservatories: hereafter referred to as HEIs), secondary professional education institutions (colleges, technical colleges and training schools: hereafter referred to as SPEIs), and technical and vocational training institutes (professional lyceums and training schools).

**Primary professional education** is offered in professional lyceums in over 100 professions to train workers who have completed nine or eleven years of general education. In addition, professional lyceums offer integrated programmes for graduates of Grade 9 to obtain specialties and school curricula with three-year terms of education, on completion of which the students can receive certificates of general secondary education that enable them to continue to higher levels of education. If an individual did not complete Grade 9 for some reason, she/he is provided with opportunity to receive professional training and acquire a profession and this gain employment. After completing initial professional education, graduates receive qualifications of skilled workers (such as cook, farmer or plumber).

**Secondary professional education** is offered by SPEIs, as well as by secondary professional education departments established within HEIs. Study periods in SPEIs vary from 1 year and 10 months to 3 years and 10 months depending on the educational programme specialization and the depth of training. It covers over 90 specialties. For instance, for pedagogical specialties the duration is at least 1 year and 10 months, whereas for medical specialties it is 2 years and 10 months and longer, and for arts and culture specialties it can be up to 3 years and 10 months. On successful completion of secondary professional education programmes, graduates receive the qualification of mid-level specialist (such as technician, teacher or feldsher (paramedic)). These programmes also provide opportunities to obtain general secondary education certificates if admitted after graduating from Grade 9, and completing an integrated programme with school curricula from senior grades. In SPEIs, there is also an opportunity to acquire a secondary certificate education if admitted after graduating from Grade 9, and completing of integrated program with school curricula from senior grades with a study period that is one year longer.

Over 60 **higher professional education** programmes are offered by HEIs to train highly skilled specialists for all sectors of the economy. For the fields of healthcare, culture and arts, and some technical and humanitarian specialties, courses last 5-6 years, while for other fields the specialists are trained on two levels: four years on bachelor degree programmes and two years on master degree programmes. Those with secondary professional education can obtain professional education in their specialty on fast-track bachelor degree programmes. Fast-track training programmes are also offered if someone has completed higher professional education in another specialty. Successful completion of certain higher professional education programmes endows graduates with academic bachelors or masters degrees or the qualification of a senior-level specialist (such as doctor, choreographer, engineer).

Primary, secondary and higher level professional education programmes can be full time, mixed full time/part time (evening courses), part time and distance learning. The list of specialties is defined by Government decrees. For part-time courses, length of study is extended by one year in accordance with state educational standard in relation to bachelor and specialists' programmes and by six months for master's programmes.

**Postgraduate professional education** offers programmes to train research personnel and academic staff and issue masters and doctoral degrees, which are usually offered through joint research projects, postgraduate programmes, military adjunct programmes and doctoral studies, established within HEIs and scientific institutions (such as the Academy of Science or the Academy of Education). The state accreditation/attestation authority of the Kyrgyz Republic establishes the procedure for issuing academic degrees and awarding academic titles (senior research fellow, associate professor, professor).

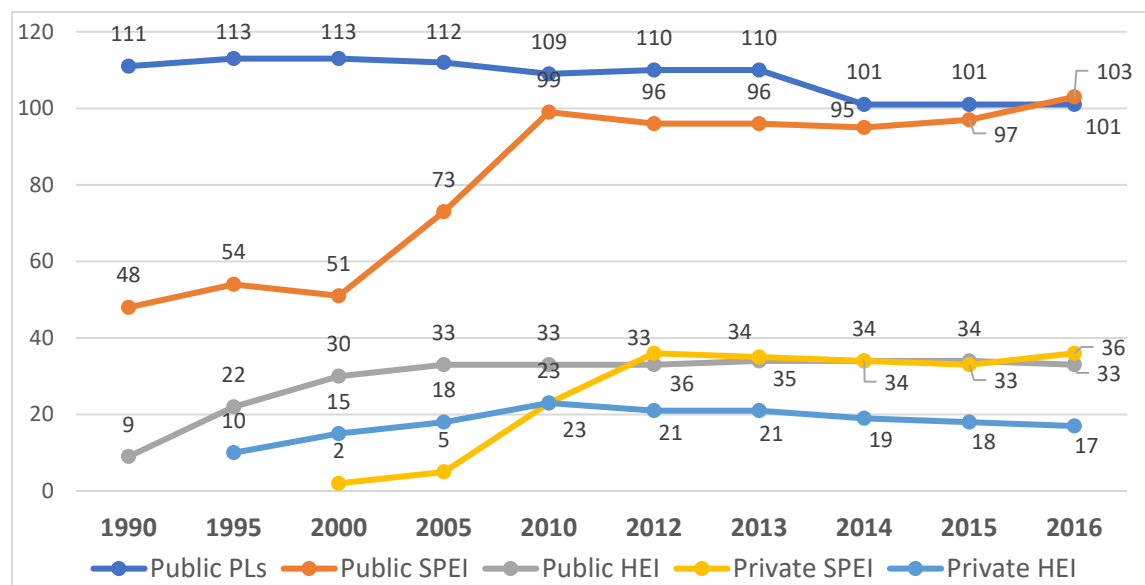
**Additional professional programmes (including adult education)** can be offered in all professional education institutions at the respective levels of training, and also in additional professional education institutions (institutes and centres under various state bodies, public and private companies, and so on). As these programs are in the informal education sector, there are no official statistics about these at state level, and so further analysis will only cover the formal education sector, with the exception of professional development of teaching staff, which will be reviewed in a separate chapter. These programmes are also part of professional development (short-term courses), which is offered in professional lyceums as part of the state's obligation to supply the labour market with a workforce.

**Professional development** (short-term courses) is offered by professional lyceums, SPEIs and private providers (training centres, schools and courses) as well as in the form of individual training, which can be offered by licensed specialists for study periods from two months to one year,<sup>34</sup> and lead to certification of possessing specific skills. The activities of these private providers and individual training are not monitored at state level, so cannot be included in further analysis in this report.

### Professional educational institutions and their management system

Kyrgyzstan has a policy of liberalizing educational institutions' rights and diversifying the educational services they offer in order to increase opportunities to obtain professional education. Therefore, there is no clear distinction between the types of educational institutions offering various educational trajectories for acquiring professional education. Over the years since independence, the increasing number of educational establishments offering various professional education programmes was strongly dependent on demand for certain levels of professional education among the population. As shown in **Figure 1**, until the early 2000s HEIs were established, both private and public, until they reached a stable number of 50. Also, in the 2000s private SPEIs opened, and rapid growth began in the number of public SPEIs, which reached a total of 139 in 2016, half of which were established by HEIs. This sharp rise began in 2003, when the Law "On Education" was amended to stipulate that higher professional education can be obtained through fast-track programmes.<sup>35</sup> Meanwhile, in 2006 the Ministry of Education and Science began implementing a strict state policy to reduce the number of HEIs that failed to ensure quality education. All these factors have led to meet demand for higher education among youth via secondary professional education, namely for continuation of education before entering the labor market. The number of professional lyceums was stable for many years, though in recent years the number has decreased and reached 101 in 2016. Private professional lyceums have not been established due to the lack of demand, as private providers and entrepreneurs/companies trained their workforce as required on fee-based short-term courses in professional lyceums. Over the years, according to MOES data, private providers of education have received more than 2100 licences for short-term courses in certain occupational areas and various training programmes. However, information is not collected on their activities.

**Figure 4.1 Trends in the number of professional educational institutions**



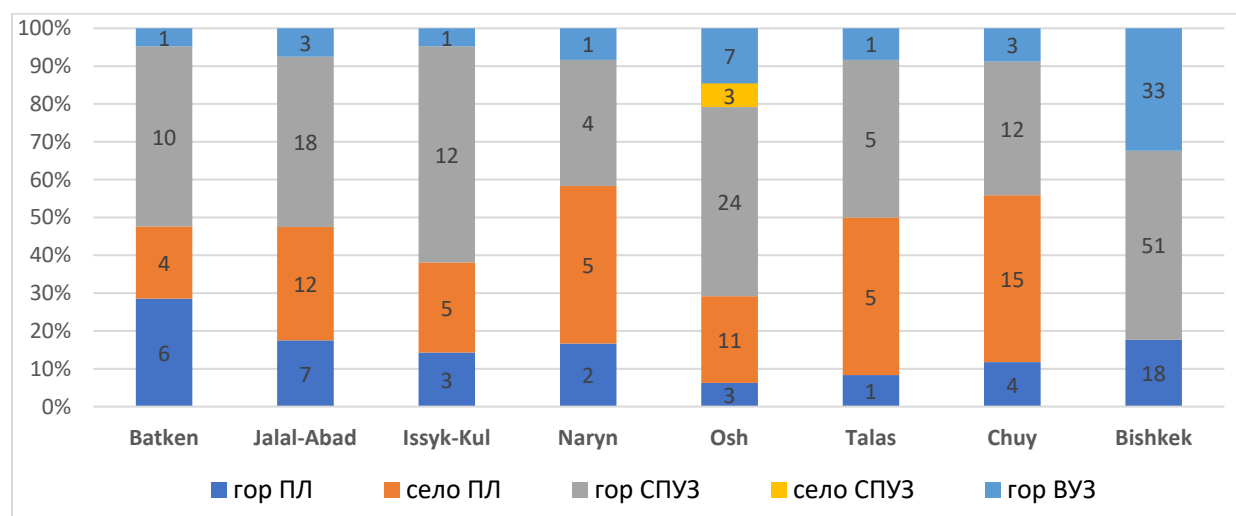
The location of educational establishments reveals that higher and secondary professional education are mainly available in cities. Historically, 66 per cent of HEIs and 37 per cent of SPEIs are located in Bishkek city, while 58 per cent of professional lyceums are located in rural areas, and 42 per cent in urban areas, out of that 44% of urban lyceums are located in Bishkek. This means that for rural youth initial professional education is more affordable, and to access other levels of professional education, they go to nearby cities or the capital city, depending on their financial opportunities. However, in Osh province some SPEIs are

<sup>34</sup> Law 129 "On Primary professional education" of 26 November 1999 (2012 revision)

<sup>35</sup> Law "On Education", as revised in 2003

located closer to rural youth. **Figure 4.2** shows the ratio between the number of professional education institutions located in urban and rural areas, clearly demonstrating the difference in provision of professional education services in certain regions. Thus, in Osh and Issyk Kul provinces, there is greater access to SPEIs, while in Naryn province, there are more opportunities for admissions to professional lyceums, whereas in Batken, Jalalabad, Talas and Chuy provinces there is almost equal access to professional lyceums and SPEIs. There is better access to higher education in Bishkek city and less access in Osh city, and there are enough SPEIs and professional lyceums there. However, availability of multiple educational establishments does not reflect adequate access of youth to relevant levels of education and specialties, due to the limited provision of various fields of study and professional development programmes.

**Figure 4.2** Number of educational institutions by territories as of 2016 (by region)



**Table 4.2** contains data on the number of educational institutions in 2016, according to forms of ownership and distribution of public educational establishments by departmental affiliation. Irrespective of their form of ownership and departmental affiliation, all professional education institutions must adhere to the norms and requirements for ensuring quality of education, set by the MOES.

**Table 4.2** Number of professional education institutions, as of 2016

Agencies / form of ownership	Professional lyceums	SPEIs	HEIs
<b>Public, departmental:</b>		<b>51</b>	<b>33</b>
MOES, including 2 HEIs and 2 self-funded SPEIs	-	28	27
Agency for Initial Professional Education under the MOES	95	1	-
State Service for Execution of Punishment under the Ministry of Justice	6	-	-
Government	-	-	1
Ministry of Health	-	11	1
Ministry of Labour and Social Development	-	1	1
Ministry of Transport and Communication	-	1	-
Ministry of Culture, Information and Tourism	-	8	3
State Agency for Physical Culture and Sports under the Government	-	1	-
Ministry of Internal Affairs	-	-	1
<b>Part of public HEIs (self-funded)</b>	-	<b>52</b>	-
<b>Private)</b>	-	<b>20</b>	<b>17</b>
<b>Part of private HEIs</b>	-	<b>16</b>	-
<b>Total:</b>	<b>101</b>	<b>139</b>	<b>50</b>

Private educational establishments make up only a third of all higher and secondary professional educational institutions: 34 per cent of HEIs and 26 per cent of SPEIs are private. Meanwhile, majority of SPEIs were founded by private and public HEIs, paid for by student tuition fees. Only 20 per cent of SPEIs and 54 per cent of HEIs report directly to the MOES. All professional lyceums report to the Agency of Initial Professional Education, which in 2015 was transferred to the MOES, except for 6 professional lyceums (training schools) located on the territory of correctional colonies (prisons).

## Access to professional education

### Forecast of youth group aged 15-24 years old until 2040

Kyrgyzstan's high birth rate (2.3 per cent per year)<sup>36</sup> since the early 2000s, will lead to equal growth rates of the 15-24 year old age group potentially eligible for professional education in upcoming decades. There were 66.4 per cent more children in 2016 than in 2000,<sup>37</sup> so in 15 years the system should be able to accommodate this quantity of young people. The number of children in Grade 1 is currently 13.9 per cent higher than the number of graduates of Grade 9,<sup>38</sup> and therefore professional educational institutions will already face challenges in nine years. This means that the birth rate will be able to maintain the growth of population aged 15-24 years old, and in approximately 15 years the number of Grade 9 students will increase by at least 10-15 per cent compared to 2016.

Trends in permanent population size in Kyrgyzstan among age groups under 24 years (Figure 4.3) indicate that demand for professional education will quickly increase from 2020. The 15-19-year-old group will grow every five years by 6.5 per cent (32,200 people), 24.3 per cent (129,200 people) and 17.9 per cent (118,300 people),<sup>39</sup> respectively. The number of children potentially qualifying for admission to professional education institutions (aged 15 to 17 years old), in 15 years will increase on average by 38 per cent compared to 2017. Provided the trend in birth rate is maintained until 2040, the population group aged 15-24 years old will increase in average by 50 per cent, which will require the professional education sector to be prepared to accommodate the educational needs of this group. The growth of the urban population will reach 35 per cent, and rural 22 per cent, and the male and female population in this age group will grow by 27 per cent and 26 per cent, respectively.

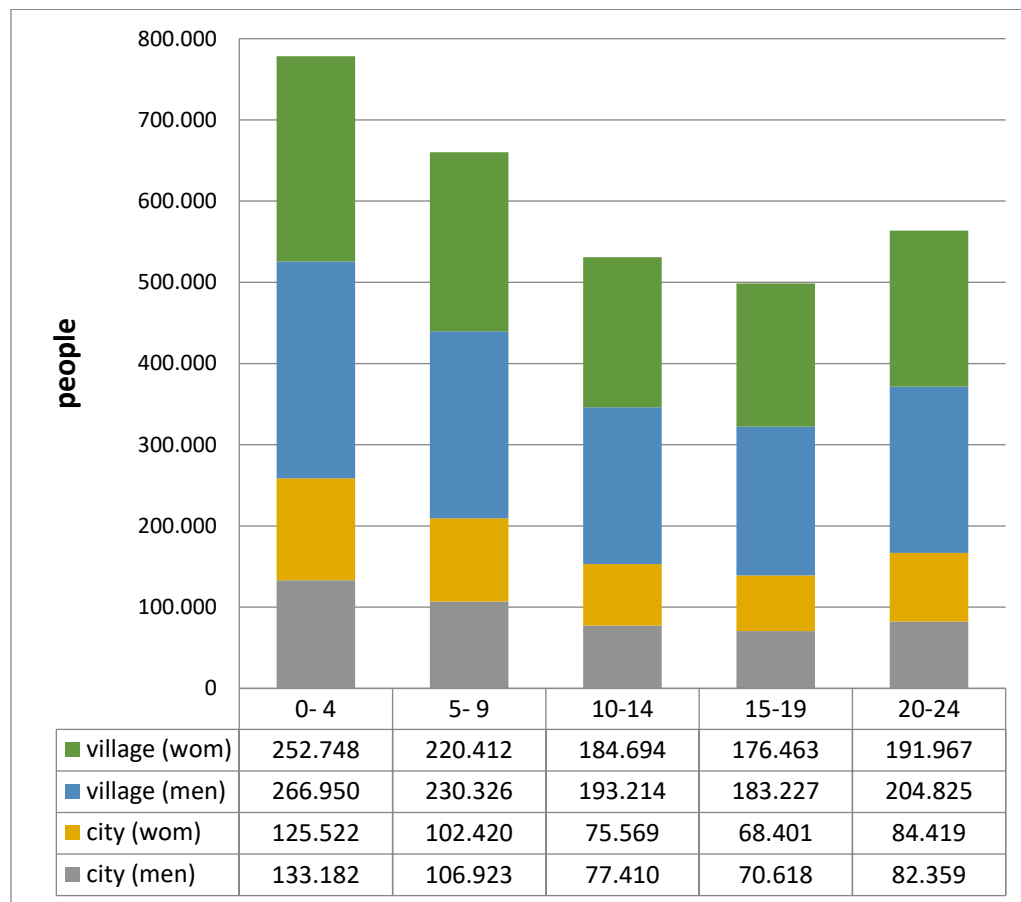
36 <http://www.indicatormundi.com/factbook/fields/birth-rate>

37 National Statistical Committee. Living standards of the population of the Kyrgyz Republic. 2015, 2017

38 National Statistical Committee, Demographic Yearbook. Section 1.11. 2016

39 <http://www.stat.kg/ru/statistics/naselenie/>, Size of permanent population of the Kyrgyz Republic by sex and age in 2017.

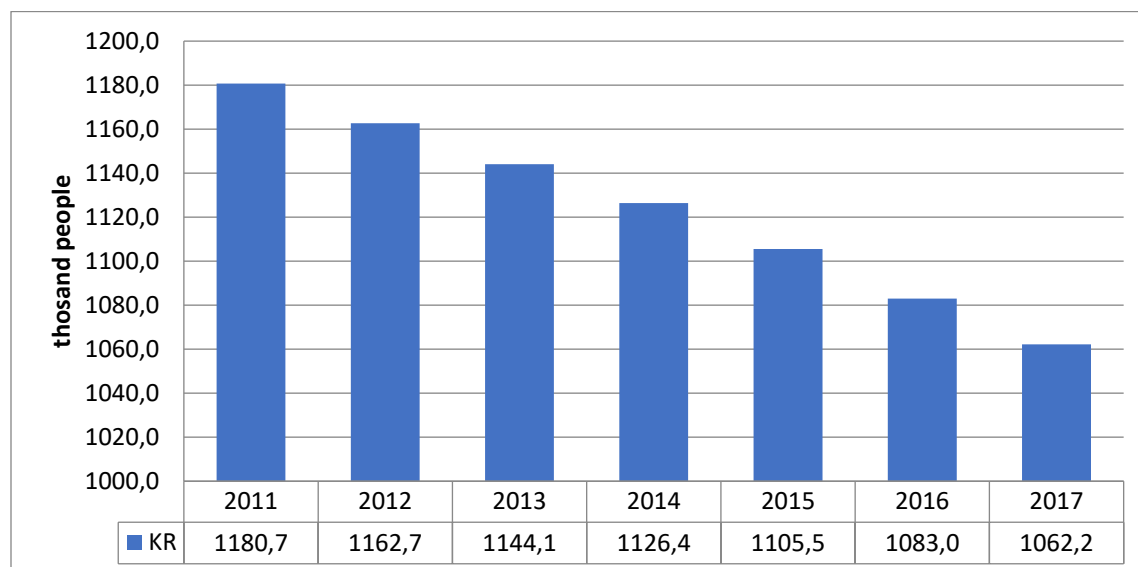
**Figure 4.3 Population size as of early 2017**



Source: National Statistical Committee, Demographic Yearbook, 2017

The demographic collapse in Kyrgyzstan in the early 2000s has in recent years had a significant negative impact on demand for professional education at all levels of initial, secondary and higher professional education. Between 2011 and 2017 the number of 15-24 years old fell by 118,500 (10 per cent). This decline will persist until 2020.

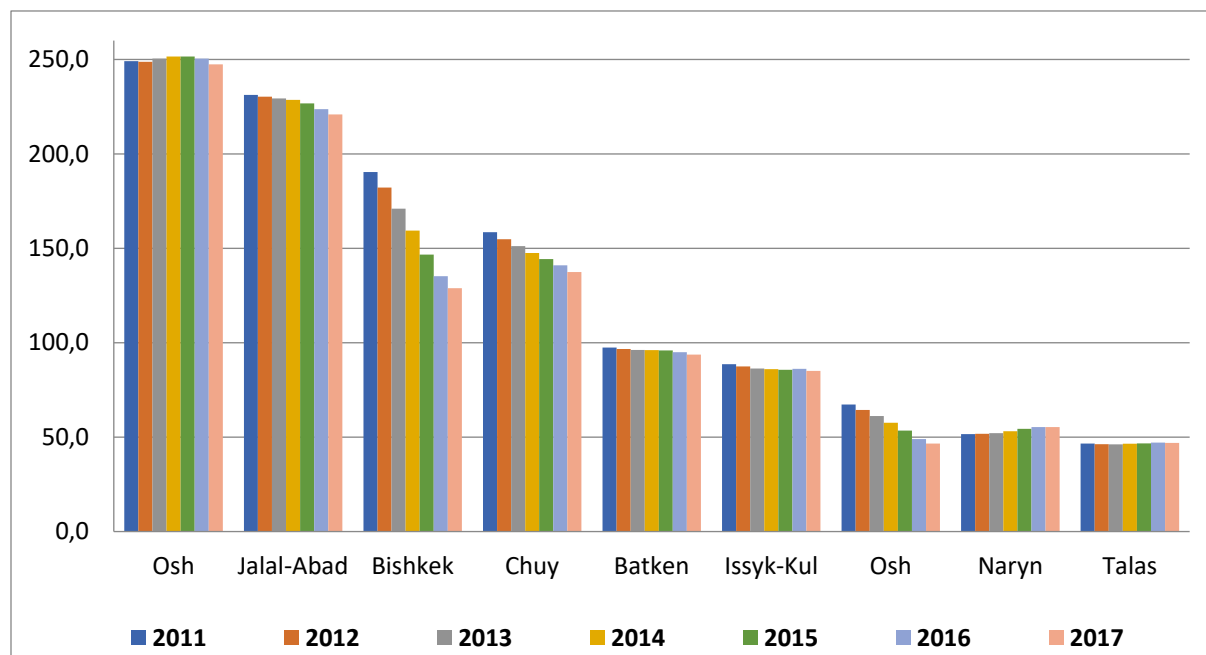
**Figure 4.4 Youth aged 15-24 years**





In most provinces, the number of youth aged 15-24 years has not changed considerably (in some it has increased slightly). However, in Chuy province this group decreased by 2,3 per cent per annum between 2011 and 2017. At the same time, in Bishkek and Osh cities, the size of this group fell faster, by 5.6 per cent and 6.3 per cent annually respectively. This is partly due to demographic changes in the population and external migration of youth to countries offering employment for unskilled youth.

**Figure 4.5 Trends in numbers of youth aged 15-24 years**



### NEET (not in employment, education or training) youth<sup>40</sup>

School graduates can enter the professional lyceums, colleges and HEIs or can enter the labour market as employed or self-employed. Alternatively, they may be not in employment, education or training. In order to make quick money, they can complete short-term courses on specialties at various training centres run by private providers or organizations that are not monitored. Apart from school graduates eligible to undertake professional education programmes, as per expert evaluation, in 2016 the average NEET rate for Kyrgyzstan was 27.1 per cent (of whom 28.1 per cent are women), who should also be covered by professional education for enhancing their competitiveness on the labour market and improving their standard of living. The NEET rate per region is presented in **Table 3**.

<sup>40</sup> From V. Gasskov "Rationalization of TVET system in KR", 2 ADB project "Vocational education and skills development"

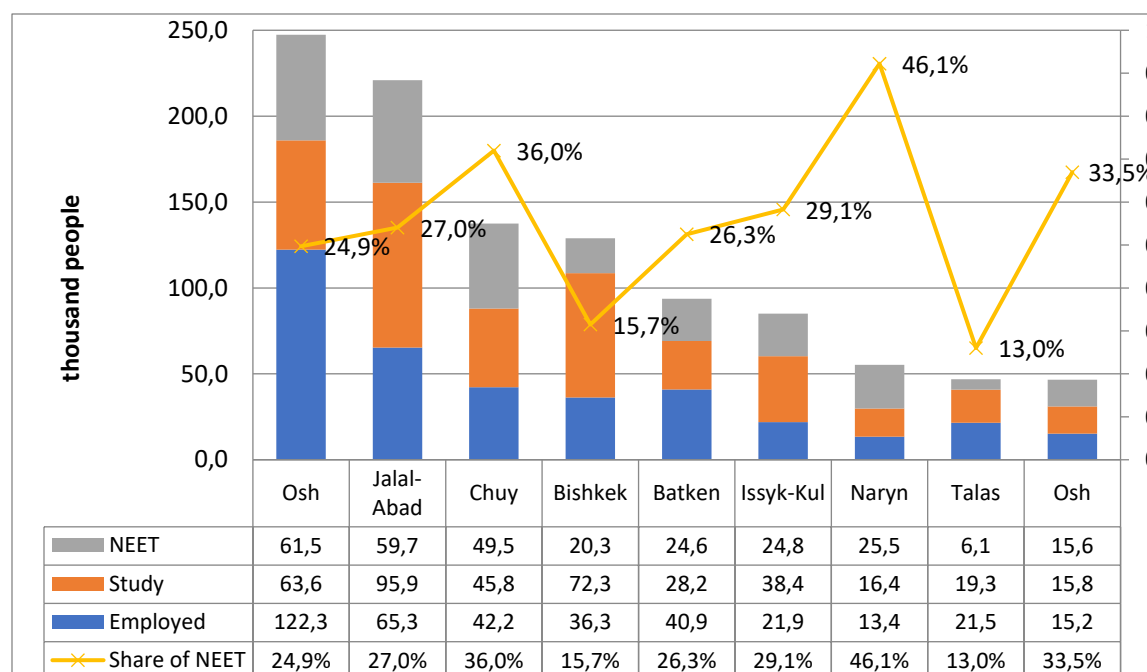
Table 4.3 Status of youth aged 15-24 years old (by regions)

Regions	Youth aged 15-24 years old in 2016		Of whom employed in 2016		Of whom in formal education in 2016		NEET group		Share of NEET		
	C1	C3	% women	C4	% women	C5	% women	C6=C3-C4-C5	% women	C7=C6/C3	% women
<b>Kyrgyzstan</b>		<b>1062,3</b>	<b>49%</b>	<b>379,0</b>	<b>33%</b>	<b>441,17</b>	<b>52%</b>	<b>242,13</b>	<b>69%</b>	<b>23%</b>	<b>32%</b>
Osh province		247,4	49%	122,3	29%	38,7	49%	86,4	77%	35%	55%
Jalalabad province		220,9	49%	65,3	41%	59,8	52%	95,8	52%	43%	46%
Chuy province		137,5	49%	42,2	40%	34,6	49%	60,7	55%	44%	50%
Bishkek city		93,7	48%	40,9	24%	29,7	52%	23,1	85%	25%	44%
Batken province		85,1	49%	21,9	35%	24,8	53%	38,4	54%	45%	50%
Issyk-Kul province		55,3	49%	13,4	27%	16,9	52%	25,0	58%	45%	54%
Naryn province		46,9	48%	21,5	33%	13,7	54%	11,7	70%	25%	36%
Talas province		128,9	51%	36,3	41%	156,5	51%	-63,9	n/a	n/a	n/a
Osh city		46,6	50%	15,2	27%	66,4	53%	-35,0	n/a	n/a	n/a

Source: National Statistical Committee, *Employment and unemployment, 2016*

The regions have different NEET rates depending on the socio-economic situation and standard of living of the local population, as well as the level of access to professional education. There are relatively low NEET rates in Bishkek city and Talas province: 16 per cent and 13 per cent respectively. The highest rate is in Naryn province (46 per cent), followed by Chuy province and Osh city (36 per cent and 33 per cent respectively). The NEET rate was calculated as the proportion of persons who are economically inactive and do not show interest in any form of structured education or cannot access it. The reasons for this can include a lack of adequate service providers or education programmes in the young people's places of residence or a lack of funds for accommodation or education. This means that in these regions there is limited access to professional education for various reasons, which require more thorough analysis and careful formulation of public policy to reduce NEET numbers in the regions and nationwide.

Figure 4.6 Proportion of the total youth population aged 15-24 years old in NEET group



For international comparison of NEET rates, data is provided for 2010 and 2014 for certain European countries where a workforce survey was held. The 2016 NEET rate in Kyrgyzstan exceeds the highest level of these studies (Greece: 22,1 per cent).

**Table 4.4 NEET rates in different countries**

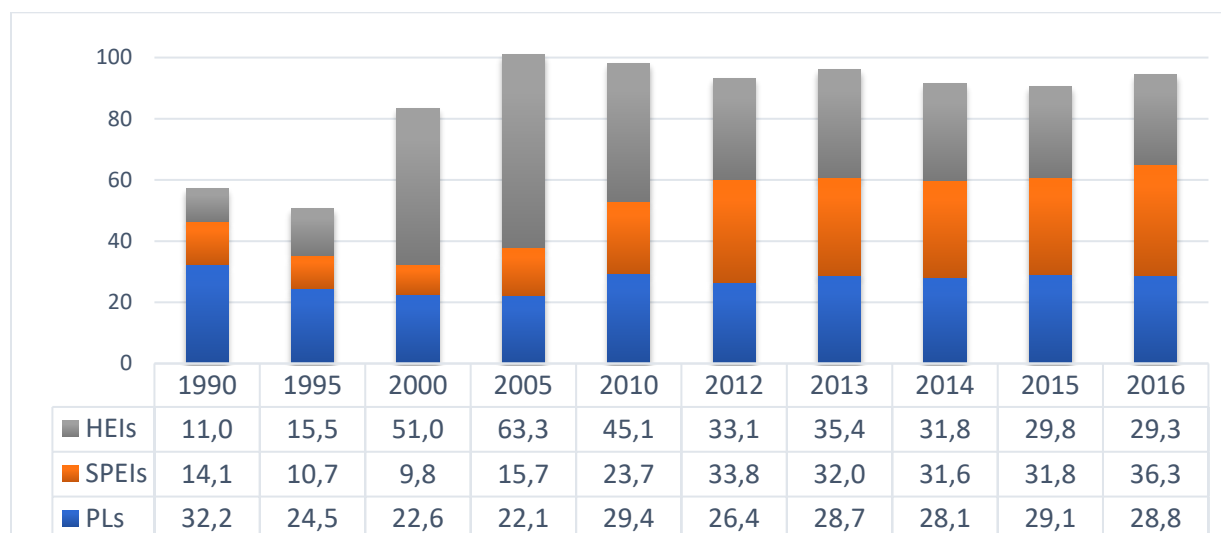
Countries	2010 (%)	2014 (%)
Greece	14.8	22.1
Bulgaria	21.8	20.2
Spain	17.8	17.1
Cyprus	11.8	17.0
Romania	16.6	17.0
Poland	13.6	12.0
United Kingdom	10.8	11.9
France	12.3	10.7
<b>Kyrgyzstan</b>	<b>n/a</b>	<b>27.1 (2016)</b>

Source: Eurostat, Database on European Union's workforce survey

### Admission of students into educational institutions and coverage of school graduates

The proportions of students in various levels of professional education had almost equalized by 2014. **Figure 7** shows that in the early 2000s, most students admitted to professional education institutions entered HEIs (63 per cent), while in the 1990s only 19 per cent did so. This led to imbalance in the workforce and thus affected the employment conditions on labour market, leading to a rise in unemployment among persons with higher education. Since 2005, the number of people wanting to enrol in colleges has been growing rapidly and by 2016, it had exceeded the number of students admitted to HEIs by 7 per cent. This would have been a positive trend, if it improved the labour market. However, at that moment, many factors hampered the situation: the introduction of mandatory national testing (the so called ORT) for admission into HEIs, the policy to reduce the number of HEIs, the transition to an 11-grade school system, as a result of which youth took advantage of a 2003 amendment to the Law "On Education"<sup>41</sup> that stipulated that persons with secondary education could obtain higher education under related programmes in a shortened period (that is, they could be admitted directly to the third year of an HEI course). The number enrolling at professional lyceums has slightly decreased compared to 1990 in absolute terms (per 3.4 thousand students), but in percentage terms, coverage of initial professional education has lowered by 26 per cent in comparison with other levels. In addition, the number admitted to professional lyceums includes those students who attend short-term courses less than a year.

**Figure 4.7 Ratio of admission to professional education institutions and coverage of school graduates for 1990-2016.**

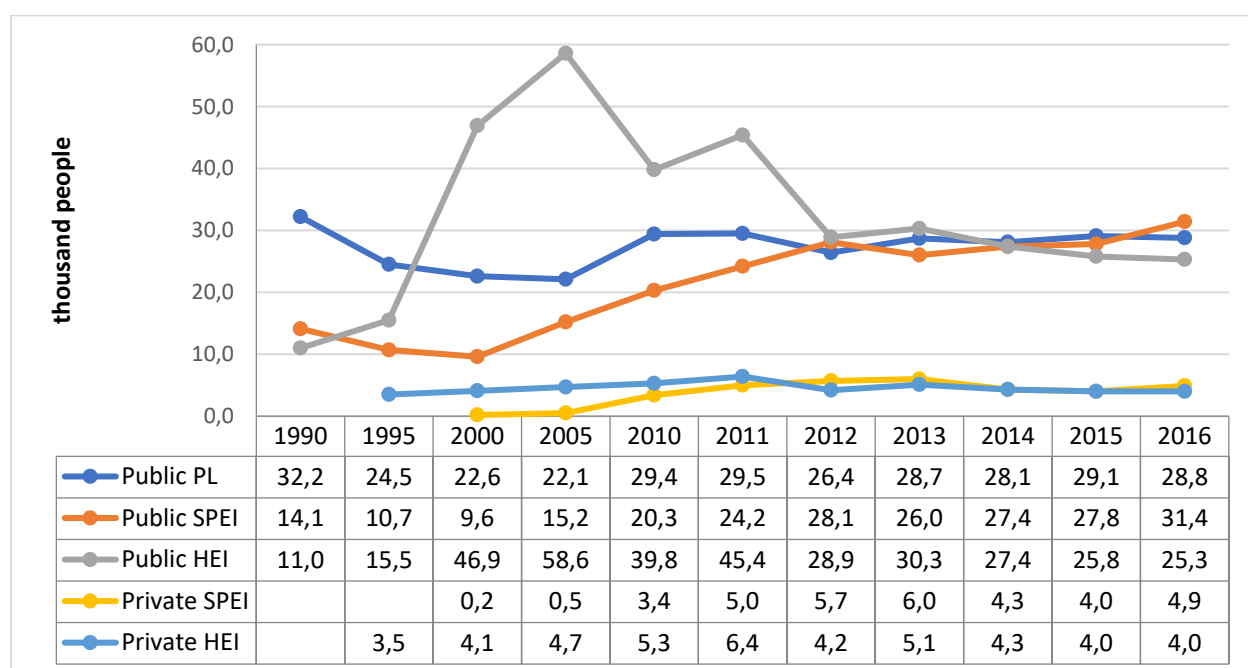


<sup>41</sup> Law 92 "On Introduction of amendments to the Law "On Education" of 1992" of 30 April 2003

Demand among school graduates for professional education over 26 years has strongly influenced the environment in the professional education system itself. In the early 2000s there was a marked evident disproportion in admission of students into initial, secondary and higher professional education programmes, which clearly did not correspond with the labour market qualification requirements. By 2016, the proportions of students enrolled into HEIs, SPEIs and professional lyceums was almost 1 to 1 to 1 while in 1990 it was 1 to 2 to 3. In the transition period, due to the difficult socio-economic situation and the lack of state regulation of professional education, demand for higher education has led to supply of services by HEIs, thus significantly decreasing the “customer base” for both initial and secondary professional education.

The proportion of students admitted to private educational institutions peaked at 12 per cent in 2013, and in the past three years it has stabilized at 9 per cent (Figure 4.8). Despite the fact that private schools make one third of vocational schools, they proportion of youth enrolled in these schools is low. This is a sign either of public mistrust of private education, or a sign of adequate supply by public educational institutions, as over 80 per cent of students are on fee-based programmes.

**Figure 4.8 Rate of admission into educational institutions by form of ownership**



After 2005, the number of students enrolled in public professional lyceums and SPEIs started to increase, while the number of students admitted to private educational establishments has remained practically unchanged for 10 years. The total number of students admitted to all levels of professional education in public and private educational institutions has almost levelled off for the past five years.

In order to review the coverage of youth eligible for professional education after graduating from general secondary school, let us consider school graduation in 2016. In total, that year 142,500 children graduated from Grades 9 and 11, of whom 64 per cent had graduated from 9<sup>th</sup> grade. Of the Grade 9 graduates, 55,400 people continued into Grade 10 education, leaving 35,300 who dropped out. Meanwhile, in the 2015/16 academic year, 10,900 young people dropped out of Grades 10 and 11 for various reasons and did not join other educational institutions. Distribution of graduations and drop-outs of children from Grades 9 and 11 by region is shown in Table 4.4. Both those who dropped out Grades 10 and 11 and those, who officially graduated from Grades 9 and 11 (with the exception of those who continuing studies into Grade 10), are the key “consumer” group for professional education at all levels. In 2016 this group numbered up to 98,00 people, or 9 per cent of the total number of youth aged 15-24 years old who can annually qualify for admission to all professional educational institutions.

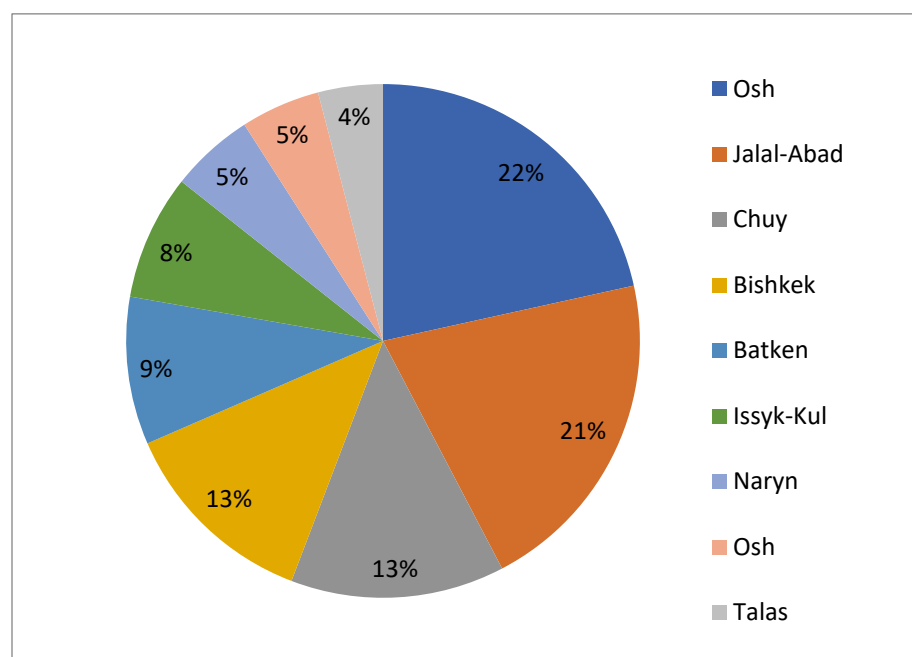
Table 4.5 Number of children eligible for professional education after graduation from school

C1	Regions	Drop-out rate in 2015/16		School graduations in 2015/16		Number who continued studies in Grade 10 as of 2016/17	Number of school leavers after Grade 9 in 2015/16	Number of school leavers
		Gr 10	Gr 11	Gr 9	Gr 11			
		C4	C5	C6	C7	C8	C9=C6-C8	C10 = C4 + C5 + C9 + C7
	The Kyrgyz Republic	9.4	1.5	90.7	51.8	55.4	35.3	98.0
1	Batken province	0.4	0.0	8.7	5.9	5.9	2.8	9.1
2	Jalalabad province	1.7	0.3	18.7	10.6	11.0	7.8	20.4
3	Issyk Kul province	0.5	0.0	7.5	4.9	5.2	2.3	7.7
4	Naryn province	0.5	0.0	5.0	3.4	3.8	1.2	5.2
5	Osh province	1.7	0.1	19.4	11.1	11.1	8.3	21.1
6	Talas province	0.4	0.0	3.9	2.1	2.5	1.4	4.0
7	Chuy province	1.5	0.2	12.6	5.7	6.8	5.8	13.2
8	Bishkek city	2.2	1.0	10.5	6.0	7.2	3.3	12.4
9	Osh city	0.4	0.1	4.4	2.1	2.1	2.3	4.9

Source: National Statistical Committee data

By region, the proportion of youth who may be eligible for admission into educational institutions of professional education is highest in Osh province (22 per cent) and Jalalabad province (21 per cent), and lowest in Osh city (5 per cent), Naryn province (5 per cent), and Talas province (4 per cent). Given that most professional education institutions are located in Bishkek and Osh cities, youth wishing to obtain higher-level professional education are eager to migrate to urban areas.

Figure 4.9 Number of children who dropped out from school in 2016



Data on coverage of youth who dropped out from school, shows that out of 98,000 people, 29 per cent were enrolled at professional lyceums, 37 per cent at colleges, and 30 per cent at higher educational institutions (**Table 4.5**). In general, 94,700 students were admitted to all levels of professional education, making up 97 per cent of the eligible group of youth for this year. However, given that the percentage of youth enrolled in specific levels of professional education is roughly similar from year to year, then eventually every year nearly 3 per cent of young people join the NEET group and will enter the labour market without professional education. This means that given demographic growth and the increased number of people who may be admitted into professional education institutions, then by 2040 it is expected that a larger number of youth will need to obtain professional education than annual admissions.

Of all students enrolled in professional education establishments, a large plurality (41 per cent) are enrolled in Bishkek city, while 23 per cent are in Osh province (including Osh city) and 12 per cent in Jalalabad province. In Chuy province (8 per cent), Batken province (7 per cent), Issyk Kul province (5 per cent), Talas province (3 per cent) and Naryn province (2 per cent) the number of students admitted is much lower, and thus, because of inadequate accessibility of professional education, young people leave to capital city.

**Table 4.6 Situation of youth after graduating from school in 2016**

Region	Number of school leavers	Admission of students to professional education						Total admitted to professional education	% admitted to professional education	% coverage of school leavers
		HEIs		SPEIs		Professional lyceums				
C 1	C 2	C 3	%	C 4	%	C 5	%	C6 = C3 + C4 + C5		
Kyrgyzstan	98,000	29,400	31%	36,400	38%	28,900	31%	94,700	100%	97%
	100%	30%		37%		29%		97%		
Batken province	9,100	1,200	19%	2,300	37%	2,700	44%	6,200	7%	68%
Jalalabad prov.	20,400	1,700	15%	5,400	47%	4,300	38%	11,400	12%	56%
Issyk Kul prov.	7,700	400	9%	1,400	30%	2,800	61%	4,600	5%	60%
Naryn province	5,200	300	13%	600	26%	1,400	61%	2,300	2%	44%
Osh province	21,100	0	0%	800	24%	2,600	76%	3,400	4%	16%
Talas province	4,000	100	4%	1,000	40%	1,400	56%	2,500	3%	63%
Chuy province	13,200	500	7%	2,100	29%	4,700	64%	7,300	8%	55%
Bishkek city	12,400	19,800	50%	11,900	30%	7,600	19%	39,300	41%	317%
Osh city	4,900	5,400	31%	10,900	62%	1,400	8%	17,700	19%	361%

Source: data from National Statistical Committee

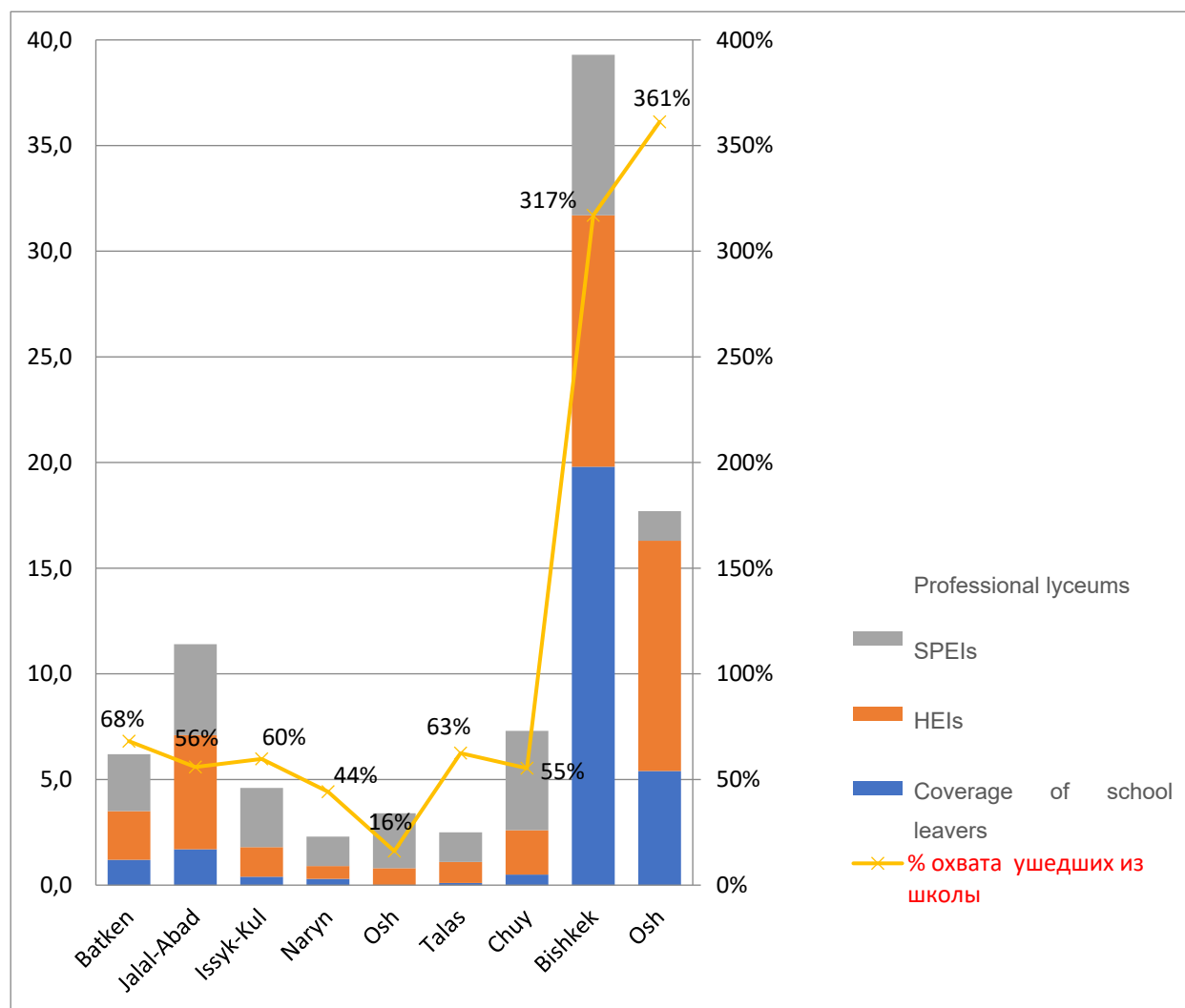
Coverage of professional education at local level reveals low accessibility in Naryn province (44 per cent), and lowest accessibility in Osh province (16 per cent), although most youth in this province enrol at educational establishments in Osh city, where coverage is 3.5 times higher than the number who dropped out of school. In other provinces, the local educational institutions admit little more of the half of the school graduates of their province. In Bishkek and Osh cities, three times more students are admitted than children graduate from school.

Regarding regional coverage by levels of professional education, in Osh province (76 per cent), Chuy province (64 per cent), Issyk Kul province (61 per cent), Naryn province (61 per cent), and Talas province (56 province) most students admitted into educational institutions, are trained in initial professional education programmes. In Jalalabad and Batken provinces, higher numbers of students are admitted into HEIs and SPEIs (62 per cent and 56 per cent respectively). In Bishkek city, 50 per cent of enrolled students opted for HEIs, while 30 per cent chose SPEIs and 20 per cent professional lyceums, whereas in Osh city more than half of students selected SPEIs (62 per cent), 31 per cent HEIs and only 8 per cent professional lyceums.

In Soviet times, higher and secondary professional education systems were in urban areas, while quality education could be obtained in educational institutions situated near various enterprises. Initial professional education institutions mainly serve to supply workforce for the agricultural sector, and thus youth's access

to professional education in rural areas is limited to professional lyceums, as 60 per cent of these are in villages. Institutions located in rural areas face certain challenges, such as finding opportunities for students to do internships and find employment, hiring qualified teachers, improving the quality of education through networking with real employers, selling goods and services produced during training, developing income generating activities, and so on. Therefore, the territorial distribution of professional educational establishments is a pressing problem for the country, as improving access to professional education in the regions requires expensive public policy to be implemented.

**Figure 4.10 Admission of students and coverage of school leavers in 2016**



Overall, the national ratio of youth who left school in the country in 2016 to the number of students admitted to all professional education institutions is almost 1 to 1. However, it should be noted that this number includes school graduates of previous years and a small number of foreign students. Therefore, it is difficult to determine absolute coverage.

### Student cohort in the system of professional education

Since Kyrgyzstan became independent, the number of students per 10,000 population in the professional education system has almost halved, and it reached 51 people in 2016. Secondary professional education coverage increased one and a half times to 150 students per 10,000 people. However, in the 2000s, there was a halving, followed by a growth of youth demand for secondary professional education. The largest coverage of youth by higher education occurred in 2005, when there were 450 students in HEIs per 10,000

population, three times higher than in 1990. By 2016, youth higher education coverage was 291 people, still quite high rate compared to the Soviet period.

**Table 4.7 Number of students per 10,000 population in Kyrgyzstan**

<b>Educational institutions</b>	<b>1990</b>	<b>1995</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2016</b>
<b>Professional lyceums</b>	116	71	54	56	58	49	51
<b>SPEIs</b>	100	65	54	69	119	152	150
<b>HEIs</b>	135	143	387	450	425	338	291
<b>Total per 10 thousand</b>	<b>350</b>	<b>278</b>	<b>496</b>	<b>575</b>	<b>601</b>	<b>539</b>	<b>493</b>

*Source: National Statistical Committee*

The number of youth aged 15-24 years, the main age for studying in professional education, has grown substantially since 1990 and had increased almost 1.4 times by 2016. Coverage of this youth group has increased by 8 per cent, compared to 1990 and almost a third of young people in this age group attended professional education institutions in 2016. This demonstrates that the capacity of professional education system to cover youth has increased almost one and half times.

**Table 4.8 Coverage of youth (15-24 years old) by professional education**

	<b>1990</b>	<b>1995</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2016</b>
Number of youth aged 15-24 years ( <i>thousands</i> )	792,600	866,600	953,500	1,112,300	1,191,300	1,105,600	1,083,000
Total number of students	152,700	126,000	241,800	295,300	325,900	317,900	296,500
% coverage of 15-24 year olds	19%	15%	25%	27%	27%	29%	27%

*Source: National Statistical Committee*

However, the general declining birth rates at the beginning of 2000s have led to a reduction in the number of 15-24 year olds, and the general cohort of students has dropped by 13.4 per cent over the last five years (Table 4.8). Of all students in professional education, the proportion in HEIs has declined by 26.7 per cent, while that in SPEIs has increased by 25.3 per cent. Overall, 59.2 per cent of youth in professional education are in higher education, compared to 30.6 per cent in SPEIs, and 10.3 per cent in professional lyceums. However, as the study periods in HEIs are five years and in SPEIs three years, then for the total period the professional lyceums cover almost the same number of youth as HEIs and SPEIs.

Meanwhile, private professional education establishments, only reach 11 per cent of all students, which is not a sufficient indicator for the whole sector.



Table 4.9 Student cohort in 2016 by levels of professional education (by equity indicators)

Educational institutions	Student cohort		Distribution of students in 2016			
	2011	2016	Proportion of enrolment in programmes	Proportion of girls	Proportion in rural areas	Proportion in private educational institutions
Professional lyceums	31,032	30,492	10.3%	30.0%		
10 months						
3 years						
1-3 months						
SPEIs	72,323	90,585	30.6%	56.4%		12.6%
After Grade 11						
After Grade 9						
HEIs	239,208	175,430	59.2%	53.8%	-	12.5%
Master's degree					-	
Specialist						
Bachelor's degree						
<b>Total:</b>	<b>342,563</b>	<b>296,507</b>	<b>100.0%</b>	<b>52.2%</b>		<b>11.3%</b>

Source: website of National Statistical Committee <http://stat.kg/ru/statistics/obrazovanie/>

Slightly more than the half secondary and higher professional education students are female (56 per cent and 54 per cent respectively), while in initial professional education only a third are girls (30 per cent): this shows that girls prefer obtaining higher education. As shown above, HEIs and SPEIs are located mainly in urban areas.

Table 4.10 Annual rate of growth of number of students in professional education system

Educational institutions	2012		2013		2014		2015		2016	
	people	%	people	%	people	%	people	%	people	%
<b>Public</b>										
Professional lyceums	31,000	0%	29,400	-5%	28,500	-3%	28,800	1%	30,500	6%
SPEIs	72,300	14%	78,400	8%	80,500	3%	78,300	-3%	79,200	1%
HEIs	204,000	-3%	196,200	-4%	188,800	-4%	175,600	-7%	153,500	-13%
<b>Private</b>										
SPEIs	10,900	20%	13,200	20%	12,000	-9%	11,300	-6%	11,400	1%
HEIs	27,500	-8%	27,000	-2%	25,600	-5%	23,900	-7%	22,000	-8%

## External efficiency of professional education

### Graduation of students

The share of graduates of the PL decreased in 10 years by 16% and amounted to only 22% of the total number of graduates of the vocational system in 2016. While the share of graduates of SPEIs increased to 30%, and in comparison with 2007 doubled. And the share of graduates of higher educational institutions practically has not changed within ten years. The proportion of girls among the graduates of the respective programs is the same as in the whole population – less on the programs of the initial vocational (23%) And more than half of average graduates (62%) and higher vocational (58%).

**Table 4.11 Number of graduates in training programmes**

	Выпуск 2007	Выпуск 2011	Выпуск 2016	Доля выпуска в 2007	Доля выпуска в 2011	Доля выпуска в 2016	Доля девушек в 2016
<b>Выпускники ПЛ, из них</b>	<b>21683</b>	<b>28101</b>	<b>24776</b>	<b>38%</b>	<b>33%</b>	<b>22%</b>	<b>23%</b>
Дневное обучение, из них	13517	14366	12978	62%	51%	52%	30%
- на базе средней школы (11 кл.)	6641	7485	8041	49%	52%	62%	32%
- на базе неполной средней школы (9 кл.)	5079	5647	4396	38%	39%	34%	27%
- не получившие среднего образования (до 9 кл.)	1797	1234	541	13%	9%	4%	28%
Краткосрочное обучение (курсы)	8166	13735	11798	38%	49%	48%	16%
<b>Выпускники СПУЗов, из них</b>	<b>8647</b>	<b>15516</b>	<b>32892</b>	<b>15%</b>	<b>18%</b>	<b>30%</b>	<b>62%</b>
Лица, окончившие среднюю школу (11 кл.)	5386	7318	17626	62%	47%	54%	66%
Лица, окончившие неполную среднюю школу (9 кл.)	3261	8198	15266	38%	53%	46%	58%
<b>Выпускники ВУЗов, из них</b>	<b>26395</b>	<b>41811</b>	<b>52781</b>	<b>47%</b>	<b>49%</b>	<b>48%</b>	<b>58%</b>
- по программам Бакалавра	1811	3642	17370	7%	9%	33%	n/a
- по программам Магистратуры	870	1168	1979	3%	3%	4%	n/a
- по программам Специалиста	23714	37001	33446	90%	88%	63%	n/a
<b>ВСЕГО по всем программам ПО</b>	<b>56725</b>	<b>85428</b>	<b>110449</b>				

According to the programs of the initial vocational, the share of short-term graduates increased by 10% compared to the daily education and amounted to 48% of the total number of graduates of the PL. The proportion of graduates enrolled based on full secondary school (up to 62%) was also increased, whereas the share of graduates with basic general education and not having it decreased significantly, by 4% and 9%, respectively, in ten years.

Among the graduates of the SPEIs, the proportion of persons received after the 11th grade decreased by 8% compared to those who were trained based on the 9th grade. And the share of graduates in the undergraduate program has increased almost 5 times, while the share of training of specialists decreases, although in absolute terms their number remains quite large (33.5 thousand people).

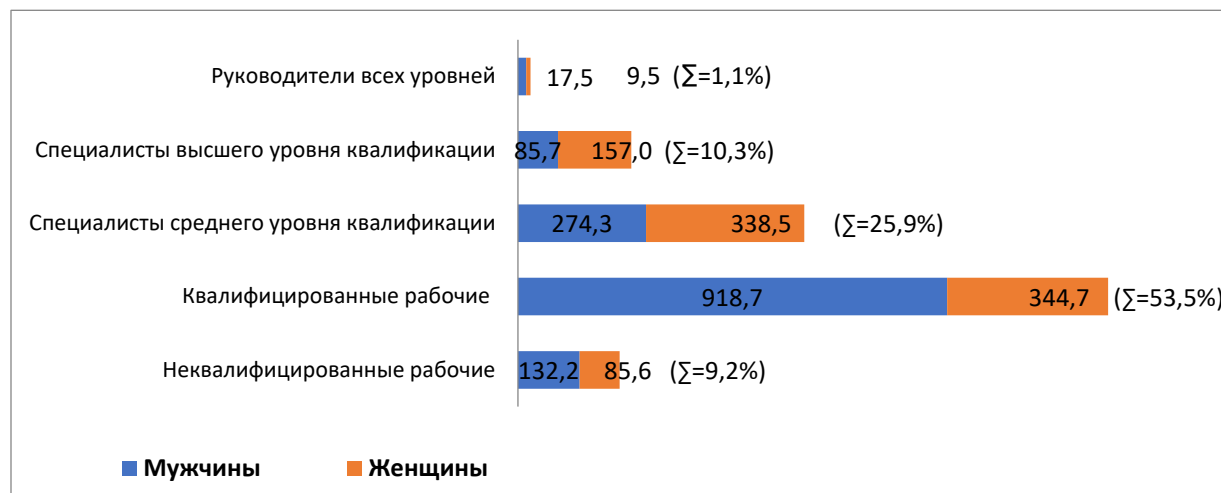
In general, the release of qualified personnel to the labour market increased twice in ten years. And their ratio for 2016 was one working and a half technician and two engineers (1:1.5:2). Whereas in 2007, this ratio was for two workers one technician and three engineers (2:1:3)

### Employment and unemployment by levels of professional education

According to the structure of the labour force to the group of occupations requiring qualification with higher education (managers and specialists of the higher level of qualification) are only 11.4% of the total number of jobs in the labour market. Jobs for specialists of the average skill level of only 25.9%, whereas skilled workers with primary vocational education in the labour market 53.5% of the total number of employed

persons. The above-mentioned ratio of graduates by skill level does not correspond to the structure of employment according to the levels of qualifications, for substitution of which should be prepared by the staff in vocational schools. The ratio of frames to the appropriate skill levels should be 1:2:5 (not one engineer two technicians and five working frames).

**Figure 4.11 Employed population by occupation groups in 2016 (thousands, by gender, in %)**



Gender parity among managers at all levels of women's management is almost half as much as men. And among the specialists, requiring a higher level of qualification, on the contrary women more almost twice. Also, women-specialists of the middle level of qualification more than men by 19%. While among skilled workers, women make up 30%, and among unskilled workers-40%. It should be noted that women choose mainly office and mental work, requiring higher and secondary vocational education. Although leadership positions are still twice as much as men.

In 2013, the employment of the population fell, regardless of the level of vocational, and reached 60-70% of the total number of employed persons in the labour market. The World Bank's "Transition to improved employment in the Kyrgyz Republic: A diagnostic study of employment Situation" (2015) states that the current development model based on migration and remittances has weakened The ability of the country to create enough jobs and will likely lead to a worsening of the employment situation in the future. The report states that "the national economy is unable to create enough jobs to meet the needs of the growing workforce. While the flow of remittances from overseas workers has contributed to active economic growth and job creation, mainly in the service sector, the rate of employment growth has remained lagging behind the growth of the workforce. In 2009-2013. The rate of employment growth was only 0.9% per year, or two thirds of the rate of growth of the workforce.... The most dramatic decrease in the proportion of workers in the country was observed among the female population, between 2000 and 2013, the proportion of women workers declined from 62 to 50 per cent."

The existing imbalance in the level of training of personnel with different levels of skills led to a discrepancy in the labour market structure, as seen in Figure 11 on the proportion of the employed population with different levels of vocational. Data on employment show that in 2016 persons with higher education in the labour market work 18%, with the level of secondary vocational education-14%, and with the primary vocational education only 10%. Whereas the structure of occupation groups in the labour market requires a ratio of skill levels of 11:25:53% respectively.

### Graduation of student by economic sectors

In case of data availability, it is recommended to consider indicators as per economic sectors. Namely, this will allow revealing whether there was an increase in ratio of participation of girls due to diversification of the number of offered programs, or the number of offered programs or the increase in the number of girls in traditionally male jobs. In Table 10.9 below there is a sample table.

**TABLE 4.12 Sample of table for comparisons of ratios related to participation of girls/women for several years, by economic sectors**

	Participation ratio of girls in 2007, (%)	Participation ratio of girls in 2011, (%)	Participation ratio of girls in 2016 (%)
<i>Total – by all sectors:</i>			
Construction			
Machine building			
Processing industry			
Office Manager /office services			
Agriculture			

**Ministry of Labour, Migration and Youth: Development of methodology for forecasting the human resources needs of the labour market Bishkek, 21 April /Kabar/.**

Currently there is an excess of labour in Kyrgyzstan's labour market. Every year in Kyrgyzstan between 80,000 and 100,00 young people reach employable age, but the national economy does not provide enough employment opportunities to meet the growing needs of the population. In recent years, the supply of workforce has exceeded demand by more than 30 per cent.

In addition, there is lack of high-level engineering personnel, technical specialists, and so on. This has created a structural deficit in the workforce and employment opportunities.

To streamline the system to forecast labour market needs, and for strategic planning of training and retraining of personnel, the Ministry has elaborated a methodology for forecasting the needs in human resources on labor market, which was approved by Government Decree 203 of 26 March 2012.

Using this methodology, the Ministry of Economy, when analysing implementation of investment projects, has provided data on the needs for human resources by professional structures in various economic sectors for 2014 – 2017. The methodology predicts a demand for 121,600 specialists.

Expert evaluation methodology, involving direct surveys of employers for 2014-2017, reveals a demand for 163,800 qualified specialists.

Overall, in the country until 2017 there will be a need for 285,400 specialists, with average annual demand of 71,300 specialists. (Source: <http://old.kabar.kg/rus/economics/full/75167>)

To predict the needs of the economy in the labour force, the Ministry of Labour has developed a method of calculation, which was approved by the resolution of the Government of KR № 203 of 26 March 2012. According to the press service of the Ministry in Kyrgyzstan, 80 to 100 thousand young people enter the working age every year, and the economy of the Republic does not create enough jobs corresponding to the growing needs of the population. Over the past few years the labour supply has exceeded the demand for it by more than 30%. Also, there are not enough specialists of high qualification from the number of engineering-technical staff, working technical specialities, etc., that creates a structural deficit of labour and workplaces. To streamline the system of forecasting the labour market needs, as well as strategic planning of training and retraining of personnel, the Ministry has developed a methodology for forecasting the labour market needs, which was approved by the resolution of the Government of KR № 203 dated March 26, 2012. Based on this method, the Ministry of Economy of the Kyrgyz Republic, considering the implementation of investment projects, provided data on the need for labour resources on professional structure in the context of branches of economy for the period from 2014 to 2017, this method requires 121.6, 000 specialists.

Based on the method of expert evaluation, by conducting direct surveys of employers for the prospect from 2014 to 2017, 163.8 thousand qualified specialists are needed. In general, the country will require 285.4 thousand specialists to 2017, the annual demand is average 71.3 thousand specialists. "According to this methodology, the forecast of the Labour resource requirement is prepared every five years and is provided to the Ministry of Education for Planning training in vocational schools.

Table 4.13 presents the forecast of human resource requirements up to 2020, which was prepared by ministry in 2017.

**Table 4.13 Forecast of demand for human resources until 2022**

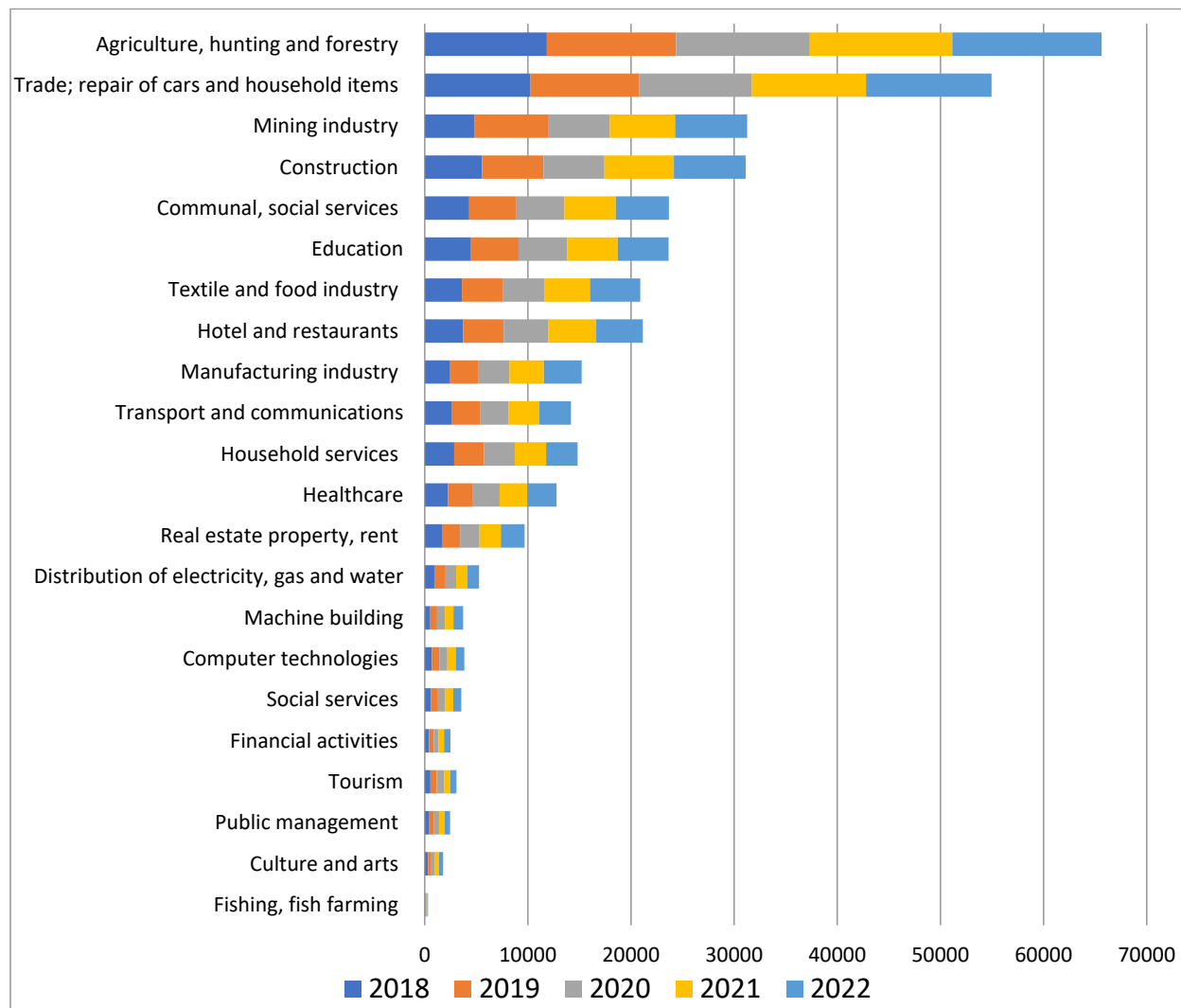
#	Sectors	Total	2018	2019	2020	2021	2022
1.	Fishing, fish farming	315	60	59	63	65	68
2.	Culture and arts	1,776	308	336	350	384	398
3.	Public management	2,464	445	458	488	522	551
4.	Tourism	3,074	549	617	740	567	601
5.	Financial activities	2,480	423	445	476	526	610
6.	Social services	3,541	614	664	717	764	782
7.	Computer technologies	3,835	691	725	771	809	839
8.	Machine building	3,716	532	658	767	826	933
9.	Distribution of electricity, gas and water	5,257	994	1,022	1,023	1,096	1,122
10.	Real estate property, rent	9,677	1,666	1,759	1,875	2,073	2,304
11.	Healthcare	12,773	2,243	2,436	2,584	2,687	2,823
12.	Household services	14,820	2,860	2,878	2,982	3,051	3,049
13.	Transport and communications	14,173	2,649	2,696	2,794	2,975	3,059
14.	Manufacturing industry	15,216	2,396	2,768	3,052	3,324	3,676
15.	Hotel and restaurants	21,151	3,718	3,934	4,299	4,668	4,532
16.	Textile and food industry	20,903	3,609	3,936	4,085	4,388	4,885
17.	Education	23,645	4,484	4,611	4,713	4,906	4,931
18.	Communal, social services	23,663	4,302	4,523	4,716	4,982	5,140
19.	Construction	31,109	5,559	5,963	5,889	6,739	6,959
20.	Mining industry	31,259	4,793	7,224	5,934	6,323	6,985
21.	Trade; repair of cars and household items	34,106	10,258	10,514	10,945	11,069	12,161
22.	Agriculture, hunting and forestry	65,625	11,834	12,531	12,972	13,811	14,477
<b>The Kyrgyz Republic</b>		<b>344,578</b>	<b>64,987</b>	<b>70,757</b>	<b>72,235</b>	<b>76,555</b>	<b>80,885</b>

Source: Ministry of Labour and Social Development calculations<sup>42</sup>

As shown in Figure 4.12 Up to 2022 the need for personnel for agriculture will grow and according to calculations of ministry more than 10 thousand workers are required annually. There is also a high need for personnel for the sectors of trade, mining, construction, education and light and food industries, where labour resources are required approximately in the same amount each year from 3 to 10 thousand employees. On such priority directions as tourism and computer technologies according to forecast ministry it is required not so many workers on 500-800 people per year. Over the next five years, there is a growing need for training to replace the workforce and to fill new jobs for all types of economic activity, and in 2022 it will take more than 80,000 dollars. Workers. However, this technique does not provide information on what level of skill needs personnel, which does not allow planning training for appropriate levels of vocational. However, the Ministry of Education has a guideline for regulating the recruitment of students to vocational training institutions, taking into account the labour market required ratio of employees to the appropriate level of qualification 1:2:5.

<sup>42</sup> Calculations are made in line with the Methodology for forecasting of the demand for human resources, approved by the Government of KR # 203 dated 26 March 2012

**Figure 4.12 The need for personnel by type of economic activity**



## Employability by sectors, structure of the labour force (needs until 2022)

### Labour market structure

As noted above, professional education was not provided based on labour market demand for professional personnel, but rather was oriented towards the demand of the population for obtaining professional education. In an environment of limited public regulation, the labour market develops spontaneously, without evaluations of demand and supply by territory or type of professions. However, given that the labour market is still in flux and is continuing to develop slowly because of weak socio-economic development in the country and the regions, the labour market does not have a significant impact on supply of professional education. According to expert evaluations, there is still an excess of labour in Kyrgyzstan, and weak competitiveness of workforce. Therefore, the extent to which personnel training and development matches the professional levels and sectors required in Kyrgyzstan remains a complicated issue.

The sectoral structure of the labour force was used as an approximate indicator to evaluate demand for qualified workforce. **Table** shows the employment structure in the country's economic sectors for groups of qualified workers. Sectors can require various workers with different professional competencies. Many workers may have never studied in professional education institutions but have acquired skills during their working lives.

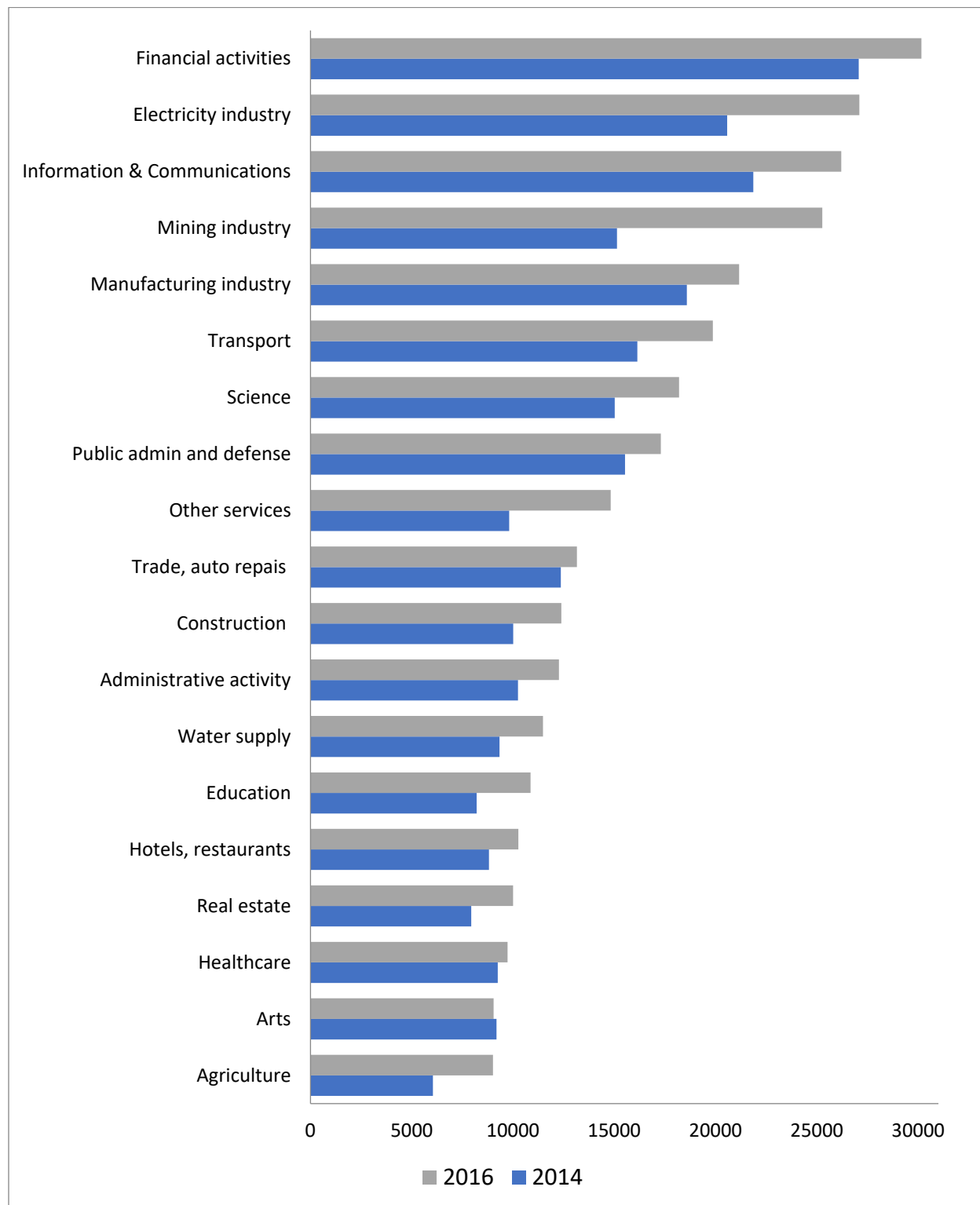
Table 4.12 Changing structure of workforce and training of cadres in educational institutions between 2011 and 2016

Types of economic activities	Total	Employed population, of whom									Training of cadres in educational institutions								
		With HE			With SPE			With initial PE			professional lyceums			SPEIs			HEIs		
		2011	2016	change	2011	2016	change	2011	2016	change	2011	2016	change	2011	2016	change	2011	2016	change
<b>Total:</b>	<b>2,363,700</b>	<b>410,600</b>	<b>491,800</b>	<b>20%</b>	<b>292,700</b>	<b>238,400</b>	<b>-19%</b>	<b>223,100</b>	<b>177,500</b>	<b>-20%</b>									
Agriculture	633,300	33,100	32,200	-3%	45,600	34,200	-25%	53,600	34,100	-36%									
Mineral extraction	10,100	2,400	1,900	-21%	2,300	1,000	-57%	5,700	400	-93%									
Manufacturing industry	180,500	24,600	29,000	18%	24,000	30,900	29%	27,200	21,300	-22%									
Electricity industry	29,400	12,700	11,100	-13%	10,100	4,200	-58%	5,900	4,600	-22%									
Water supply	18,700		4,000			1,200			3,000										
Construction	283,300	19,300	26,900	39%	18,000	13,800	-23%	32,400	22,700	-30%									
Trade, repair of cars	368,500	55,500	69,000	24%	46,800	34,300	-27%	28,100	28,900	3%									
Transport	168,300	21,900	24,500	12%	15,800	15,500	-2%	25,500	20,000	-22%									
Hotels and restaurants	109,200	11,100	10,400	-6%	9,700	10,400	7%	8,900	8,100	-9%									
Information and communications	30,000		14,500			3,500			4,100										
Financial activities	25,900	11,000	18,800	71%	2,800	3,400	21%	1,700	600	-65%									
Real estate	7,900	22,000	4,100	-81%	10,600	1,900	-82%	5,100	1,000	-80%									
Scientific activity	15,500		8,200			3,000			700										
Administrative activity	13,200		5,400			900			1,000										
Public management	100,500	50,400	53,800	7%	22,000	13,200	-40%	4,500	7,000	56%									
Education	206,700	111,700	132,900	19%	27,500	21,200	-23%	6,500	8,400	29%									
Healthcare	83,900	17,900	23,900	34%	41,700	36,300	-13%	4,300	3,000	-30%									
Arts	16,000		6,300			2,900			1,700										
Other service activities	46,200	14,600	13,800	-5%	11,900	5,700	-52%	10,500	5,600	-47%									
Activities of private households	16,200	1,600	1,100	-31%	3,900	900	-77%	3,100	1,400	-55%									
Exterritorial organizations	200	800	100	-88%	0	0	0%	0	0										

<sup>1</sup> The list is in accordance with SCEA (state classification of economic activities) (version 3), introduced in 2011

## Monthly average income of TVET system graduates by professional group

Figure 4.10 Salary by types of economic activities (thousands KGS)





## Internal efficiency and quality of professional education

According to the legislation in the field of education vocational educational institutions operate on the principles of autonomy and academic freedom, therefore they have the full responsibility to ensure the quality of education and to create conditions for Effective activity of the educational institution. In this regard, professional educational institutions independently solve the issues of resource provision with pedagogical personnel, educational and methodical materials, laboratory and educational-production equipment, and corresponding Infrastructure base. Academic freedom gives them the flexibility to respond to the demands of a constantly changing labour market to form and update the content of training programmes within the framework of State educational standards that establish Framework requirements for guaranteeing the quality of education.

There is not enough information in the state statistics to analyze the internal efficiency and quality of vocational education. However, the available data can provide an overall picture of the resource and capacity of vocational schools.

## Analysis of quality of the services provided by vocational education

The most important indicator of internal efficiency measurement in the education system is the number of students who have successfully passed the exam. According to the data available in the State statistical reporting, the dropout rate of students in SPEIs in the 2016/2017 academic year was 15%. This is the share of the total number of students in all courses and forms of study, which at the end of the school year dropped out of school. Their share of the departed from among students on failure during the year was 35%, of which 18% did not pass the state examination (attestation). The rate of successful certification of students from the number admitted to it cannot be calculated due to the lack of comparable data in statistical reporting.

**Table 18. Student dropout in SPEIs**

SPEIs	2016-2017						
	All types of education	Total	Including girls (%)	State		Private	
				Total	Girls (%)	Total	Girls (%)
<b>Total number of dropout students</b>	<b>13427</b>	<b>46%</b>	<b>11744</b>	<b>46%</b>	<b>1683</b>	<b>50%</b>	
- including poor performers	4662	38%	4073	37%	589	45%	
- out of them, those who did not pass the final attestation (did not pass exam, did not defend diploma work)	861	48%	745	47%	116	54%	
<b>Share of dropout students:</b>	<b>15%</b>	<b>12%</b>	<b>15%</b>	<b>12%</b>	<b>15%</b>	<b>12%</b>	
<b>With performance failure rate</b>	<b>35%</b>	<b>28%</b>	<b>35%</b>	<b>28%</b>	<b>35%</b>	<b>31%</b>	
<b>Share of students who failed attestation</b>	<b>18%</b>	<b>23%</b>	<b>18%</b>	<b>23%</b>	<b>20%</b>	<b>24%</b>	

The total dropout rate and the proportion of students on non-achievement in public and private educational institutions are the same. Although the proportion of students failed the state certification in private SPEIs is slightly higher than in the state by 2%. The proportion of female students in the SPEIs of graduating students is less than half (46%), which is 12% of the number of females for this year in SPEIs. Moreover, from the number of dismissed girls 28% were degraded by failure, of which 23% did not surrender State exam. Accordingly, in private SPEIs, the proportion of girls in the unemployment rate is higher than in the state by 8 per cent and amounted to 45 per cent (or one third of the female students, of whom almost one quarter did not pass the state attestation). And more than half of students not passed state certification-girls (54%).

As far as the higher education institutions are concerned, the dropout rate of students is 4% higher than in SPEIs, and made up 19% of those who graduated from higher education institutions for various reasons. Whereas the percentage of students is less than SPEIs by 7%, but also quite high – 28%. Out of the number of students, 10% failed to pass the state certification, of which more than half of the girl (54%), which is

13% of the number of girls in the unsuccessful. In general, the proportion of students who have not passed public exams in HEIs, less than in SPEIs by 8%, and in the public institutions it was 12%, in private only 2% of the number of students on failure to learn. The proportion of girls in them is more than half, and in private universities almost 70% of students who failed state attestation are female students.

**Table 18. Student dropout in HEIs**

HEIs	2016-2017					
	Total	Including girls (%)	State		Private	
			Total	Girls (%)	Total	Girls (%)
<b>All types of education</b>						
<b>Total number of dropout students</b>	<b>34112</b>	<b>48%</b>	<b>29892</b>	<b>48%</b>	<b>4220</b>	<b>48%</b>
- including poor performers	9543	44%	8141	42%	1402	55%
- out of them, those who did not pass the final attestation (did not pass exam, did not defend diploma work)	1000	54%	965	53%	35	69%
<b>Share of dropout students:</b>	<b>19%</b>	<b>17%</b>	<b>19%</b>	<b>17%</b>	<b>19%</b>	<b>19%</b>
<b>With performance failure rate</b>	<b>28%</b>	<b>26%</b>	<b>27%</b>	<b>24%</b>	<b>33%</b>	<b>38%</b>
<b>Share of students who failed attestation</b>	<b>10%</b>	<b>13%</b>	<b>12%</b>	<b>15%</b>	<b>2%</b>	<b>3%</b>

This is the average picture of the analysis of the effectiveness of the provided training in SPEIs and HEIs in the country, most likely in the context of regions, educational institutions, their profiles and specialties, the picture will be more differentiated, but such data was not available. Also, data on results of final qualification exams in professional lyceums are not provided in National Statistical Committee, therefore it is not possible to compare between levels of vocational education. However, according to the information of Automatized primary professional education (APPE) annual dropout of primary vocational education system is about 2-3 thousand students for various reasons. From total students who have taken final exams, almost all receive qualifications and an appropriate document confirming the acquisition of skills for successful employment.

Information on the results of passing exams in vocational schools is not enough to assess the quality of education in them. In SPEIs and HEIs exams are accepted by attestation committees, which are formed and approved by the order of the Ministry of Education. Evaluation of graduates' knowledge is limited to assessing of theoretical results of training and the practical side of educational programs of SPEIs and HEIs remains "untouched". As such, problems of the quality of practical training, which is common for the system of primary vocational education, are not reflected in the exams results HEI and SPEI graduates, and are identified only when graduates enter the labour market.

The quality of professional education and training can be assessed on many factors:

- Qualification and competence of pedagogical staff of HEIs and SPEIs, and for professional lyceums – technical teachers and masters of practical training;
- Correspondence of curricula to the needs of the labour market and trends in the development of technologies in economic sectors;
- The availability of appropriate buildings and facilities in the educational institution to provide training as per the up to date curricula;
- Sufficiency and compliance with the needs of technology development in the production of training resources: equipment, consumables and training materials

## Chapter Five. Management of funding

In the education system of the Kyrgyz Republic there are three main sources of financing: public, private and external financing. State sources are the state budget (which includes expenses of both Republican and local budgets) replenished by the income from the general taxation. Private funds include payments from households (parental funds in schools, preschool institutions). External financing is the funds sent by international organizations to the education system of the Kyrgyz Republic.

The funds from the Republican budget are received by the Ministry of Education and Science of the Kyrgyz Republic, which in its turn finances:

- public schools of general secondary education (except for utilities and maintenance of buildings and premises);
- district and city departments of education;
- expenses for the salary fund of preschool, extracurricular and other educational organizations.

Currently, full funding from the local budget is carried out only from the budget of the city of Bishkek, which allocates to education sector 3,5 billion KGS out of its annual budget of 7 billion KGS, i.e. exactly 50% of its budget. But according to the decision of the Government of the KR on 30 May 2013<sup>43</sup> funding from local budgets were transferred to the republican budget. So, all the other municipalities fund from local budget only expenses for utility services and maintenance of buildings and premises of secondary general education schools, as well as all expenses (except wages and contributions to the Social Fund) of preschool, extracurricular and other educational organizations.

Private spending in Kyrgyzstan is mainly represented by household expenditures. Households pay for the education services provided in private educational institutions and in public schools they pay through so-called parental funds organized as public funds (most often affiliated to public schools and preschool institutions). This type of payment can be both formal (payment according to the list of paid services) and informal. This practice is most common in the major cities of the country, especially in Bishkek.

It is not possible to estimate the volume of private funds, as their centralized accounting is not conducted (only within the framework of a separate organization of education). In addition, obtaining reliable information on financial flows in parent funds is extremely difficult and is characterized by the opacity of both income and expenditure.

### Public revenues and expenditure, external debt

The budget policy of the Kyrgyz Republic is focused on ensuring full and timely receipt of tax and non-tax payments in the income of the State budget, as well as priority financing of social sectors of the economy (Education, health, social protection) and protected budget items. Protected budget items include:

- wages
- contributions to the Social Fund
- the costs of purchasing goods and services (such as medicines, foodstuffs, etc.)
- cash benefits for low-income families
- cash benefits to mothers until the child reaches the age of one and a half
- lump-sum allowance at birth of a child
- pensions to military and mothers of many children (7 and more)
- allowances for persons with disabilities and special merits (awards)
- compensatory payments to pensions for electricity and other benefits.

According to the Central Treasury of the Ministry of Finance, the total revenues of the state budget, received in 2016, amounted to more than 130 billion KGS, which in comparison with 2007 increased by 3.6 times (table 1.2). The share of revenues of the state budget in GDP compared to 2007 increased by 8.2 percentage points and amounted to 27.4 per cent.

<sup>43</sup> "On the transfer of educational organizations, financed from local budgets municipalities and cities, for financing from the Republican budget through the territorial units of the MOES of the Kyrgyz Republic" starting from August 1, 2013

Table 5.1 State budget

Years	Revenue (in million KGS)	Expenditure (in million KGS)	Cash Deficit (-) / Cash surplus (in million KGS)	Share of public revenues in GDP, %	Share of public expenditures in GDP, %
2007	35988,4	35859,3	129,1	25,4	25,3
2008	46597,6	45032	1565,6	24,8	24,0
2009	55669,4	58628,2	-2958,8	27,7	29,1
2010	58013	68781	-10768	26,3	31,2
2011	77880,4	91544,1	-13664	27,2	32,0
2012	87008,1	107240,4	-20232,3	28,0	34,5
2013	101940,8	104271,3	-2330,5	28,7	29,3
2014	119428,1	121303,7	-1875,6	29,8	30,3
2015	128422,9	134572,2	-6149,3	29,8	31,3
2016	130669,9	151558,8	-20888,9	27,4	31,8

*In accordance with the IMF Handbook on Public Finance Statistics 2001, including income from sales and expenses for acquisition of non-financial assets*

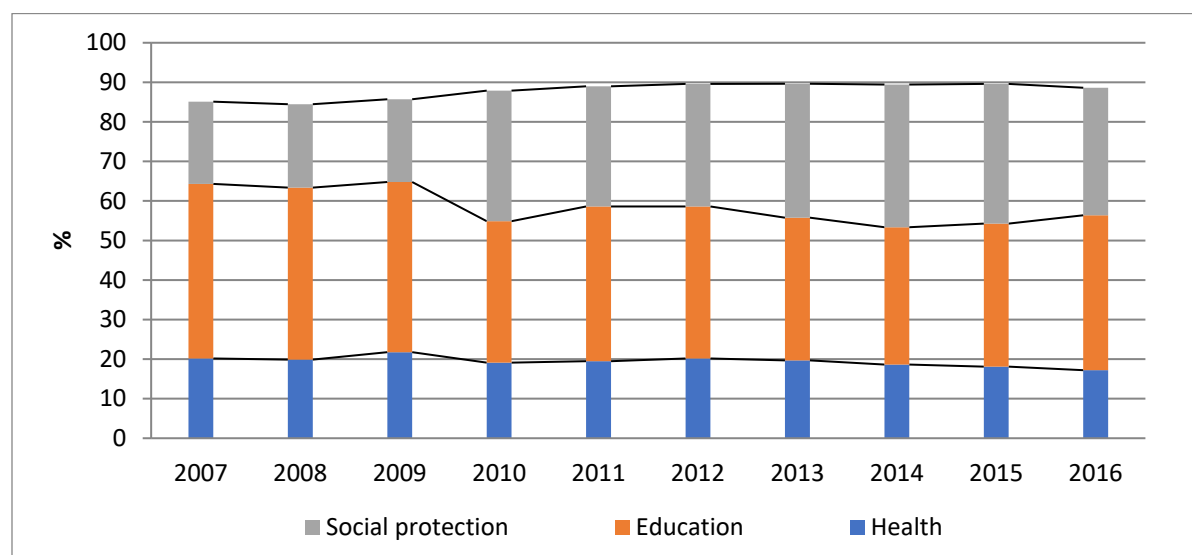
The main source of increase in budget resources is tax revenues, which amounted to more than 93 billion KGS in 2016, which is 4 times higher than the level of 2007. In the revenue structure in 2016, the share of tax revenues was 71.8 per cent, higher than in the previous three years, but lower than in 2007 (74 per cent). In 2016, as in previous years, the bulk of tax revenue (about 72 per cent of all taxes) was generated by value added tax, income and profit taxes, and international trade and operations.

**Public expenditures** in 2016 amounted to more than 151 billion KGS, surpassing the level of 2007 by 4.2 times (Table 1.3). At the same time, the share of budget expenditures in relation to GDP increased by 6.5 percentage points and amounted to 31.8%.

The structure of expenditures of the state budget testifies to the social orientation of the budget policy of the Government. For example, over the past 10 years, an average of 56 per cent of expenditures have been made in the socio-cultural sphere (education, health, social protection, housing and communal services, recreation, culture and religion), and the amount of funding for socio-cultural sphere in 2016 reached more than 77 billion KGS, surpassing the level of 2007 by 4.3 times. Expenditure on education, whose share of the total expenditure in the socio-cultural sphere was an average of 39 per cent (Figure 1.11), remained a priority in social and cultural expenditures over the decade.

**Figure 5.1 Expenditure of the State budget on education, health and social protection**

*(Percentage of total expenditure in the social and cultural sphere)*



In 2016, the public services of general purpose, defence, public order and security used about 32 billion som, which exceeded the level of 2007 3.2 times. If in 2007 the share of expenditures for this purpose was 28 percent of all funds of the state budget and in the following years increased, in 2016 the share slightly decreased and reached 27 percent. The main part of the state budget is devoted to the remuneration of the employees of the budget sector. Over a decade, such expenditure had increased by 1.4 times, and the share of expenditures in the budget had been between 27 and 40 per cent during that period.

The volume of social benefits in 2016 compared to 2007, it increased 6.6 times and reached 24 billion som. The share of expenditure on social benefits in total expenditure declined in 2009 compared to 2007 from 10 to 9 percent, but in 2010 it grew to 15 percent, and in 2013-to 19 percent, but in the following years the share decreased and in 2016 was 16%.

In the period 2007-2016 the implementation of the state budget was characterized mainly by the deficit of funds. Thus, if in 2007-2008 there was a surplus, in 2009 the cash deficit was already 2958.8 million som, and in 2012 – 2032.3 million som. In 2013 it was possible to reduce the deficit to 2330.5 million som, and by the end of 2014-to 1875.6 million, but in 2015 it increased to 6149.3 million som and in 2016-to 20888.9 million som (Table 1.2).

According to the Ministry of Finance of the Kyrgyz Republic, the state foreign debt at the end of 2016 amounted to US \$3.7 billion. The share of the state external debt to GDP for ten years fluctuated within the limits of 44-64, 4 percent (table 1.3). Of the total external debt, 39.6 per cent was owed to China, 16.5 per cent to the International Development Association, 15.2 per cent to the Asian Development Bank (ADB), 7.2 per cent to Russia, 6.3 per cent to Japan, 5 per cent to the International Monetary Fund (IMF), 10.2 per cent to other countries. Of the total amount of loans granted, 98.6 per cent had concessional loans and 1.4 per cent for unfavourable loans.

**Table 5.2 Public external debt**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
In million US \$	2076,9	2127,9	2475,6	2615,7	2802,6	3031,8	3158,7	3437,1	3606,2	3742,7
As a share of GDP, %	52,0	44,6	54,2	55,9	45,6	46,3	43,8	50,5	63,6	54,4

## Public education expenditure

Table 5.3 Public education expenditure

KYRGYZ REPUBLIC	Actual Values for Prior and Current Years		
	2014	2015	2016
<b>Total public expenditure (recurrent and capital, excluding debt service)</b>	<b>92,086,040.05</b>	<b>127,069,491.32</b>	<b>146,294,475,786.71</b>
Total public recurrent expenditure (including debt service payments)		105,252,414.75	115,948,115,673.64
Total public capital expenditure		25,946,556.89	35,499,583,467.28
Interest and debt services	3,498,588.45	4,129,480.32	5,153,223,354.21
<b>Public expenditure on education (recurrent and capital)</b>	<b>24,271,101.86</b>	<b>29,596,064.89</b>	<b>36,467,977,031.07</b>
Public recurrent education expenditure		25,621,920.33	30,533,346,939.11
Public capital education expenditure		3,974,144.56	5,934,630,091.96
Public recurrent and capital education expenditure (as % total public expenditure)	26.4%	23.3%	24.9%
Public recurrent education expenditure (as % public recurrent expenditure, excluding debt service)		25.3%	27.6%
Public capital education expenditure (as % public capital expenditure)		15.3%	16.7%

**Looking back at 2006:** The Kyrgyz Republic adopted its Midterm Strategy of education financing (by Government Decree 891 of 28 December 2006). The Strategy sets out the current system for managing education sector funding and defined how to reform it.

Thus, the content of education in the total state budget in 2006 provided for 5533.6 million soms, or 5.0 percent of GDP and 23.8 percent of total public expenditure, including the current needs of education-5016.6 million som, which accounted for 4.5 per cent of GDP and 21.6 per cent. Current expenses were provided by means of:

- the republican budget – 1678.9 million som (33.3%);
- local budget – 1132.0 million som (23.0%);
- categorical grants – 2154.6 million som (42.7%); and
- adjustment grants – 51.1 million som (1.0%).

Total state budget for education envisioned an investment funding of 282.0 million KGS as well as funding from the Central Anti-Poverty Fund (CAPF) of 235 million KGS, out of which 100 million KGS was allocated for textbooks and 135 million KGS for current repairs of school buildings. In addition, the total education expenditure amounted to 6172.6 million soms or 5.6 per cent of GDP and 26.6 total public expenditure

## Funding in pre-school education

**Table 5.4 Calculation of the norm for financing expenses for nutrition/meals for children per child**

(in KGS, based on 2016 prices)

Type of preschool educational institution	Indicator	Nursery groups for children under 1.5 years	Nursery groups for children aged 1.5-3 years	Preschool groups for children aged 3 years and older
10 hours stay	Norm for expenses per day	55	55	60
	Norm for expenses per year	12,705	12,705	13,860
24 hours stay	Norm for expenses per day	60	60	70
	Norm for expenses per year	13,975	13,975	16,170

Calculation of the norm for financing expenditure for household needs, paid from parents' resources, is based on identifying the needs for these supplies in general per group in the preschool educational institution and calculating per child.

**Table 5.5 Calculation of the norm for financing education expenditure by households**

(in KGS, as per 2016 prices)

	Preschools in rural areas			Preschools in urban areas		
	Nursery groups for children under 1.5 years	Nursery groups for children aged 1.5-3 years	Preschool groups for children aged 3 years and older	Nursery groups for children under 1.5 years	Nursery groups for children aged 1.5-3 years	Preschool groups for children aged 3 years and older
Normative size of groups (persons)	20	25	30	25	30	35
Expenses per group per year (KGS)	4,320	5,400	6,480	5,400	6,480	7,560
Expenses calculated per child per year (KGS)	216	216	216	216	216	216

The need for resources for ongoing repairs of preschool educational institutions is defined by calculating expenditure to purchase major construction materials, supporting materials and equipment for preschool educational institutions, located in standardized buildings, taking into account the estimated capacity of the building.

**Table 5.6 Expenditure on ongoing repairs of buildings calculated per child**

Types of expenditure (in KGS, 2016 prices)	Amount
Purchase of paint, lime carbonate (KGS)	154,820
Purchase of supporting construction materials (KGS)	7,680
Purchase of supporting equipment (KGS)	4,100
Total expenditure (KGS)	166,600
Estimated capacity of the buildings of preschool educational institutions (KGS)	280
Expenditures for running repairs calculated per child per annum (KGS)	595

Calculation of funding for purchasing goods for household needs is based on the identifying the need for supplies in general per group in preschool educational institution and its further recalculation per child.

**Table 5.6 Calculation of the norm for purchasing goods for household needs**

(in KGS, 2016 prices)	Preschools in rural areas			Preschools in urban areas		
	Nursery groups for children under 1.5 years	Nursery groups for children aged 1.5-3 years	Preschool groups for children aged 3 years and older	Nursery groups for children under 1.5 years	Nursery groups for children aged 1.5-3 years	Preschool groups for children aged 3 years and older
Normative size of groups (people)	20	25	30	25	30	35
Expenses per groups per year (KGS)	12,769	15,961	19,153	15,961	19,153	22,345
Expenses calculated per child per year (KGS)	638	638	638	638	638	638

The standard for financing of services in preschool educational institutions (hereafter referred to as the Standard) is ensured by:

- Public authorities – to the sum of the norm for financing educational services;
- Parents (caregivers) – to the sum of the norm for financing expenses for meals/nutrition and childcare;
- Public authorities and local self-governance bodies (hereafter referred to as LSGs) – to the sum of the norm for financing expenses for maintaining infrastructure of preschool educational institutions, belonging to them in line with their ownership right.

Financing of educational services is ensured through the republican budget based on the norms for financing per child per annum and the average annual number of children attending preschool educational institutions.

Municipalities finance the maintenance of infrastructure and utilities in preschool educational institutions from the local budget. Municipalities have the right to finance other expenses of preschool educational institutions from the local budget after decisions by local councils.

Arranging meals/nutrition for children is the responsibility of preschool educational institutions and is financed from funds disbursed by parents (legal representatives) for meals/nutrition of children and childcare.



In 2007, system reform to management of **financing school education**. As result of the reform, two levels of financing of budgetary organizations were identified: republican and local. Local budgets are the budgets of *ayil* community, village and city, and local municipalities draft, approve and implement these budgets.

Between 2007 and 2009, per capita financing was introduced in schools in Chuy, Batken and Issyk Kul provinces. Transition of general education organizations in Osh, Jalalabad, Naryn and Talas provinces, as well as Bishkek and Osh cities to per capita budgetary financing was endorsed by Government Decree 563 “On the transition of general education organizations of the Kyrgyz Republic to the per capita principle of financing” of 20 September 2011. This transition was recently formally completed.

Of the 2,236 schools in the country, 52 are not covered by normative financing (gymnasiums, lyceums, boarding schools, evening schools and special needs schools). All budget lines in these schools are financed directly by the Ministry of Education and Science and the local budget of Bishkek city.

There is guaranteed financing for 161 schools, with a total number of pupils slightly more than 15,000: these schools are not part of the mechanism for normative financing, in the frame of which the list of schools is approved by the relevant decision of the Government of KR.

A key component of the reforms to management of financing was the adoption of the Government Decree 302 “On transition of educational organizations financed from local budgets of *ayil aimaks* and cities to financing from the republican budget via territorial branches of the Ministry of Education and Science of KR”, according to which the following was approved:

- Standard staffing requirements of centralized accounting departments under the district (city) departments (branches) of education;
- The procedure for developing and implementing expenditure of general education institutions of the Kyrgyz Republic;
- The methodology for identifying standards for financing general education institutions of the Kyrgyz Republic;
- The list of general education institutions of the Kyrgyz Republic that are not covered by the mechanism of normative financing.

At that time, per capita financing was renamed normative financing. The Decree has stipulated that:

- A) The following expenses are financed from the republican budget through the MOES of the Kyrgyz Republic:
  - Expenditure of public general education institutions, except for expenses related to utilities and maintenance of buildings and facilities;
  - Expenditure of district (city) departments (branches) of education, centralized accounting departments under the district (city) education departments (branches), as well as methodological activities;
  - Expenditure related to staff costs/salaries of preschool, extra-curricular and other educational institutions;
  - LSGs maintain their function of financing utility bills and expenditure on maintenance of buildings and facilities of general education institutions, as well as all expenditure of preschool, extra-curricular and other educational institutions, except for salaries and deductions to the Social Fund of the Kyrgyz Republic;
- B) Budgetary expenses of schools for the upcoming year are calculated based on two methodologies:
  - For schools financed through normative principle – taking into account the number of students and the scale of standards;
  - For schools not covered by the normative principle of financing (hereinafter “schools with guaranteed financing”) – taking into account the existing procedures to calculate expenses for all expenditure/budget lines.

Expenses for salaries are calculated by multiplying the standard for staff costs/salaries by the number of students per level and the correction index of the scale. During the calculations, the value of the standard depends on the urban or rural location, the type of school/class and the stage of education.

For schools situated in mountainous and remote areas (according to Government Decree 377 of 25 June 1997), payroll/salaries are calculated based on the standard making compensation for length of service in conditions of high altitude and remoteness, and the value of the district coefficient.

Expenditure on nutrition/meals of students is calculated by summing up the expenses for meals of students and meals of students of boarding schools. Expenses for meals are calculated by multiplying the standard for nutrition/meals by the number of students. For institutions located in mountainous and remote zones, the need for meals/nutrition of first category students is multiplied by the correction index of 1.43.

Other expenses (daily subsistence allowance, teaching expenses, expenses for ongoing repairs and purchase of textbooks) are defined by multiplying the standard for these expenses by the number of students adjusted by levels of education.

The draft cost estimates for schools of guaranteed financing is calculated in terms of the major areas of expenses according to the following:

- Expenditure for staff costs/salaries is calculated by multiplying the monthly staff costs/payroll of the institution by 12 months and for the tariff of social insurance deductions. Monthly staff costs/payroll are established based on list of teaching staff's tariffication and the staff schedule of administrative and operations personnel with consideration of promotion fund in the amount of 10%, payments for sick leave and for backstopping to a sum of 1 per cent.
- Other expenses (meals, daily subsistence allowance, teaching expenses, expenses for ongoing repairs, and purchase of textbooks) – are similar to calculations for schools on normative financing.

Table 5.7 The scale of standards for normative financing as of 2013

#	Types of schools	Types of expenses	Secondary general education schools in urban areas			Secondary general education schools in rural areas		
			primary	lower secondary	upper secondary	primary	lower secondary	upper secondary
1	Primary, lower and upper secondary schools (and classes)	Staff costs	6,486	9,398	9,751	7,835	11,301	11,441
		Deductions to Social Fund	1,119	1,621	1,682	1,352	1,949	1,974
		Expenses for meals	1,260			1,260		
		Teaching expenses	159	176	210	173	192	220
		Professional development	93	93	93	93	93	93
		Purchase of textbooks	177	291	476	177	291	476
		Ongoing repairs	297	297	297	297	297	297
		Standard for budgetary financing per student	9,591	11,876	12,509	11,187	14,123	14,501
		Staff costs	10,011	14,506	15,050	12,093	17,443	17,660
2	Boarding schools (and classes)	Deductions to Social Fund	1,727	2502	2596	2086	3009	3046
		Expenses for meals	7,140	7,350	7,350	7,140	7,350	7,350
		Teaching expenses	159	176	210	173	192	220
		Professional development	93	93	93	93	93	93
		Purchase of textbooks	177	291	476	177	291	476
		Ongoing repairs	297	297	297	297	297	297
		Standard for budgetary financing per student	19,604	25,215	26,072	22,059	28,675	29,142
		Staff costs	6,486	13,259	14,982	7,835	15,467	17,075
		3	Gymnasium schools (and gymnasium classes)	Deductions to Social Fund	1,119	2,287	2,584	1,352
Expenses for meals	1,260					1,260		
Teaching expenses	159			176	210	173	192	220
Professional development	93			93	93	93	93	93
Purchase of textbooks	177			291	476	177	291	476
Ongoing repairs	297			297	297	297	297	297
Standard for budgetary financing per student	9,591			16,403	18,642	11,187	19,008	21,106
Staff costs	6,486			11,875	15,634	7,835	13,844	17,818

4	Lyceums (and lyceum classes)	Deductions to Social Fund	1,119	2,048	2,697	1,352	2,388	3,074
		Expenses for meals	1,260			1,260		
		Teaching expenses	159	176	210	173	192	220
		Professional development	93	93	93	93	93	93
		Purchase of textbooks	177	291	476	177	291	476
		Ongoing repairs	297	297	297	297	297	297
		Standard for budgetary financing per student	9,591	14,780	19,407	11,187	17,105	21,978

Payroll/staff costs of AOP (administrative-operations personnel) includes salaries as per the staffing table of school principal, head teacher, pedagogue-planner, social pedagogue, librarian, laboratory assistant, secretary, and payment of teaching time for optional classes and lectures.

**Table 5.8 Normative share of salaries of administrative and support personnel (ASP) in the net wages**

Type of school	Maximum share of ASP salaries in the net wages of schools	
	Urban schools	Rural schools
Primary, lower secondary and upper secondary schools	29%	29%
Gymnasiums and lyceums	35%	34%
Boarding schools	54%	54%

**Table 5.9 Data on the normative budget financing for 2016**

Type of general education institutions (classes)	Urban general education institutions			Rural general education institutions		
	primary	lower secondary	upper secondary	primary	lower secondary	upper secondary
Primary general education schools	13,332	17,268	18,118	15,688	20,584	21,060
Lower secondary and upper secondary schools (classes)	12,399	15,915	16,714	14,561	18,958	19,414
Boarding schools (classes)	29,932	37,155	38,198	33,032	41,522	42,076
Gymnasium schools (classes)	12,229	21,709	24,644	14,389	25,249	28,003
Lyceums (lyceum classes)	12,229	19,545	25,664	14,389	22,702	29,169
Gymnasiums with in-depth study of foreign languages (classes)	12,229	24,359	25,913	14,389	27,244	28,356

**Table 5.10 Normative budget financing of general education schools for 2016 by expenditures**

Types of general education institutions (classes)	Urban general education institutions			Rural general education institutions		
	1 category	2 category	3 category	1 category	2 category	3 category
Staff costs	8,801	12,752	13,231	10,632	15,334	15,525
Deductions to Social Fund	1,518	2,200	2,282	1,834	2,645	2,678
Expenses for meals	1,260			1,260		
Teaching expenses	163	181	215	178	197	225
Professional development	93	93	93	93	93	93
Purchase of textbooks	196	321	525	196	321	525
Expenses for ongoing repairs	368	368	368	368	368	368
Standard per student	12,399	15,915	16,714	14,561	18,958	19,414

**Table 5.11 Coefficient rate in relation to school size in normative budget financing**

Number of students in secondary education school	Coefficient rate in relation to school size
Up to 100	1.9
From 101 to 145	1.7
From 146 to 190	1.5
From 191 to 235	1.3
From 236 to 275	1.1
From 276 to 450	1.05
From 451 to 550	1.0
From 551 to 775	0.95
From 776 to 990	0.85
From 991 to 1,320	0.83
Over 1,321 people	0.8

**Table 5.12 Sample calculation of schools' payroll needs**

Village		Kun-chygysh
Name of school		Secondary school named after Bokonbaev
Number of students	Total	1,166
	Primary	541
	Lower secondary	479
	Upper secondary	146
Standards of budgetary financing of staff costs	Primary	12,466
	Lower secondary	17,979
	Upper secondary	18,203
Coefficient of scale		
Compensation for length of service for work in high altitude areas		0.83
Coefficient of high altitude		1349.3

Coefficient of high altitude		1.10
Payroll on tarrification with promotion fund 10%		17,930,700
Payroll needs in KGS		16,154,800
Deviations	KGS	1,775,900
	%	111.0

Source: *Guidelines for School Principals under the "Management and financing in school education" training programme (P 85, ISBN 978-9967-17-082-7, -B.: "Uchkun" – 2017)*

Staff costs/payroll are calculated based on the regulations approved under Government Resolution 18 of 19 January 2011 "On introduction of new remuneration conditions for employees of educational institutions" and Government Resolution 270 of 31 May 2011 "On instructions for the procedure to calculate salaries for employees of educational institutions".

During calculation of the norms for expenses on staff costs, the following indicators are used:

- The number of mandatory hours under the Basic Curriculum (as per categories of education) bearing in mind division of classes into sub-groups for learning certain subjects,
- Average actual size of classes per rural areas/urban areas
- Average hourly rate of teacher salaries for general education institutions, gymnasiums and lyceums,
- Average actual share of allowances and compensations to the basic salary of teaching staff, and
- Average actual share of payroll/staff costs for administrative, operations and support staff in net wages.

**Table 5.12 Parameters for calculating staff costs of school personnel**

*Example 1.*

	Unit	1 category	2 category	3 category
Number of mandatory hours under Basic Curriculum	Hours	148	268	98
Actual average class size	Persons	25	25	22
Average hourly rate of teachers	KGS	66.6	66.6	66.6
Actual share of allowances, compensation to the basic salary of teachers (without allowances for work in conditions of high altitude and remoteness)	%	25	25	25
Share of staff costs/payroll of administrative operations personnel in net wage	%	29.0	29.0	29.0
Share of expenses for payment of promotion/stimulating part of salary	%	10	10	10
Share of expenses for payment of temporary disability benefits, backstopping arrangement from staff costs/payroll	%	1	1	1
Salaries of entire personnel including allowances and compensation for temporary disability per month calculated per student	KGS	733	1,063	1,102
Salary per year calculated per student	KGS	8,801	12,752	13,231

Example 2.

	Unit	1 category	2 category	3 category
Number of mandatory hours under Basic Curriculum	Hours	148	283	113
Average hourly rate of teachers, 15%	KGS	66.6	76.6	76.6
Share of staff costs/payroll of administrative-operations personnel in the net wage	%	29.0	35.0	35.0

Example 3.

	Unit	1 category	2 category	3 category
Number of mandatory hours under Basic Curriculum	Hours	148	274	113
Average hourly rate of teachers, 20%	KGS	66.6	72.0	79.9

**Table 5.13 Example calculation of schools needs under other budget lines**

Name of LSG	Name of school	Standards of budgetary financing for meals of 1 <sup>st</sup> category students	Coefficient for meals in high altitude conditions	Need in meals 1 <sup>st</sup> category, thousand KGS	Standards of budgetary financing for teaching expenses			Need for teaching expense, KGS	Standards of budgetary financing for professional development	Need for professional development, KGS	Standards of budgetary financing for ongoing repairs	Need for ongoing repairs, KGS	Overall needs, KGS
					1 category	2 category	3 category						
Kunchygysh	Secondary school named after Bokonbaev	1,260	1.43	974,800	178	197	225	223,500	93	108,400	368	429,100	19,666,500

Source: *Guidelines for School Principals under the "Management and financing in school education" training programme (P 85, ISBN 978-9967-17-082-7, -B.: "Uchkun" – 2017)*

Apart from the budgetary funds, general educational institutions have the right to raise extra budgetary resources, such as voluntary contributions, donor funds, earmarked contributions (for meals/nutrition, security, etc.), and payment for provision of additional educational services.

Under Government Decree 134-p of 31 March 2016, pilot testing of the mechanism for regulating of extra budgetary funds of general education institutions is underway, according to which these institutions are allowed to open accounts in commercial banks with the share of state ownership interest for servicing of extra budgetary funds.

Oversight over the spending of extra budgetary resources is conducted by a supervisory board that does not have the status of legal entity and is created under the procedure established by the Law "On Public Supervisory Boards". General educational institutions, which are not part of this pilot project, accumulate extra budgetary funds in special treasury accounts.

## Funding of vocational education

**Table 5.14 Education expenditure in 2006**

Levels of education	Total, million KGS	Including:			
		State budget, million KGS	Share of total, %	Special funds budget, million KGS	Share of total, %
Preschool education	369,3	288,5	7,5	80,8	7,4
Secondary general education (primary, lower and upper secondary)	2617,7	2486,5	64,2	131,2	12,0
Primary professional education	333,0	294,4	7,6	38,6	3,5
Secondary professional education	189,5	133,4	3,4	56,1	5,1
Higher education	960,5	227,3	5,9	733,2	67,0
Others	495,5	441,8	11,4	53,7	5,0
<b>Total</b>	<b>4965,5</b>	<b>3871,9</b>	<b>100</b>	<b>1093,6</b>	<b>100</b>

Average budget expenditures per 1 student in preschool educational institutions comprised 6010 KGS, in secondary schools – 2229 KGS, in primary professional education – 11980 KGS, in secondary professional education – 10234 KGS and in higher education – 8530 KGS.

Budget for secondary general education was formed based on composite indicators comprised of class size, number of administrative and managerial personnel and support staff, expenditures for maintenance of buildings and other costs. Taken into the consideration its non-flexibility, schools practically did not influence the budget formation and because of that they did not have any flexibility to use it in support of education quality improvement.

The medium-term financing strategy also described the situation in the professional education levels. In 2006, all 113 vocational schools and lyceums functioning in the country were financed from the republican and local budgets.

**Table 5.15 Funding of primary vocational education network in 2006**

Budget	Number of PVEs	Budget, million KGS	Number of students	Funding per student, KGS
Total	113	294,4	24573	11980
Republican budget	74	214,4	18345	11687
Local budget	39	80,0	6228	12845

It needs to be noted that although no more than 27,000 students were enrolled overall in the primary vocational education system in 2006, the PVE capacity was estimated to accommodate about 80,000 students, leading to high infrastructure maintenance costs (for example, buildings for practical training, dormitories, etc.).

The significant current costs of infrastructure maintenance and personnel salary in vocational education schools with the capacity to accommodate 500-800 students, in practice would train only 50 to 200 people. This was true for about 30 per cent of vocational schools in the country. The rest of the schools enrolled students between 200 to 450 students per year. According to international standards, the school is effective if at least 500 students are enrolled in vocational school.

It has been challenging, for lack of funds, to renew and maintain the physical facilities and equipment so now at least 80 per cent of these schools are morally and physically outdated.



Piloting of normative financing at the level of **primary professional education** is being conducted in accordance with Government Decree 83-p of 23 March 2017 which approved the following arrangements:

- Temporary methodology for setting standards for budgetary financing of professional lyceums participating in the pilot testing of the normative financing model in 2017;
- Temporary scale of standards for budgetary financing of professional lyceums participating in the pilot testing of the model of normative financing (without utilities) in 2017;
- Temporary procedure for creating and making expenses for maintenance of professional lyceums participating in the pilot testing of the normative financing model in 2017.

Standards for budgetary financing of professional lyceums include the norms of current expenses for:

- Staff costs/salaries;
- Expenses for meals;
- Expenses for scholarships;
- Teaching expendable items;
- Expenditure for professional development of engineering teachers;
- Ongoing repairs to professional lyceums before the start of the new academic year.

Calculation of standards for budgetary financing is made within:

- Initial professional education Programmes with study periods of 10 months, two years, and three years;
- Main professions (specialties) for training of workforce, grouped around priority economic sectors.

The standards for budgetary financing of professional lyceums in relation to expendable teaching materials, includes actual expenses for purchase of teaching and expendable items for major professions (specialties) grouped around priority economic sectors.

The standards for budgetary financing of professional lyceums for rehabilitation groups and orphaned children are calculated taking into consideration specifics of staff costs/salaries of teaching staff and teachers in technical disciplines, size of classes, increased scholarship amounts and norms for nutrition/meals of students.

The norms for expenditures related to staff costs are defined based on the following indicators:

- Number of hours of general education and professional training based on standard curriculums, grouped around the economic;
- Average cost of hourly rate of teachers;
- Average actual size of groups;
- Normative number of teaching times of teacher in technical disciplines per group;
- Average wage of teacher in technical discipline;
- Average actual amount of allowances, compensations for the basic salary of teachers and teachers in technical disciplines;
- Actual share of the staff costs/payroll of administrative, operations and support staff in the net wage of the entire personnel.

The total amount of paid hours includes the number of extra-curricular hours of teachers (with coefficient of 0.5), due to the low hourly rate for extracurricular work.

**Table 5.16 Number of hours in general education professional training***per year based on the standard curriculum grouped around economic sectors*

Name of sector	10 months of study period		2 years of study period				3 years of study period					
	Hours of general education disciplines	Hours of professional training	Hours of general education disciplines		Hours of professional training		Hours of general education disciplines			Hours of professional training		
			Year 1	Year 2	Year 1	Year 2	Y1	Y2	Y3	Y1	Y2	Y3
Information technology	170	436					816	816	414	288	225	140
Textiles industry	145	415					838	804	388	203	216	217
Construction	129	577	262	100	640	218	775	778	490	248	190	280
Transport	117	565	244	142	578	322	836	780	400	269	209	275
Mining industry	138	686					840	816	364	280	208	218
Energy industry							816	816	386	241	200	262
Food industry	115	521	164	164	400	558	824	816	393	322	270	298
Others	143	444					816	816	444	264	240	419
Tourism							816	850	374	350	298	261
Agriculture	142	638	244	203	624	444	850	816	340	390	246	398
Handicraft industry	114	664	168	94	521	651						
Machine building	147	585					816	816	374	306	276	342
Printing industry	172	514										
Communications	182	451										
Energy sector	142	530										
Financial activities							850	816	340	201	243	386

The actual indicator for group size for initial professional educational institutions in training and rehabilitation groups with various study periods is used to calculate expenses for staff costs/teacher salaries.

**Table 5.17 Average actual group size by location of professional lyceum**

Indicator	Unit	Location	Study period					
			10 months	2 years		3 years		
				Y1	Y2	Y1	Y2	Y3
Average actual size of training group	Person	Urban	27	27	25	27	27	25
		Rural	25	22	20	22	22	20
Average actual size of rehabilitation group	Person	Urban	20	15	15	15	15	15
		Rural	18	13	13	13	13	13

The weighted average hourly rate for teaching work and preparatory work is used to calculate the norms for staff costs/salaries:

- Weighted average hourly rate of teacher salaries in training groups: 80.3 KGS;
- Weighted average hourly rate of teachers in rehabilitation groups: 97.0 KGS.

The following indicators are used to calculate the norms for salaries of teachers of technical specialties:

- Average monthly wage of teachers of technical specialties in training groups – 8,419 KGS;
- Average monthly wage of teachers of technical specialties in rehabilitation groups – 10,173 KGS.

Actual share of payroll/staff costs for administrative, operations and support staff is used to calculate the norms for salaries of administrative, operations and support personnel of professional lyceums that do not have campus hostels and canteen and that are located in:

- Urban areas - 35 per cent;
- Rural areas - 41 per cent.

Multiplying the coefficient for staff costs/salaries is applied in professional lyceums with campus hostels and canteens for coverage of expenses related to maintenance of additional staff (campus hostel attendant, educator, linen keeper, kitchen manager and kitchen assistant):

- Availability of campus hostel - value of coefficient is 1.04;
- Availability of canteen –value of coefficient is 1.03.

The share of allowances and compensations to basic salaries of engineering teachers is applied to calculate the norm for staff costs/payroll expenses:

- In professional lyceums located in cities, - 1.6%;
- In professional lyceums located in villages, - 28%.

The amount of these payments includes allowances and compensations for length of service as teachers, academic titles, honorary awards, and compensations for working in rural areas and for arduous and harmful working conditions.

The norm for financing of teaching supply materials is calculated per student for major professions (specialties) for training of workforce, grouped around the priority economic sectors using 2016 prices.

Teaching supply materials include:

- Expenses for purchasing teaching materials (visual aids, audio and video materials, methodological materials);
- Expenses for purchasing materials for training sessions and laboratory studies (expendable materials, reagents, instruments and tools for workshops in technical disciplines); and
- Expenses for purchasing teaching materials and manuals for libraries.

**Table 5.18 Teaching supply materials cost calculated per student, 2016**

Course area	Cost per student (KGS)		
	10 months	2 years	3 years
Construction	5,252		4,144
Textiles industry	3,545		4,096
Food industry	4,500		3,465
Information technology	3,316		1,026
Communications	3,776	-	
Transport	4,778	4,697	2,778
Others	3,319		4,552
Handicrafts	6,051	3,447	
Printing services	3,588		
Machine building	6,581		7,696
Agriculture	4,067	2,560	2,996
Tourism			5,356
Mining industry	2,076		3,986
Energy industry	1,622		3,225
Financial activities			1,005

The norm for financing expenditure for professional development of engineering teachers per student is defined by dividing actual expenses for professional development in professional lyceums participating in pilot testing of normative financing model by the total number of students.

**Table 5.19 Expenditure for professional development of engineering teachers, 2016**

Type of expenditure (per student)	Expenditure (KGS)	Quantity	Total (KGS)
Transportation	195	2	390
Daily subsistence allowance	275	10	2,750
Accommodation	275	10	2,750
Total per worker			
Number of engineering teachers who take professional development courses per year	540		
Total expenses for professional development of staff (KGS)	3,181,000		
Number of students trained in pilot professional lyceums	24,545		
Expenses on professional development of teaching engineers per student per annum (KGS)	130		

Expenditures for meals of students are defined based on the norms for expenses approved by Government Resolution 7 of 15 January 2008 "On monetary norms of nutrition in the social sphere institutions" and the average number of school days per year:

- For students of training groups - 240 days;
- For students of rehabilitation groups and orphaned children - 365 days per year.

**Table 5.20 Expenditures on meals/nutrition calculated per student (KGS, 2016 prices)**

Indicator	3 years		
	Y1	Y2	Y3
Average number of meal serving days per year	240	240	240
Norms for nutrition/meals per student per day (KGS)	30	30	30
Expenses for nutrition/meals calculated per student per year (KGS)	6,840	6,840	6,840

**Table 5.21 Expenditure on meals/nutrition per student in rehabilitation group and for orphaned children (KGS, 2016 prices)**

Indicator	Study period					
	10 months	2 years		3 years		
		Y1	Y2	Y1	Y2	Y3
Average number of meal serving days per year	365	365	365	365	365	365
Norms for nutrition/meals per student per day (KGS)	110	110	110	110	110	110
Expenses for nutrition/meals calculated per student per year (KGS)	40,150	40,150	40,150	40,150	40,150	40,150

Calculation of expenses for disbursement of scholarships for students of professional lyceums was made based on norms and rules approved by Government Resolution 261 of 27 June 2005 "On defining the

amounts of scholarships for students and pupils at public initial, secondary and higher professional education institutions of the Kyrgyz Republic”.

**Table 5.22 Costs for financing of scholarships per one student (KGS, as of 2016 prices)**

<b>Total number of students (people), including scholarship recipients (people)</b>	<b>23,251 13,342</b>
Average scholarship (KGS)	200.0
Scholarship fund (KGS)	32,020,800
Total number of student orphans/students from rehabilitation groups (people)	852
Average amount of scholarship (KGS)	624
Scholarship fund (KGS)	6,379,800
Expenses for payment of scholarship in training groups calculated per student per year (KGS)	1,377
Expenses for payment of scholarship in rehabilitation groups and orphaned children calculated per student per year (KGS)	7,488

The resources needed for ongoing repairs of professional lyceums are calculated by direct estimation of costs for purchase of major construction materials, supporting construction materials and equipment.

**Table 5.23 Expenditures on ongoing repairs in professional lyceums per student (in KGS, in 2016 prices)**

<b>Type of expenses</b>	<b>Amount (KGS)</b>
Expenditure on paint, lime carbonate	115,500
Expenditure on supporting construction materials	23,303
Expenditures on supporting equipment	2,880
<i>Total expenditure</i>	<i>141,683</i>
Estimated capacity of the buildings of lyceums (number of students)	460
Expenditures for ongoing repairs per student per annum	308

In 2016 the Government adopted Resolution 370 dated 1 July 2016 “On the procedure for financing **higher professional education institutions** in the Kyrgyz Republic” which stipulated the introduction of the normative principle of financing into the higher education system.

Given the context of financing based on the scale of state-funded educational grant, the heads of educational institutions of secondary and higher professional education have the right for independent formation and approval of staffing schedule within the cost estimates in budget and special funds upon agreement with the supervisory board.

Calculation of the scale of the state-funded educational grant is done based on the actual consolidated expenditures of higher professional educational institutions, both from budgetary funds and from funds accumulated due to provision of fee-based educational services, as per 1 student.

State-funded educational grant included the norms for current expenditures, related to the ensuring of the education process, classified as direct and indirect costs.

When calculating the amount of state-funded educational grant, the expenses for student scholarships and expenses for meals of orphan students are not considered, in accordance with the resolution of Government of the Kyrgyz Republic #7 dated 15 January 2008 on “Monetary norms of nutrition in the social sphere institutions”.

Specialties of higher professional education, confirmed by the award of such qualifications as “bachelor”, “specialist” and “master” are combined into 9 cost-wise groups of training areas (specialties) as per expenditures and priority economic sectors.

**Table 5.24 Cost groups of training areas (specialties) for expenditures and priority economic sectors**

#	Group	Specialty codes
1	Education	51/52/53/54/55
2	Construction, economics and management, ecology, tourism	52/58/60/62/75
3	Energy industry	64
4	Mining industry, transport, agriculture	61/63/65/67/73
5	Healthcare	56
6	Musical art	57
7	Culture, arts (not including musical art)	57
8	Computer technologies, telecommunications and communications	59/70/71/69/
9	Equipment, technical specialties	65/68/72/74/76

Specialty codes are established according to the resolution of Government of the Kyrgyz Republic # 496 as of 23 August 2011 on “Establishment of two-level structure of higher professional education in the Kyrgyz Republic”.

The norms for direct costs includes the expenses for the following:

- Staff costs of higher education teaching staff and other personnel of HEIs;
- Purchase of materials required for provision of educational services.

Calculation of direct costs in the amount of state-funded educational grant is based on the following:

- Actual consolidated expenses for staff costs/payroll and purchase of supplies for current needs, which are targeted for education of full-time students in bachelor's, specialist and master's programs of state-funded and fee-based programs;
- Number of students on full-time education in bachelor's, specialist and master's programs of state-funded and fee-based programs, as of the beginning of the respective academic year.

Basic level of state-funded educational grant for 2016/2017 academic year and adjustment coefficients to basic level of state-funded educational grant for groups of training areas (specialties)

(Revisions of resolution of Government of KR # 71 as of 3 February 2017; #339 as of 2 June 2017; # 404 as of 23 June 2017).

**Table 5.25 Basic level of state-funded educational grant for 2016/2017 academic year**

Name of indicator	Amount (KGS)
Basic level of state-funded educational grant	26360
Including expenses for staff costs, including deductions to Social Fund of the Kyrgyz Republic	20075

Note: expenses for staff costs on the basic level of state-funded educational grant are defined for the purposes of annual indexation of the amount of state-funded educational grant.

**Table 5.26 Adjustment coefficients to basic level of state-funded educational grant for groups of training areas (specialties)**

#	Name of groups of training areas (specialties)	Adjustment coefficient
1	Education	1,00
2	Construction, economics and management, ecology, tourism	1,00
3	Energy industry	1,15
4	Mining industry, transport, agriculture	1,10
5	Healthcare	1,50
6	Musical art	5,80
6-1	Fine arts	3,85
7	Culture, arts (not including musical art)	2,70
8	Computer technologies, telecommunications and communications	1,20
9	Equipment, technical specialties	1,30

**Table 5.27 Poverty level by level of education head of household**

Level of education	Total	Poor	Of whom extremely poor
Higher education	16.9	8.5	-
Incomplete higher	0.7	0.4	-
Secondary professional/specialized	11.2	8.5	2.7
Initial professional with obtaining secondary education	7.5	6.6	16.5
Initial professional education without obtaining secondary education	1.4	1.0	0.4
Secondary general	52.9	60.5	43.0
Main general education	3.9	6.1	13.2
Primary education	3.4	4.9	2.4
No primary education	0.8	1.0	-
Illiterate	1.2	2.4	21.7

**Table 5.28 Comparative table of major macroeconomic indicators for Eurasian Economic Community Countries, Uzbekistan and Tajikistan (2017)**

Indicators	Unit	Kyrgyzstan	Russia	Kazakhstan	Belarus	Armenia	Tajikistan	Uzbekistan
GDP	Billio n US \$	7.2	900.1*	105.4*	45.4*	9.3*	6.9	35.9*
GDP compared to previous year	%	104.5	101.5	104.0	102.4	105.1*	107.1	105.3
*GDP per capita	US \$	816.1	6,130.9	7,714.8 <sup>44</sup>	4,781.6	2,467. 7	-	0.00
Investments in fixed assets in previous year	%	106.2	104.8*	103.5	105.3	90.0*	104.3*	101*
Inflation rate (by September of previous year)	%	103.7	102.5	107.1	104.6	102.6	99.6*	102.2*
Inflation rate (annual average)	%	103.2	103.7	107.4	106.0	101.0	106.7	114.4
Average monthly wage	US \$	216	862	489.6	495.0	497.3	135.9*	370.4*
*Average pension, in US \$	US \$	72.1	279.1	146.5*	155.3	82	-	104.47
*Subsistence minimum	US \$	70.1	222.5	74.2*	103.4	107.1	-	-
External debt to GDP	%	56.6	10.0	13.0	30.9	56.6	32.7 <sup>45</sup>	-
Budget deficit of GDP	%	3.3	0.5	3.1	3.58	-	-	0.11
Budget revenue to GDP	%	30.3	26.9	25.8	29.6	105.0	-	20.93
Budget spending to GDP	%	33.6	26.3	27.5	25.5	99.1	-	20.81
**Exports by previous year	%	112.8	140.8	113.3	264.2	111.8	109.9	115.9
**Imports by previous year	%	110.2	105.9	115.7	188.8	59.1	199.7	244.5
Ranking in Doing Business	#	77	35	36	38	47	123	74

\* Data for 9 months of 2017

\*\* Data for 11 months of 2017

**Table 5.29 Employment of population by sex and level of education in 2016**

(data from Kyrgyz Integrated Household Budgets and Workforce Survey, percentages, National Statistical Committee)

	Primary, general education, illiterate	Incomplete higher education	Secondary professional education	Main general education	Initial professional education	Higher professional education	Secondary (full) general
Women	1.1	1.3	14.4	4.1	4.9	26.6	47.6
Men	1.5	1.9	7.3	7.6	9.2	17.0	55.5

<sup>44</sup> 2016

<sup>45</sup> As of 1 January 2017



## Chapter Six. Cross-Cutting Priorities

Issues in education are inter-related often through recursive linkages - hence it would be counterproductive to consider any particular issue in isolation. At the same time, it is particularly helpful – from a time-bound sector reform perspective - to prioritize on a few critical ones. While a whole range of issues – from quality of nutritious lunch in preschool to availability of appropriate machine-tools in the vocational institutions could be potentially mapped to challenges of access, quality and equity in the education sector of Kyrgyz Republic, three stand out as most pressing, with most cross-cutting implications and transformative potential. These are: System of teacher development and management, Quality assurance system, and Education information management system (EMIS).

### 6.1 Teacher Development and Management

It is widely understood that the quality of an education system is most fundamentally dependent on the quality of its teachers. This is where the education system of Kyrgyz Republic faces its biggest challenge. For a whole range of economic, political and socio-cultural factors, the system of teacher development and teacher management remains a particularly weak link in Kyrgyz education system at all levels. This in turn perpetuates a vicious cycle of poor quality of learning and outcomes for students.

The literature on teacher development and management conceptualizes a whole continuum that begins with recruitment and manifests in student learning outcomes (Figure 6.1) – all within the broader policy and regulatory framework on teachers.

**Figure 6.1 Teacher Development and Management Continuum**

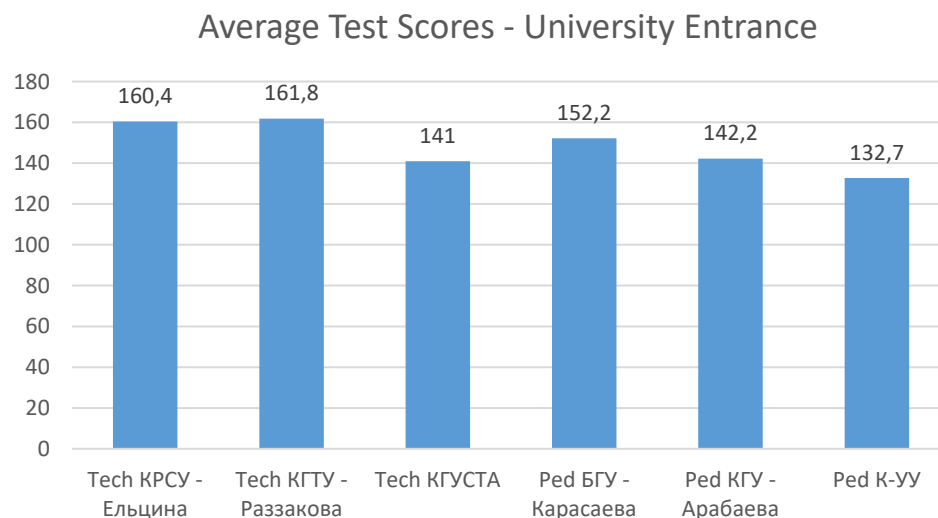


Source: "Chang, Mae Chu; Shaeffer, Sheldon; Al-Samarrai, Samer; Ragatz, Andrew B.; de Ree, Joppe; Stevenson, Ritchie. 2014. *Teacher Reform in Indonesia: The Role of Politics and Evidence in Policy Making. Directions in Development--Human Development; Washington, DC: World Bank. © World Bank.*

In a highly positive development for the country's education system, the Ministry of Education of Kyrgyz Republic has recently (in July 2017) approved a **progressive policy framework on teacher development and management** with the title: The New Teacher. The official document – whose development was supported by ADB – pays due attention to the entire continuum of the teacher development and management cycle (Figure 6.1), and duly emphasizes the manifold impact of the teaching profession across the education sector – both vertically and horizontally. Delivering on the promise of the new teacher policy would however require a careful look at reality, and designing of strategies that respond to the challenges of that reality.

When it comes to **the recruitment pipeline**, there is a legitimate concern that the country is unable to attract its best and the brightest to the teaching profession. This concern is partly validated by the university entrance scores of candidates entering a pedagogical university versus technical higher education institutions (Figure 6.2 – Source ORT, only data for three major institutions in each category are presented as illustration). (There is a further caveat – technological universities can also offer pedagogical specializations).

**Figure 6.2 Average Test Scores – University Entrance**



Undeniably, low levels of **teacher salaries**, which remain below the national average (Table 6.1) remains a serious disincentive for recruiting high quality candidates into the profession.

**Table 6.1: Average salaries by professional domain in Kyrgyzstan (Source: NSC)**

Occupation Category	2014	2015	2016
Agriculture, forestry and fishing	6044	8331	9010
Mining and quarrying	15134	20225	25265
Manufacturing	18577	19340	21162
Electricity, gas, steam and air conditioning supply	20572	23537	27094
Water supply; sewerage, waste management and remediation activities	9330	10833	11478
Construction	10007	11959	12384
Wholesale and retail trade; repair of motor vehicles and motorcycles	12361	12648	13150
Transportation and storage	16133	18143	19862
Accommodation and food service activities	8813	9553	10265
Information and communication	21862	24678	26204
Financial and insurance activities	27066	26903	30157
Real estate activities	7938	9703	10000
Professional, scientific and technical activities	15022	17582	18197
Administrative and support service activities	10246	11078	12263
Public administration	15526	16385	17297
<b>Education</b>	<b>8204</b>	<b>9233</b>	<b>10862</b>
Human health and social work activities	9244	9381	9728
Arts, entertainment and recreation	9182	9741	9042
Other service activities	9810	12178	14823
<b>Average in country</b>	<b>13214</b>	<b>14812</b>	<b>16223</b>

Successive reports on teachers in Kyrgyzstan have shown, low level of teacher compensation remains a challenge for the country, even after its ambitious salary reforms in 2011. In one of the most detailed analysis of the teacher salary reform of 2011<sup>46</sup> the authors demonstrate how the subsequent dilution and adaptation of the salary policy in practice resulted into a system that essentially tied compensation to teaching hours - meaning that the de facto take-home salary of absolute majority of teachers remained same or indeed decreased. In other words, the legacy of the Soviet “stavka” was not entirely eliminated. This continues to create all kinds of undesirable consequences, including: schools maintaining “strategic” vacancies that are subsequently allocated preferentially to teachers; teaching overload for some teachers which risks teaching-learning quality; and a ‘generational antagonism’ between older teachers and the younger ones – where the latter are seen as enjoying undue privileges as a result of the rural appointment incentives of the system<sup>47</sup>.

Ultimately, the notion that even after attaining the highest professional level one is not assured a living income after retirement, makes school teaching a less-than desired career option for youth. This macro-financial context undermines professionalization of teaching as a career in the country.

Certainly, salary and monetary incentives are important factors to strengthen the pool of candidates at recruitment, and to ensure their retention graduation. However, a resource constrained system needs to consider a wider array of possible solutions to address the recruitment pipeline challenge. Here one has to consider that the problem is not just the low levels of salary – but the overall lack of a rewarding career ladder for school teachers who choose to stay in the system. This is both a challenge and an opportunity for innovative solutions to motivate academically strong candidates to join and stay in the profession of teaching in schools (and indeed at higher levels). It is worth noting that:

*“Countries that have succeeded in making teaching an attractive profession have often done so not just through pay, but by raising the status of teaching, offering real career prospects, and giving teachers responsibility as professionals and leaders of reform. This requires teacher education that helps teachers to become innovators and researchers in education, not just deliverers of the curriculum.”*

*OECD (2011), Building a High-Quality Teaching Profession: Lessons from Around the World.*

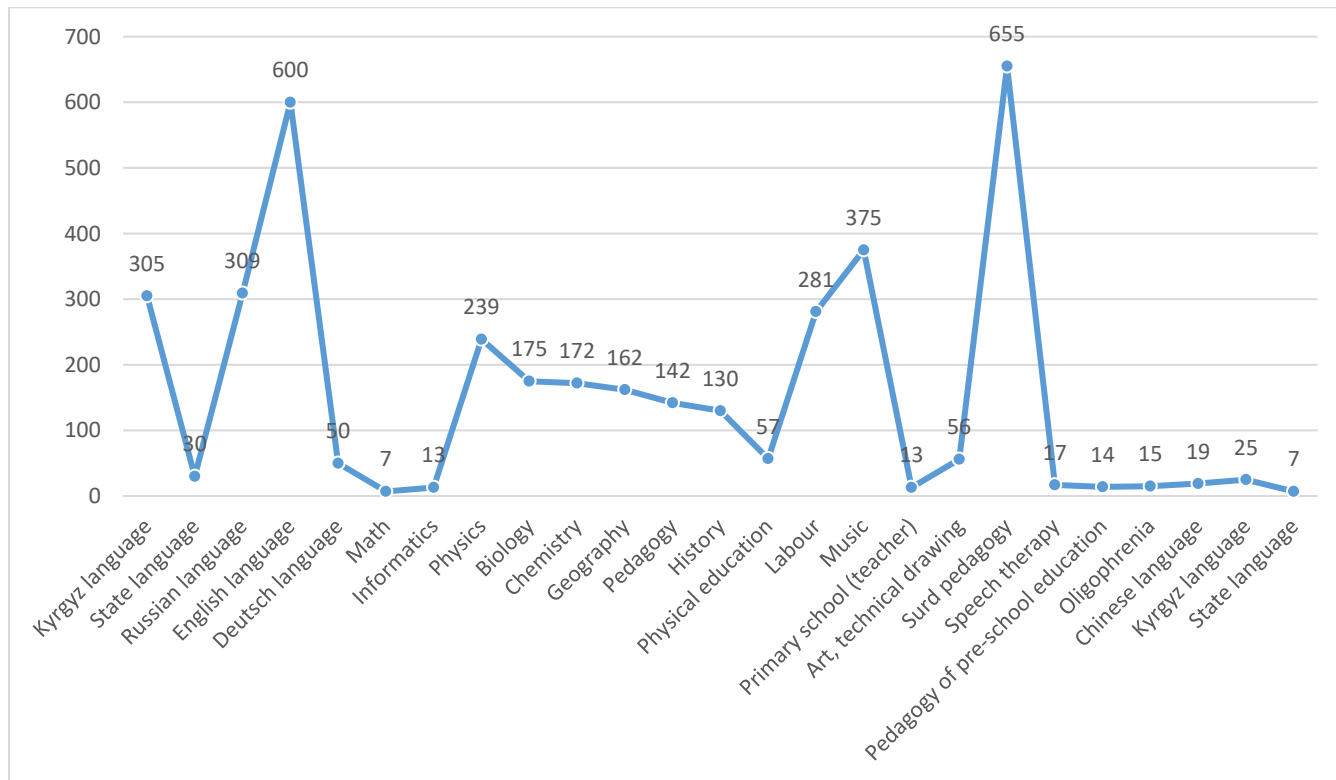
Such innovations in reimagining the teacher career ladder is more pressing today than ever in Kyrgyzstan as witnessed by the absolute low levels of teacher candidates graduating with STEM specializations over the last two years (Fig 5c, 5d, 5e and 5f) – and many provinces struggling to find enough teacher candidates in the stem fields.

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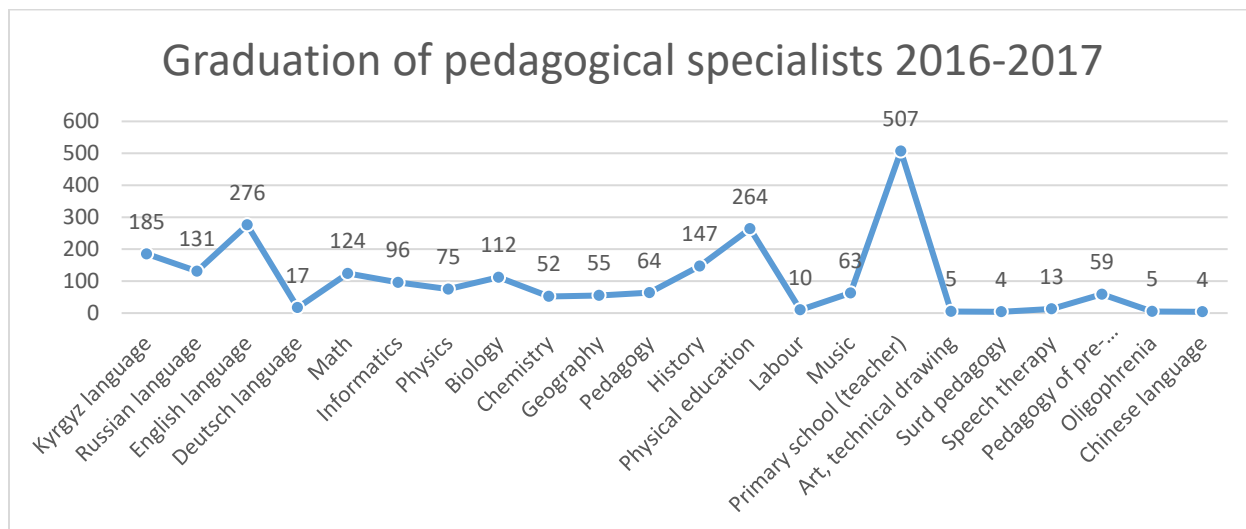
<sup>46</sup> Situation Analysis of Teachers in Kyrgyzstan: Salary, Teaching Hours and Quality of Instruction/ Gita Steiner-Khamsi, Farida Ryskulueva, Raisa Belyavina and Chynara Kumenova. UNICEF and the MOES. 2014

<sup>47</sup> Steiner-Khamsi et. al 2014

**Figure 6.3 Graduation of pedagogical specialists for 2015-2016**



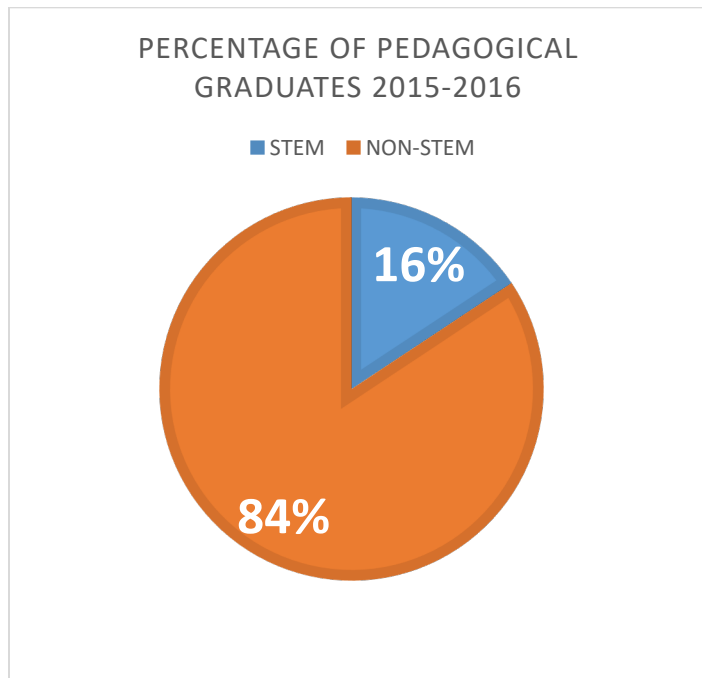
**Figure 6.4 Graduation of pedagogical specialists for 2016-2017**



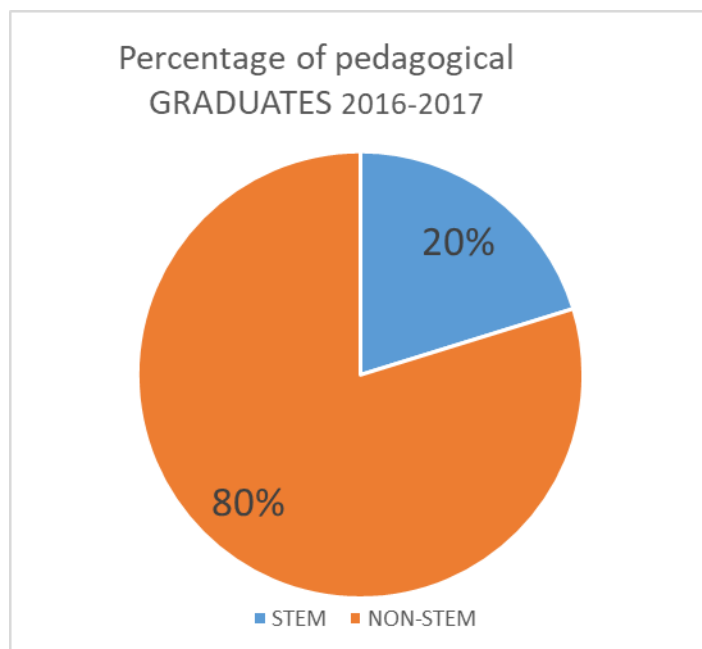
**Table 6.2: Graduation of pedagogical specialists in the country for 2016-2017 academic year***(Subject and name of the university or secondary vocational educational institution)*

№	Subjects																	TOTAL
		КНУ	КГУ	БГУ	ОшГУ	ЖАГУ	И-ГУ	КГИФАКС	К-узб. Унив	НГУ	Ош.пед. ин	БМПК пед.училищ	Нарын пед.коллед	Каракол педколл.	И-Кинд тех.	БАТГУ	ТалГУ	
1	Kyrgyz language	61	11	22	27	11	9		8	4	23					9		185
	State language		9															9
2	Russian language	19	8	11	25	14	6		7	5	25						2	122
3	English language	36	24	31	27	29	10		9	7	65					26	12	276
4	Deutsch language		3	10						4								17
7	Math	37	11		21	10	14		6	11	10						4	124
8	Informatics		14		18	16			6		23					15	4	96
9	Physics	19	13		17	11	7		8									75
10	Biology	15	7		15	5	6		13	8	29					9	5	112
11	Chemistry	17	10		12	4				9								52
12	Geography	13	12		8	7	6				9							55
13	Pedagogy			16		15				11						16	6	64
14	History	16	19		20	14	14		11	12	21					11	9	147
15	Physical education				26	31	3	146	15		21	12	10					264
16	Labour						10											10
17	Music		5		24					7	27							63
18	Primary Teacher		19		20	87	18		36		115	55	24	103	30			507
20	Art, tech. drawing		5															5
21	Surd pedagogy		4															4
22	Speech therapy		13															13
23	Pedagogy ECD		11							12	11	12		13				59
24	Oligophrenia		5															5
25	Chinese language									4								4
	<b>Total</b>	<b>233</b>	<b>203</b>	<b>90</b>	<b>261</b>	<b>254</b>	<b>103</b>	<b>146</b>	<b>119</b>	<b>66</b>	<b>367</b>	<b>105</b>	<b>46</b>	<b>103</b>	<b>43</b>	<b>90</b>	<b>42</b>	<b>2271</b>

**Figure 6.5 Percentage of pedagogical graduates in STEM / Non-STEM fields (2015-2016)**



**Figure 6.6 Percentage of pedagogical graduates in STEM / Non-STEM fields (2016-2017)**



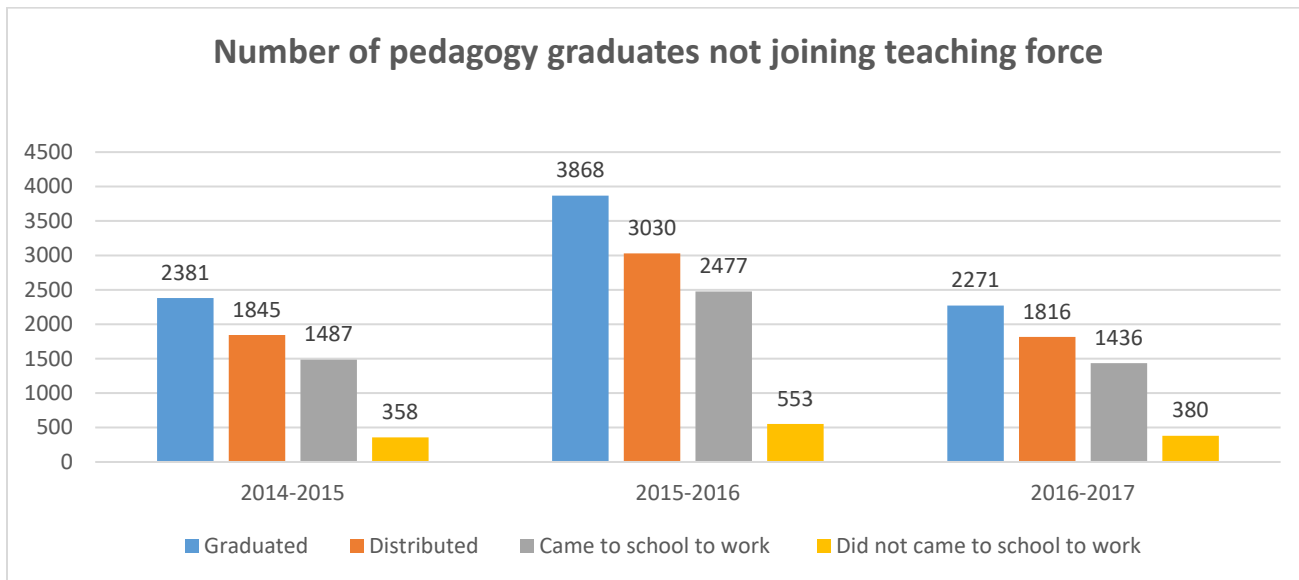
The low attractiveness of the teaching profession needs to be situated with **the ageing of the teacher workforce**. As teachers educated in the Soviet era begin to approach retirement age, it will be absolutely critical for the Kyrgyz education system to attract young college graduates into the profession in ever greater number. However the most recent data available from the pre-service teacher education colleges indicate an alarming trend – a sizeable proportion (almost a third) of graduates who are offered a teaching position,

do not show up in the school for work (Table 6.2 and Figure 6.7). For country with a lean education budget – that offers scholarships for university entrants to pursue a teaching career - this one-third leakage (presumably the ones with better academic performance) is an expensive loss of both human and financial capital. This leakage adds to the already recognized challenge of teacher shortage in the system.

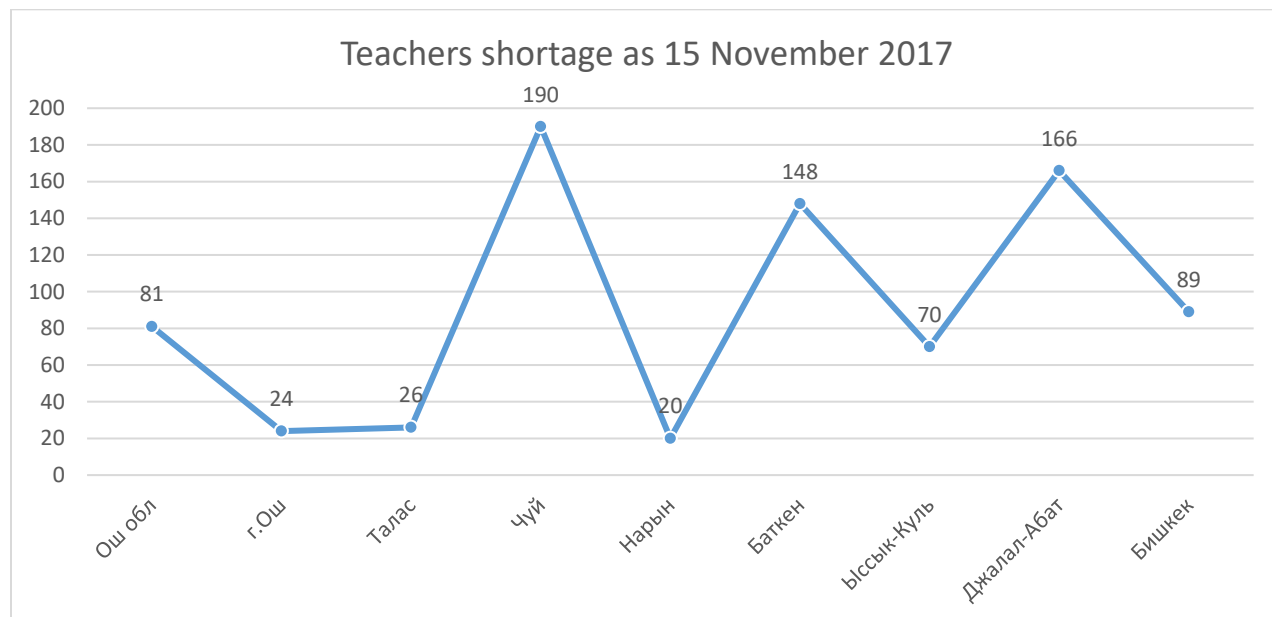
**Table 6.3 Percentage of Pedagogy Graduates that Joined Teaching**

	2014-2015	2015-2016	2016-2017
Percentage of graduates that came to school to work	62%	64%	63%

**Figure 6.5 Number of pedagogy graduates not joining teaching force last 3 years**



If one considers also the teacher shortage (Fig 5g), it is not difficult to envision a potential scenario - in not so distant future - when the country may face a widening shortfall of teacher supply in key subject areas – such as the STEM fields. This is certainly not a desirable situation for a country that aspires to be at the forefront of the digital economy with its Taza Koom initiative.

**Figure 6.6 Teachers shortage as of 15 November 2017**

Teacher shortage numbers need to be interpreted with the caveat of “strategic vacancies”. These are updated monthly as vacancies are filled up. Hence the numbers prior to the beginning of the academic year (end August) may overstate the shortage.

As Kyrgyzstan makes a concerted effort in gaining a strong foothold in the globalized digital economy, the lure of STEM graduates into professions other than teaching will only continue to grow. This in turn would create a dangerous vacuum in the STEM teaching force - with far-reaching consequences for the future of the country’s digital vision, unless the teaching profession innovates the way it recruits and retains those at the ‘top of the class’.

When one is confronted with a weak pipeline at the beginning of the teacher management cycle, it will be an almost insurmountable challenge to transform such cadres into outstanding teachers. This situation in Kyrgyzstan is in stark contrast to that of Finland – one of the highest performing countries in the international education context. In Finland and Singapore (another high achieving country), getting accepted into teacher education institutions is an academically challenging proposition, and only the very best students coming out of the school system manage to do so.

Herein lies one of the most profound challenges of the Kyrgyz education system: no amount of professional development workshops can make up for the weak academic foundation that most of the teacher candidates will struggle with coming into the teaching force in Kyrgyzstan. The cumulative result of the weak pipeline is a workforce that is by and large not professionally competent or motivated to excel and innovate in their profession. This is the de-professionalization factor that must be addressed by the government and its development partners for any meaningful positive change in the education system of the country.

Given that candidates for the teaching profession are not coming with strong academic backgrounds, it becomes absolutely essential that the system to train them is highly sophisticated and compensatory – so that even with poor initial academic foundation the trainees can learn to become effective teachers. Unfortunately, this is far from the case in the world of pre-service teacher education in Kyrgyz Republic.

Reports on Kyrgyz education system have repeatedly pointed out aspects of pre-service education that required attention and reform. As early as 2011, the OECD/World Bank study noted:

*“The course content should include a strongly applied emphasis in the treatment of the education disciplines. Students should be more encouraged to read, research and reflect on the course material, developing a more self-reliant approach.” Source: OECD. Lessons from PISA*



Similar concerns have been echoed by a 2014 UNICEF study - that too much emphasis is placed on content knowledge, at the expense of pedagogical methods and foundational education knowledge, and the notion of multi-subject teacher preparation is viewed unfavourably (UNICEF Steiner-Khamsi et. al 2014). The latter is particularly counterproductive since the same report suggest that most vacancies/teachers' shortages at school level are filled with existing teachers not teaching according to their field of specialization (UNICEF 2014)

Yet, there has been no significant effort – either on behalf of the government or on behalf of the development partners - to meaningfully transform the pre-service teacher education space. Indeed, one of the most striking aspects of donor involvement in Kyrgyz teacher education has been their near exclusive focus on in-service teacher development and almost total absence from the pre-service teacher education space. This means that the preservice preparation that could have strengthened and brought a corrective measure to the teacher education pipeline of academically weak applicants, has practically received no attention from the international actors with access to valuable knowledge and resources.

Given the macro-economic reality of low-salary levels of public school teachers, it is unlikely that the aspiring teacher candidates' pipeline will significantly improve in the foreseeable future. Consequently, significant innovations need to occur in the pre-service-induction-certification institutional space (Figure 6.1) to make the optimal use of the new teaching corps that are entering the school education system. This requires an innovative and intentional pre-service teacher education system that optimizes each candidate's relative strengths and enables him/her to add value to the system by improving student learning outcomes. Focusing on in-service training - while ignoring the pre-service space - is analogous to focusing on cure while ignoring prevention.

To transform pre-service teacher education in Kyrgyzstan, it is important to have a reliable account of how pre-service teacher education happens in various institutions across the country. Unfortunately, there has been no in-depth study of the pre-service teacher education institutions and their practices in Kyrgyz Republic to date. There is some commentary that points to the fact that most of these institutions have undergone little if any change from their Soviet times. Absent a system of quality assurance in higher education institutions (an issue discussed later in this chapter), it is unclear to what extent the curricula and the methods employed in the pre-service degree programs reflect the latest knowledge from the field of pedagogy and adult education, and /or correspond to the reality of schools in Kyrgyzstan.

While pre-service teacher education programs in institutions located in Bishkek (such as the most well-known Arabayev University) enjoy access to qualified education practitioners as potential "visiting" faculty, the same cannot be said for teacher education institutions in the regions.

Additionally, there has been no study on the teacher educators – the permanent and visiting faculty in the teacher education institutions - with regards to their professional preparation, experience, value systems and competence in preparing new teachers. Anecdotal evidence abounds about the archaic methods used by many long-serving faculty members in these programs - who themselves may have not benefitted from any professional development or upgrade in recent times.

To be fair, the revised guidelines of master's degree programs in pedagogy are well articulated – with adequate attention to different domains of teacher development: content knowledge, pedagogy, research and practice. However, absent an evaluation or quality assurance system, it is unclear to what extent the reality of pre-service teacher education correspond to those declared guidelines.

To address the core structural challenges of Kyrgyzstan's teacher development system, there is an urgent need today to carry out a study of teacher educators and teacher education institutions. Such a study should look into how the preparation of new teachers take place, including the curricular content and pedagogical methods, and the extent to which logistically complex and analytically demanding components such as practicum and research are fulfilled in accordance with stated program guidelines. Empirical evidence from such a study (or studies) should inform how to optimize the existing resources of the pre-service teacher education system in Kyrgyzstan for superior outcomes. Doing the same old and doing more of it - will not produce better results.

When it comes to the teacher development and teacher management systems, nothing exemplify 'doing the same old and doing more of it' as much as the waves of in-service professional development programs supported by the international development partners. While the development partners have allocated (and

continue to allocate) significant resources to in-service professional development over the years, there is little documented evidence of lasting impact.

It should be noted that the on-going coverage of in-service teacher training is lower than what is required by law. A functional analysis of the in-service teacher education and training space revealed only 8-9% of coverage instead of 20% as required by the law (Functional Analysis of In-service Training, ADB 2017). Funding constraints lead to this situation. Certainly, in such a context, in-service training is potentially a welcome intervention from the development partners (Table 6.4)

**Table 6.4 Coverage by In-service Teacher Training Institutes during 2015-2016**

	<b>ITTI</b>	<b>Planned for 2015-2016</b>	<b>Trained</b>
1	КАО\РИПКипПР	<b>3050</b>	<b>2935</b>
	Кафедра дошкольного и начального образования	481	656
	Кафедра естественно-научного и математического образования	468	476
	Каф. Филологического образования	910	941
	Кафедра информатики, технологии и искусства	975	691
	Каф. Педагогики, психологии и социально-гуманитарного образования	216	171
2	Ошский ОИО	<b>2898</b>	<b>3414</b>
3	Иссык-Кульский областной институт образования Дополнительно: 981– Проект USAID Читаем вместе (72 ч), 80 – Наристе (72 ч)	<b>795</b>	<b>710</b>
4	Таласский обл. метод.центр (Включая 121 – Проект USAID Читаем вместе)	<b>600</b>	<b>543</b>
5	Джалалабадский обл.метод. центр	<b>0 (нет данных)</b>	<b>750</b>
7	Баткенский обл.метод.центр (Основная часть обучена за счет проектов: Проект USAID Читаем вместе -1671 Наристе -912 ВБ Сектор поддержки образования – 437 Остальные курсы проводятся по заказу школ, учителя оплачивают услуги по ПК	<b>3137</b>	<b>3262</b>
8	Нарынский ЦПК при НГУ)	<b>800</b>	<b>723</b>
	<b>Total</b> Note: 3141 + 1061 дополнительно = 4202 – проектная деятельность	<b>11280</b>	<b>12337</b>

At the same time, ensuring effectiveness of such training is equally important. With the exception of USAID's Quality Learning Reading Project, no other large scale donor-funded in-service training has been rigorously evaluated to date (VERIFY), and even in the case of QLP QRP the results are mixed (as discussed in the Quality chapter, page 67). Hence, ambitious and expensive donor-driven projects – training thousands of teachers in cascade methods - however well-intentioned, need be to be critically and rigorously appraised prior to their approval and implementation. Ultimately, the strategy for in-service professional development needs be carefully designed with a whole-system perspective of teacher development and teacher policy.

The formation of a new national level institution of in-service teacher education – Republican Teacher Training Institute (RTTI) – is an important milestone in this regard. Interviews with the leadership of RTTI suggest that the institute is keen to develop flexible mechanisms such as modular trainings and voucher based training programs – whereby teachers can choose the content and provider of their mandatory in-service for professional development from a variety of options, some public and some private. It is important to be reminded that 72 hours of mandatory training is required for the re-certification (or attestation) of current school teachers once in every 5 years.

The idea of diversifying the pool of qualified training providers through a voucher system is bold. There is also a drive to ensure that regional teacher training institutions work more synergistically and proactively with the staff of the regional administrative bodies of education, and the schools under their jurisdiction. Among the development partners, ADB is playing a lead role in these efforts, and their recently published position paper on functional analysis of in-service teacher education is noteworthy.

While these are promising developments in the in-service teacher professional development and support arena, a few notes of caution are in the order. First, the voucher system by itself is not a panacea, and has been attempted before in the country on a much smaller scale without clear evidence of benefits. All familiar challenges of voucher implementation elsewhere – most importantly, inadequate information about possible options and their relative quality – were noted during the earlier experimentation, and will have to be dealt with in any new voucher initiative.

While RTTI and the MOES seem keen to address these issues, absent a robust quality assurance system (the topic discussed later in this chapter) – the efficacy of a voucher-based in-service program would need to be continually monitored and carefully evaluated. That in turn would require robust data and information systems (another topic of this chapter) that would enable RTTI and its regional nodes to ensure quality control, manage variable demand with adequate supply, and track progression of teachers through a meaningful and authentic (and not merely bureaucratic) re-certification / attestation process.

Beyond the pre-and in-service professional development, there is a pressing need today to address the issue of teacher career ladders. The current system does not provide any meaningful incentive for teachers to take initiatives. Nor does it have enough provisions for those who are performing at highest levels to continue to stay within the government system and not switch careers to better paid professions. Certainly, finances will play a role in defining such meaningful career ladders. But there needs to be a whole range of mechanisms – including social status and professional growth opportunities – in the mix.

Finally, there is an immediate need to develop the knowledge base of classroom instruction and in-school / in-community engagement of teachers. While there have been important contributions on the situation of teacher salary, teacher deployment, and teacher allocation strategies within the school level; there have been few (if any) empirical studies that look into what teachers actually do in their classrooms. Little if anything is systematically researched and made publicly available about the classroom instructional practices of teachers in the diverse schools and classrooms of Kyrgyzstan. Ultimately, efforts of pre and in-service teacher education would affect what happens in the classroom of a teacher. Consequently, the how teachers teach, and how that teaching translates into learning outcomes of students – the key indicator of quality of any education system – has to remain in focus on policies and programs in the sphere of teacher development and management.

## 6.2 Quality Assessment and Assurance

In a comprehensive and insightful review of education quality assessment in the country (REF EU) the authors mention at the outset:

National education policy does not provide a consistent and coherently defined view of education quality or quality assessment; this sets up problems for the practical implementation of policy and renders hard won agreements with stakeholders less meaningful.

Unfortunately, this succinct assertion is borne out in reality, as was evidenced in the earlier chapter on Quality in this report. This is not to say that quality indicators are lacking in the Kyrgyz education rather; rather the point is that there is a somewhat sporadic approach to the many dimensions of quality at each level of education – from early childhood to higher – that needs to be attended to. To be fair, the situation is far more encouraging in the school education sector, than in either ECD or TVET/HED segments.

For example, valid indicators for Early Childhood quality have been piloted in the country over the years – such as cognitive and non-cognitive development indicators (supported by UNICEF) or the Education Development Index and CLASS (supported by World Bank). However, these have not manifested into a comprehensive national system of quality assessment or child outcome registry. Thus, while the Nariste

programme is being celebrated for its universal access, information about its quality (in terms of institutional aspects, human resource and learner outcomes) is not readily available.

The learning process and outcome measures at the school education level were elaborated in the chapter on quality, and can be schematized as below:

**Table 6.5 Large-scale assessment tools used in the Kyrgyz Republic**

Type	Learner Level	Key Institution
EDI	Early childhood, Community based kindergartens(CBK)	World Bank (Offord Center)
CLASS	Early childhood programs. Codes and measures care giver-child interaction	World Bank (University of Virginia)
EGRA	Grade 2 and Grade 4	USAID (AIR)
NOODU	4 <sup>th</sup> and 8 <sup>th</sup> grades	National Testing Center (NTC)
ORT	11 <sup>th</sup> grade	CEATM

The quality assessment in terms of learning outcome in the school system has benefitted tremendously from the efforts of CEATM in the creation and implementation of the ORT –the national admission tests for universities. Yet, as was mentioned earlier, the ORT is not necessarily an assessment of what school-leavers should know based on the school curriculum, rather a measure of their capacity to succeed in higher education. Where learning assessments tied to school curriculum exist – such as NOODU (grades 4 and 8) and NTC (for various grade levels) – are only administered selectively in schools and regions of the country (and that too mostly on a voluntary basis for participants). This creates a situation where authentic measures of what children are learning in school do not become consistently available for meaningful analysis to inform policy. This fragmented reality warrants an analysis that looks into available data and studies, along with any proxy measures that could shed light on the situation of learning outcomes at school level for the country as a whole.

Section 3 of the 2014 State Standard addresses “Learning outcomes and assessment”, this is where the basic strategies of leaning achievement assessment were to be stated. However as the subject standards were only finalized and adopted in 2015 this section is not elaborated. Section 3 repeats the section from the State Standard. Competencies and learning achievements in standards for all subjects, except language subjects (see Table 4 above), still focus on content rather than outcomes. (Review of Education Quality Assessment System in the Kyrgyz Republic (EQAS): From Conceptual Framework to Quality Assurance Tools)

NOODU, NTC, ORT are part of the end of year learning assessment testing/summative assessments of students’ learning over the preceding school year/years. Since these tests happen at the end of the school year, they provide little opportunity for the classroom teachers to reflect upon and improve their own teaching with regards to the student cohort being tested. This is where formative assessment comes in. Formative assessment is typically learning assessment often done as micro assessments throughout the school year during classrooms by the discretion of the instructing teachers. Because of this nature, formative assessments are generally better in informing teachers’ ongoing instructional practice, and providing them valuable insights as to how to change and adapt the instruction to best meet their students’ diverse learning needs.

Unfortunately the issue of formative assessment is not quite consistent in Kyrgyzstan. Earlier attempts in this area have involved the formative assessment component of the rural education project the World Bank, formative assessment within the quality learning project of USAID, and the Read project. Within the framework of the Read project more than 5000 primary school teachers (60% of the total) were trained in classroom assessment. The requirement for classroom assessment were included into the state educational standard of 2014 and have become an essential part of the educational process.

These are important and encouraging developments. Yet it is fair to say that the culture of formative assessment, and the capacity to carry them out fruitfully has been limited in the KR. So far the national practice of assessment has traditionally considered assessment as a way of monitoring student learning achievements, and not as a tool to inform instructional practices: “The main aim of classroom assessment is giving grades and informing parents about student progress. Much less often does the teacher use the data obtained to adjust the teaching process or to identify individual students’ needs, form learning groups, and differentiate learning tasks; however, this is the main aim of formative assessment.” Page 54 EU

The current five-point rating scale that is used in assessment does not allow reflecting student progress as only 3 to 4 points are actually used. This also makes the assessment highly subject to teachers’ individual subjective opinions. In such a context assessment then does not fully promote improvement of learning outcomes; it is usually considered as a punishment or encouragement for the students’ performance. In this regard, tests conducted by NTC and ORT were both major improvements that in-school tests, as they eliminate the concerns of grade inflation and corruption in the system.

Part of the challenges of developing robust learning assessment measures for every grade level of school education has been the fluidity of the national curricular standards – specifically their remake into competency based standards for grade levels. For example, one limitation of NOODU is that it is not based on the newly revised curriculum standards and that the MOES lacks the funding to revise the tool, take it to scale and implement the test on a regular basis. If one adds to this the lag time of production of appropriate text books and introduction of teachers to such new teaching learning resources, it becomes apparent that creating and administering learning assessments for every grade and subject is a task of significant complexity and scale.

Demonstrably, there is a clear awareness on behalf of the Ministry of Education that a reliable national system of learning assessment has to be a priority for the education sector development in the country. The fact that almost a quarter of the national budget goes to education, makes it necessary for the MOES to demonstrate that these significant resources are producing increasingly superior results. It is a very positive development that in a recent public statement in the National Forum on Taza Koom (on December 11) the Minister of Education reiterated the commitment of her ministry to develop and support application of national learning assessments for each grade level, for all students in the country. This is a significant investment of resources and efforts, and must be supported by national and international stakeholders.

Annual learning assessments will go a long way to support the quality improvement efforts in school education of Kyrgyzstan. At the same time, quality assessment of the school education system is not only about assessing learning outcome of students at the end of an academic year or cycle. But it is – and should be – about a robust system for monitoring student growth and informing teacher practices – that are built on formative assessments in class, throughout the lessons, throughout the academic year.

The fact that learning assessment remains a subject barely taught in the pre-service teacher education programs, implies that very few teachers come into the profession adequately trained in designing and conducting both formative and summative assessments of their pupils. It is only when teachers are capable of measuring the effect of their own instruction on the learning outcomes of their pupils, can a system of education begin to respond to the learning needs of every child in the classroom. Quality instruction coupled with and informed by such classroom level formative micro assessments by teachers is the foundation of Finland’s spectacular achievements in large scale international comparative assessments such as PISA, and not the other way round.

Perhaps nowhere in the Kyrgyz education sector the issue of institutional quality is as pressing as it is for higher educational institutions (HEI) and institutions of technical vocational education and training (TVET). And given the stage of life where TVET and HED learning happens for learners, eliminating the imbalance between the competence of graduates from TVET-HED institutions, and labour market demands – remains the cornerstone of education quality assurance in these sectors.

To be sure, the notion of ensuring high quality TVET and HED provisions had always been present in the national policies and directive. However, a reliable and independent system of quality control – underpinned by industry best-practices of quality measures – are still work in progress. For example, the approach of the Kyrgyz Republic to ensuring the quality of VET is set out in a number of conceptual, strategic and regulatory documents, including (and not limited to): The National Strategy for Sustainable Development of the Kyrgyz Republic for the period of 2013-2017 (NSSD); The Program of Transition to Sustainable Development for the period 2013-2017 (PTSD); The Concept of Education Development until 2020 (CED);

The Education Development Strategy (EDS) of the Kyrgyz Republic 2012- 2020; The Law of the KR “On Education”, # 92, 30.04.2003, as amended on #84, 17.05.2015; The Law of the KR “On Initial Vocational Education and Training” # 129, 26.11.1999, as amended on # 28 10.04.2012.

The National Strategy for Sustainable Development, 2013-2017 viewed TVET as a key driver for achieving its vision of Kyrgyzstan as a “democratic country with a stable political system, dynamically developing economy, and steadily rising incomes of the population”. NSSD emphasized the need to bridge the gap between the structure of the TVET programs and the labour market demands based on national priorities and economical strategies of regions. It also stipulated the importance of assessing the qualifications of graduates, and creating centers for certification and recognition of qualifications. Further, the need to improve the quality of human resource capacity of IVET and SVET organizations, through implementation of collaborative projects with the business was acknowledged. Similarly ambitious and worthy goals are encountered with regards to HEI, such as develop university research, especially in the field of applied sciences, and introducing new technologies. Notably, fighting corruption by improving student selection mechanisms and creating trust board remains a particular focus of the Higher Education sector.

While these are all worthy declarations, they fall short of well-articulated goals with measurable indicators and clear, codified mechanisms to achieve them. For example, beyond minimum qualifications there are no other normative requirements of training for teaching in VET and HEI-s. There is no national teaching quality framework or teacher standard operational in the country. This means that a robust system of teacher evaluation – a hallmark of a strong quality assessment system of a country’s education sector – remains a distant goal for now in Kyrgyzstan. This in turn makes it particularly challenging to hold education institutions – that prepare faculty for VET / HEI accountable. While the EDS 2012- 2020 rightly points out that the two existing quality assurance mechanisms – licensure and certification – are not effective as they are not used as tools for monitoring quality and improvements, “there are no clear criteria or standards for assessing VET and HE institutions independently”.

This last issue of institutional quality assurance – and not solely learners’ performance assessment - goes to the very core of a national quality assessment system. The institutional unit – just like the learner and educator units – should also be seen in the entire continuum of sector. Thus, just like learner outcomes, one could consider “school report cards” that provide descriptive and analytical measures of how well a school educates its learners and puts them on a path of growth. There are important methodologies in the literature on comparative and international education that could be adapted and applied.

When it comes to quality of learning outcomes in VET and HEI, it should be invariably linked to the labour market success of graduates – which adds a new layer of complexity in determining quality of outcomes for learners in VET and HEI-s. With support from EU, as one of Bologna initiatives, the MOES was encouraged to develop a concept of the National Qualification System (NQS) for all educational levels, which was adopted in December 2016. The NQS is currently undergoing Government review. Should it be approved, it is expected that the NQS would improve the status of the labour migrants from the Kyrgyz Republic to the Russian Federation, who generally work in low-skilled occupations. (It has been observed that even professionally trained Kyrgyz migrants often perform unskilled labour in Russia.)

The regulatory structural aspects of a quality assurance has been strengthened in the past three years through the passage of a number of decrees and acts. These include: Law № 438 of 4.08.2014 "Regulations on the National Accreditation Board of the authorized body in the field of education"; № 670 of 29.09 2015 "Procedure for the accreditation of educational programs and institutions"; № 670 of 29.09.2015 "Procedure for the recognition of accrediting agencies in the field of education," № 470 of 4.07. 2012 “Regulations on the final state certification of graduates of secondary vocational education and training institutions of the Kyrgyz Republic”, and Law № 346 of 29.05. 2012 "Regulations on the on-going monitoring and interim assessment of students in higher educational institutions of the Kyrgyz Republic".

The two most far-reaching positive outcomes of these new policy mandates in the VET and HED fields are: a) affirmation of “independent accreditation” (as opposed to “state accreditation”) in the Law of Education No. 110 of 2014 (Article 40); and b) the establishment of a new agency - the National Accreditation Board (NAB) – to coordinate to and promote independent accreditation. Implementing these policies and strengthening the associated structures must be a priority of quality assurance in the higher and vocational education sector of Kyrgyzstan.

These are all positive developments, however moving from pilots to a comprehensive requires significant financial, intellectual and political capital. As the EU Report affirms:

The development of systems for quality assurance and the implementation of independent accreditation which includes all key elements of quality: educational results, teaching staff, educational environment will be a very significant achievement but there remains a long way to go as relatively little attention has been placed on developing comparative indicators for the VET sector and the work on international quality benchmarks is similarly underdeveloped.

In short, across all levels of education, the issue of learning measurement and quality assurance remains a systemic challenge, and hinders much of the evidence-based decision making in the education sector. The good news is that development of a national model for quality assurance, and independent accreditation of higher education institutions are squarely on the policy radar of the Ministry of Education, and more so now than ever thanks to the priorities of Taza Koom campaign.

## Chapter Seven. Strategic Choices for the Government to Improve Education

Since adopting its National Education Development Strategy for 2012 to 2020, **Kyrgyzstan has made important advances in its educational development**. Access to all levels of education, from early childhood development, has been on the rise, with pre-primary and primary education at near-universal levels. Much has also been accomplished in terms of redesigning the content of student learning, introducing competency-based standards and restructuring the mechanisms for preparing and developing professional development of teachers.

However, observers of Kyrgyzstan's education sector, both within the Government and among its development partners, will readily acknowledge that **much still needs to be done**. While the Government has taken a leadership role in formulating progressive policies and regulations, implementation on the ground has often lagged behind. Indeed, national (and some international) experts on Kyrgyzstan's education note the often un-coordinated and unsustainable interventions by development partners, which duplicate efforts and lead to inefficient use of scarce resources, financial as well as human.

Today, at the very beginning of 2018, the education system of Kyrgyzstan stands at an important juncture. The October 2017 elections have returned the ruling party to power, providing hopes of continuity in the Government's education sector policy and national development strategies for the next five years, beginning in January 2018. A new national sustainable development strategy for the years 2020 to 2040 is currently under review. Perhaps most significantly, the newly-elected Government has mobilized the country for its flagship Taza Koom initiative, a campaign for a transparent system of governance that is underpinned by a robust national strategy of digital transformation in every field of social economic and political life. These broader policy vectors imply that immediate and medium-term developments in the education sector of Kyrgyzstan must occur synergistically with the broader national campaigns and programmes underway.

The year 2018 also marks the beginning of the 24-36 month cycle in which the Ministry of Education and Science develops **a new National Education Strategy for Kyrgyzstan for the years beyond 2020** (EDS 2020+). Finally, the year 2018 marks the beginning of the last three-year cycle of implementation of the 2012-2020 Educational Development Strategy of Kyrgyzstan. An accompanying action plan for the education sector (APED 2018-2020) is expected to be in the beginning of 2018, and is ready to be implemented from the beginning of 2018. All of this means that the next 24-36 months will be a period of vigorous analysis and strategic choices as the Ministry of Education and Science develops EDS 2020+ in alignment with the emerging national development priorities, while delivering on the final leg of the current (2012-2020) Strategy through concerted efforts and actions.

In this context, this report proposes **four broad strategic objectives for the Government** – and specifically the leadership team at the Ministry of Education and Sciences - to consider as it starts a new administrative cycle, implements the 2018-2020 Action Plan for Education Development, and prepares the education sector strategy for the years beyond 2020:



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***Affirm country ownership and leadership in education reform***

***Ensure a systems approach to policy and programme initiatives***

***Focus on the implementation of policies and delivery of results***

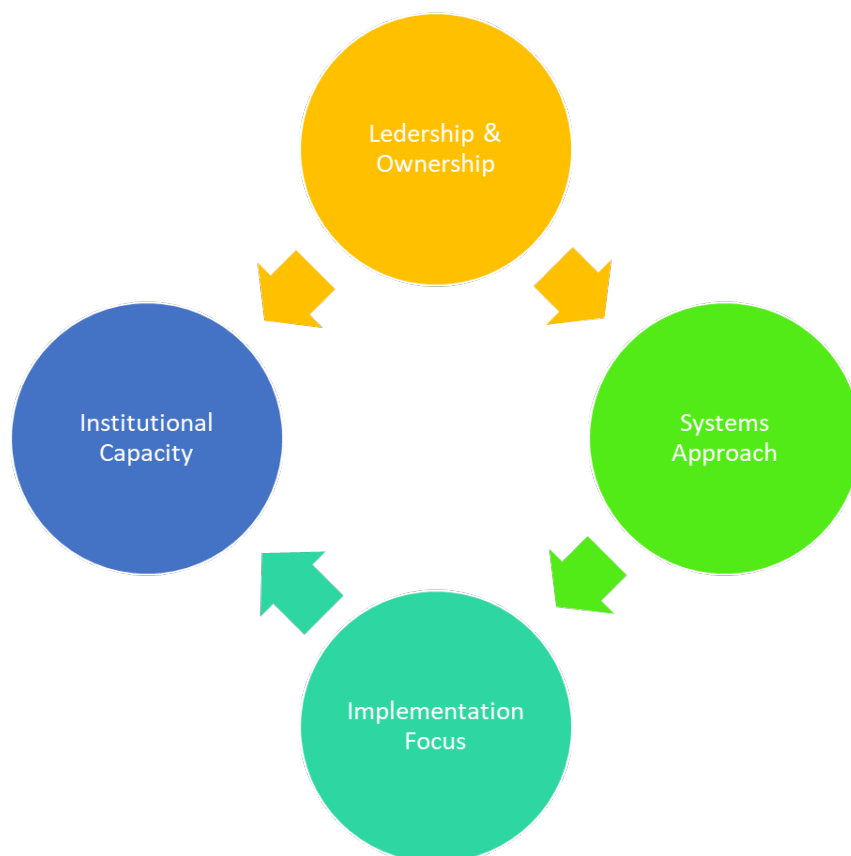
***Build sustainable institutional capacity and support innovation at all levels***

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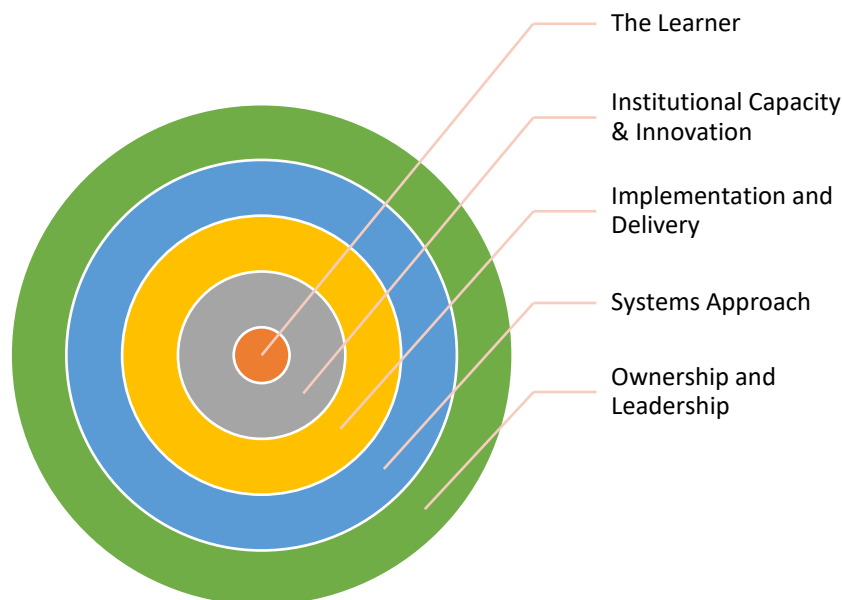
It is important to note that there is a certain level of causal interplay in these strategic objectives. Thus the efficacy of the systems approach largely depends on whether ministerial leadership and ownership of the education sector is affirmed. Similarly, a comprehensive and dynamic systems approach would enable decision makers to identify the various dependencies and potential obstacles to fidelity of education policy and programme implementation. The effectiveness of implementation would in turn depend heavily on the strength, innovativeness and capacity of the education system at every level. At the same time, there are vital recursive linkages between these strategic objectives. Thus, while adequate implementation would expectedly lead to improved capacity, the breadth and depth of existing institutional capacities will to a great extent determine the effectiveness of the implementations themselves.

Similarly, the relentless focus on implementation could highlight hitherto unattended structural aspects of the education system, leading to a much more nuanced systems perspective. In other words, these strategic objectives provide a dynamic view of the sector, with the learner and her/his cognitive and social emotional growth at the centre.

Ultimately, what is recommended here is simultaneously cognizant of what needs to happen now, and what needs to be in place for a robust new education sector strategy going forward beyond 2020. Within each strategy a number of specific mechanisms are suggested, along with a desired timeframe for realizing them. All of these are expected



and recommended to be vigorously debated within the Government and with development partners, to make adjustments as needed based on the political, economic and social parameters on the ground.



## 7.1. Affirm Country Ownership and Leadership in Education Reform

“The evidence is now overwhelming that most of the binding constraints in development are about institutions and institutional change. At the various interlocking levels of the development process in poor countries, the prevailing institutions – the formal and informal rules underpinning behaviour – undermine optimal use of the available financial and human resources.”

Booth <https://www.odi.org/publications/7376-facilitating-development-arms-length-approach-aid>

It is necessary to see institutional dynamics as central to development, and the single most important dynamic is that of country ownership in reform. For education reforms to be successful and sustainable, they have to be country-owned and country-led, as opposed to donor-driven. Despite the repeated declarations in countless international gatherings of aid agencies, country ownership of development reform remains more rhetoric than reality in much of the aid-receiving world. In Kyrgyzstan in particular, this is unfortunately also the case.

To be sure, the status quo of country ownership in the education sector of Kyrgyzstan is not a reflection of the authority or the credibility of the leadership of the Ministry of Education and Science or other government ministries and agencies.

What is more, **the fragility of the country’s voice** – its ability to articulate its priorities and hold all development partners accountable to their pledges – stems from an inherited governance system that has morphed into its current state over the years of Kyrgyzstan’s heavy reliance on foreign aid, particularly to meet the budgetary needs of the social sectors. This system offers too many informal channels for development agencies (which all in turn bring valuable resources to the sector) to influence the policy of the Ministry of Education and Science. However, the benefits of these additional resources – some of which also result into further indebtedness of Kyrgyzstan to development actors – are outweighed by the cost of a fragmented ownership ethos. Without a consolidated mechanism to affirm and exercise national leadership and authority, policies and reform agendas become supply driven, originating from donor expertise and their respective agency goals. In contrast, a strong and consolidated leadership nucleus

would articulate its own priorities and needs – thereby making the process of development partnership demand driven, with the demand emanating from the national leadership.

To be sure, there are plenty of rules when it comes to engagement between the Ministry and aid agencies / development partners. And in principle every donor agency is only implementing what the Government approves and/or requests them to perform. However, beneath the bureaucratic protocols, there is a reality of heavyweight donors having a significant voice on how specifically the country must adopt its course so as to receive their continued support.

Certainly, some level of conditionality or constraints is inevitable in any aid relationship that involves significant foreign taxpayer funds. Additionally, in the certain political economy contexts of aid-receiving states, nudges and conditionality could bring necessary discipline to policymaking and resource allocation. However, the absence of clear articulation of what country ownership must look and feel like – and how a country can gradually implement internal governance reforms to aptly own and exercise its own authority over how donor resources should best be spent, perpetuates the status quo of diffused ownership and sub-optimal aid allocation, resulting into continued underperformance of the education sector of Kyrgyzstan.

Thus, even actions that are undertaken by donor agencies to strengthen Government capacity – such as the creation of project implementation units (PIUs) within the MOES to closely support and collaborate with the Government units – defeat the purpose and become de-facto extended arms of the donor agencies within the Ministry that further undermine the latter’s authority and ownership. This issue was flagged in a Sector Review by Hugh McLean, that the PIU teams are understandably more accountable to their paymasters, the aid agencies, than to the Ministries who they are required to serve. The imbalance of salaries, benefits and working conditions between the donor-paid PIU staff and the Ministry personnel on the Government’s payroll also makes harmonization between the two a difficult proposition.

**The challenge of ownership and leadership** is ultimately a governance challenge of Kyrgyzstan’s education sector, which should be seen not only in relation to external or international development partners, but equally with regard to its internal stakeholder dynamics. This issue is revisited later in the discussion of policy implementation.

As a recent report observes, Kyrgyzstan’s education sector is multi-tiered with complex stakeholder dynamics. The MOES is the principal actor, and is responsible for all levels of education. Yet a number of key functional areas, such as the accreditation of curricula and development of textbooks, are under the purview of the Kyrgyz Academy of Education (KAE), a relatively autonomous entity.

“Such dependency also permeates in the day-to-day management of the school system, as the latter rests with the rayon (municipal) administration authorities. This administrative structure in turn affects the clarity of the financial management of the Education Sector. While the MOES has been afforded greater responsibilities for management of the sectoral budget, resources for the operations and maintenance of schools is provided through the state budget directly to the municipal administrations. Elsewhere, teachers’ salaries are paid by the Ministry, with the exception of teachers employed in the city Bishkek - who are paid by the Bishkek city administration. This diffusion of the sector budget affects the ability of the MOES to fully control the allocation and spending of its resources.”<sup>48</sup>

One plausible explanation of this governance status quo is the inertia of administrative inefficiency that stems from the Soviet system. This inertia prevents the formation of any centripetal force that might enable the Ministry to create a more robust mechanism for assuming and exercising ownership. The unfulfilled promises of the education sector will only perpetuate unless governance – and specifically the ownership of reform – is a concerted effort of all stakeholders, internal and external.

**What is critically important here is that even the issue of country ownership has been framed in/by the vocabulary of donors.** Thus there is a discussion – originating in the donor community as far back as 2003 – of donor “harmonization”.<sup>49</sup> The issue is not just harmonization of donor practices to reduce transaction costs; nor should it be defined in the narrow terms of aid management and aid effectiveness. The issue is about national ownership and leadership in defining development agendas and priorities – and not merely the harmonization of donor-defined priorities and donor-funded propositions waiting to be carried

<sup>48</sup> Action Document for Education Sector Reform Contract – Kyrgyz Republic. Annex One of the European Commission Implementing Decision ACA/2018/039-937 On the Education Sector Reform Contract

<sup>49</sup> <http://www.donors.kg/en/aid-harmonization/56-garmonizatsiya-protsedur-zakupok#.WkizYd-WY2x>

out in the country. The current mechanism of the Donor Partner Coordination Committee (DPCC) is a response to the latter, not the former.

When viewing the institutional and governance challenges in the education sector in terms of country ownership rather than just in terms of donor harmonization, one is compelled to consider a different governance mechanism. One possible way of achieving this would be to **create a single high-level strategic advisory platform to vet all policy and programme proposals** from internal and external national and international stakeholders on their technical and financial merit.

Such a platform will ensure much-needed **substantive strategic and technical coordination** between the various international actors and their counterparts in the Ministry. Existing coordination mechanisms such as the DPCC are good for high-level reporting, but do not allow for substantive methodological discussions or analytical assessments of various concurrent initiatives undertaken by international actors and the Government. While thematic “working groups” attempt to fill a void, there is a critical need to vigorously examine the potential system’s efficacy, implementation feasibility and the cost-benefit efficiency of the various policy and programme proposals across thematic domains and education levels. No single platform or entity within the Ministry is currently equipped to perform this critically important strategic function.

Indeed, the nature of the DPCC – attended by the heads of various international agencies and occasionally senior MOES officials – restricts the conversations of these occasional two-hour meetings to ‘who is doing what’ kind of coordination. What is needed however is an ongoing forum where people charged with the significant responsibilities of conceptualizing, designing and implementing policies can share and seek feedback on why and how they are undertaking those specific initiatives. In such a forum, the PIUs of various agencies inside the MOES, their respective MOES colleagues, relevant international consultants and national experts should all have opportunities to share, discuss, critique, co-develop and find avenues of collaboration. These groups rarely come together or collaborate from the inception of problem identification, through policy recommendations, programme conceptualization or programme implementation phases. By bringing together people with both expert and experiential knowledge – both policy designers and policy implementers – redundancies can be eliminated, synergies can be found, and scarce resources can be optimized. Creating such a forum would provide international and local stakeholders with greater transparency, voice, and enhanced accountability to each other. This would help the MOES move from ownership of individual policies and programmes to **ownership of the sector agenda and reform management process**. This should be done immediately – within the first half of 2018 – as the new administration starts its term.

The exact shape and operating norms of the proposed platform, as well the representation of constituencies and expertise in it, is something that the Government will ultimately decide. What is important, however, is to make sure that such a high-level structure exists for the Minister and the Deputy Ministers of Education so that they can make informed and technically sound decisions about education policy in the country. Among other issues, the proposed advisory body could consider the following guiding questions to begin with:

What kinds of institutional arrangements are necessary to ensure stronger coordination between the Ministry of Education and Science of the Kyrgyz Republic and its development partners?

What processes and mechanisms could be put in place to ensure that Government ownership begins with problem definition and priority identification, and does not solely rest in programme implementation?

What processes can be put in place so that both technical-conceptual foundations and governance implications of policy and programme propositions are widely and substantively debated and peer-reviewed before resources are committed?

Most importantly this proposed high-level national, Ministry-led platform would ensure that every policy or programme initiative that comes under its review is assessed against the three other strategic objectives laid out in this section:

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## ***Systems approach to policy and programme initiatives***

### ***Implementation of policies and delivery of results***

### ***Sustainable institutional capacity and innovation at all levels***

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It is important to note that the proposed platform would not replace the existing thematic working groups that have been set up for specific issues / themes such as Inclusive Education, or ICT in Education. What is recommended here is a platform – be it a commission (such as a Strategic Advisory Committee) or a forum within the Ministry – that is to ensure that every policy initiative receives the proper analytical review to ensure optimal use of scarce resources for the best possible education outcomes.

This report submits that ministerial ownership and leadership of the education sector is the foremost element for improving the education system in Kyrgyzstan. Success of all other elements will depend on how effective the Ministry of Education is in affirming its ownership and leadership, and how efficient development partners are in their collaborations in followership.

## **7.2. Ensure a Systems Approach to Policy and Programme Initiatives**

“In many countries, education systems suffer from two related weaknesses. First, systems are not well aligned with the overall goal of learning; other goals can detract from, and in some cases compete with, efforts to improve learning outcomes. Second, the elements of an education system are often incompatible or incoherent. ... Technical and political factors underlie these system weaknesses. Getting all parts of an education system to work together is difficult, and the agencies responsible for designing, implementing, and evaluating education policies often lack the capacity to take on this role. ... Failure to tackle these technical and political constraints can trap countries in a low-learning, low accountability, high-inequality equilibrium. When different parts of a system fail to work together, education outcomes will fall far short of what is possible.”

*World Bank, World Development Report 2018, p. 170-171.*

It is noteworthy that the words above come from the World Bank Group's latest flagship annual World Development Report (WDR) for 2018 entitled “Learning to Realize Education’s Promise”, the first ever WDR dedicated entirely to education. Affirming learning as the central goal of education, the WDR calls to: “align actors to make the whole system work for learning.” This is precisely the key message from this sector analysis: the Ministry of Education of the Kyrgyz Republic needs to exercise a vigilant systems approach to all education policy and programme initiatives.

To illuminate why it is **imperative to have a systems approach to education**, it is worth referring to the following excerpts from the final section of WDR 2018 - Box. 9.1 It’s all about (education) systems (p. 172)

### *What’s an education system?*

*An education system is a collection of “institutions, actions and processes that affect the ‘educational status’ of citizens in the short and long run.<sup>50</sup> ”Education systems are made up of a large number of actors (teachers, parents, politicians, bureaucrats, civil society organizations) interacting with each other in different institutions (schools, ministry departments) for different reasons (developing curriculums,*

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<sup>50</sup> Moore, Mark. 2015. “Creating Efficient, Effective, and Just Educational Systems through Multi-Sector Strategies of Reform.” RISE Working Paper 15/004, Research on Improving Systems of Education, Blavatnik School of Government, Oxford University, Oxford, U.K

monitoring school performance, managing teachers). All these interactions are governed by rules, beliefs, and behavioral norms that affect how actors react and adapt to changes in the system<sup>51</sup>

Why is it useful to take a systems approach?

*A systems approach takes into account the interactions between the parts of an education system. In doing so, it seeks to understand how they work together to drive system outcomes, instead of focusing on specific elements in isolation.<sup>52</sup> It can help assess whether different actors and subsystems align with education goals and shed light on the underlying drivers of system performance.... A systems approach aims to identify (these) underlying factors so that policy design can tackle the deeper causes of poor performance. A systems approach can also highlight where system elements are incoherent. For example, curriculum improvements may lead to few improvements in student learning if other parts of the system (such as assessment or teacher development) fail to adapt. A systems view can reveal how changes in one part of the system affect other subsystems and support better alignment and ultimately better outcomes.<sup>53</sup> A systems approach is also better suited to working with the complexity of education systems. The many objectives that education systems tend to pursue at the same time, coupled with the many different actors involved in pursuing these objectives, make it difficult to predict how different interventions will affect learning. A systems approach shifts the focus away from interventions designed to address specific problems, toward the broader changes required to improve learning sustainably.*

The systems approach is already a core methodology of the World Bank's efforts to help guide education reforms in its partner countries, since the launch of SABER (Systems Approach for Better Education Results) in 2011. Most of the effort to date has focused on mapping data and knowledge on policies and institutions operational in various countries. This has also been the case for Kyrgyzstan, which has already participated in at least two SABER exercises: one on Teachers and one on Early Childhood Development. This is a valuable exercise, and conducting other thematic SABERs (for example, Assessment or ICT in Education) would be highly recommended at the current juncture of education governance in Kyrgyzstan.

However, these are still one-time policy mapping and institutional landscaping exercises. The next phase of SABER is about guiding actionable policy in education, with a focus on the quality of policy implementation.<sup>54</sup> It is in this dynamic and evolving context of policy formulation and policy implementation where the systems approach is expected to make a profound impact on Kyrgyzstan's education sector. Thus, instead of a one-off mapping exercise, the true scope of a systems approach would involve using those very thematic maps and knowledge inventory to design new policies and programmes that fully take into account the interaction and dependencies within the education system across existing policies and institutions. As such a dynamic systems approach would ensure – among other things – the misalignments concerning teacher training, curricular reform, and availability of new textbooks reflecting the new curricula are addressed – increasing the overall efficiency of the policies and programmes.

The WDR 2018 provides a helpful image to capture such desired coherence among actors and initiatives

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<sup>51</sup> World Development Report 2004: Making Services Work for Poor People. Washington, DC: World Bank

<sup>52</sup> Bowman, Kimberly, John Chettleborough, Helen Jeans, Jo Rowlands, and James Whitehead. 2015. "Systems Thinking: An Introduction for Oxfam Programme Staff." Oxfam, Oxford, U.K.

<sup>53</sup> Newman, John L., Elizabeth M. King, and Husein Abdul-Hamid. 2016. "The Quality of Education Systems and Education Outcomes." Background Paper: The Learning Generation, International Commission on Financing Global Education Opportunity, New York.

<sup>54</sup> Halsey Rogers & Angela Demas. 2013. SABER Overview April 2013 - The What, Why, and How of the Systems Approach for Better Education Results. Conference Edition. World Bank



Source: WDR 2018 team.

Figure 1. Coherence and alignment toward learning. WDR 2018. P 4

The next education sector strategy for Kyrgyzstan will need to embed a systems perspective that is built upon the achievements and lessons learned since 2012.

It is worth noting that the systems approach to education was chosen as the organizing theme of the consultative seminar conceived as part of this sector analysis exercise. Led by the MOES, with funding support from UNICEF and the European Commission, the consultative seminar brought together Ministry officials, national experts, NGO representatives and international development partners to critically examine the persistent challenges faced by Kyrgyzstan's education system, and to explore a road-map for system building in certain thematic areas. The rich discussions over a day and a half did not produce a systems roadmap. They did however reveal strong agreement among participants that a systems approach has been lacking in the national education policy, and that problematizing the challenges and opportunities of Kyrgyzstan's education sector using a systems perspective has to be a guiding philosophy for the Ministry as it assumes its renewed mandate from the people for the next five years.

It must be underscored that a systems approach is deeper and broader than coordination. Coordination already pre-supposes pre-defined activities that are to be coordinated, while a systems approach would help define and situate the activities themselves within the overall contours of the education sector.

Structuring and sustaining a systems approach to education policy and programming would necessarily require rethinking of the current governance structures of education, and possibly the putting in place of new/modified structures that ensure effective policy development and programme implementation across and within various levels, as well as strong coordination between the state and its development partners.

There is evidently a conceptual overlap between "governance", defined by Kaufmann, Kraay, and Mastruzzi (2004; 2007) as the "traditions and institutions by which authority in a country is exercised for the common good"; and "system" as defined by WDR 2018. As Lewis and Petterson (2009) argue in "Governance in Education: Raising Performance", "Good governance in education requires enabling conditions: the existence of standards, information on performance, incentives for good performance, and, arguably most importantly, accountability."

All policies reside within systems of governance. Hence, understanding how specific education policies perform requires careful analysis of the broader governing arrangements that influence those policies' content and implementation. This distinction is important because the same policy might produce very different results in different governing arrangements. In such a case, a policy change would be ill advised, whereas a governance change might improve performance.

Indeed (as discussions in the September 2017 Consultative Workshop revealed) better academic outcomes in certain schools may very well be the result of governance arrangements in place at the local level – under which the school leadership and the municipal/regional leaderships have identified mechanisms to collaborate with each other.

A well-conceived systems approach will eliminate duplication and redundancy. A systems approach would also inquire about the relative merits of a policy or programme vis-à-vis alternatives, including the alternative of doing nothing. It is remarkable that in spite of the high level of policy formulation in Kyrgyzstan’s education sector in the past decade (indeed longer), it is difficult to find a well-documented cost-effectiveness or cost-benefit analysis among policy proposals. Likewise, a review of the past three Action Plans of the Education Sector (APEDs) since the launch of the Education Development strategy (EDS) 2012-2020, also reveals a multitude of programme initiatives (often by international partners) that are well-intentioned pilots, without a related cost-benefit justification against alternatives, and at times without a clear path for sustaining the benefit or ensuring its impact at the level of the system as a whole.

It is plausible that a lack of information management and communication streamlining protocols lead to a disjointed and a-systemic approach to school curriculum, teaching and learning materials, and teacher professional development – the factors most directly linked to learning outcomes. The schematic Figure below presents this disjuncture.

The misalignments above are self-evident: teacher development is out of sync with the curricular change that is underway / planned, which in turn is out of sync with the production and distribution of textbooks. Herein lies the genesis of the paradox that continues to perplex education observers of Kyrgyzstan – why there is so little improvement in spite of so much resource outlay. The misalignments above mean that while policies were enacted and projects implemented, there was no coherence to produce systemic change. High completion of planned actions, but little system efficacy.

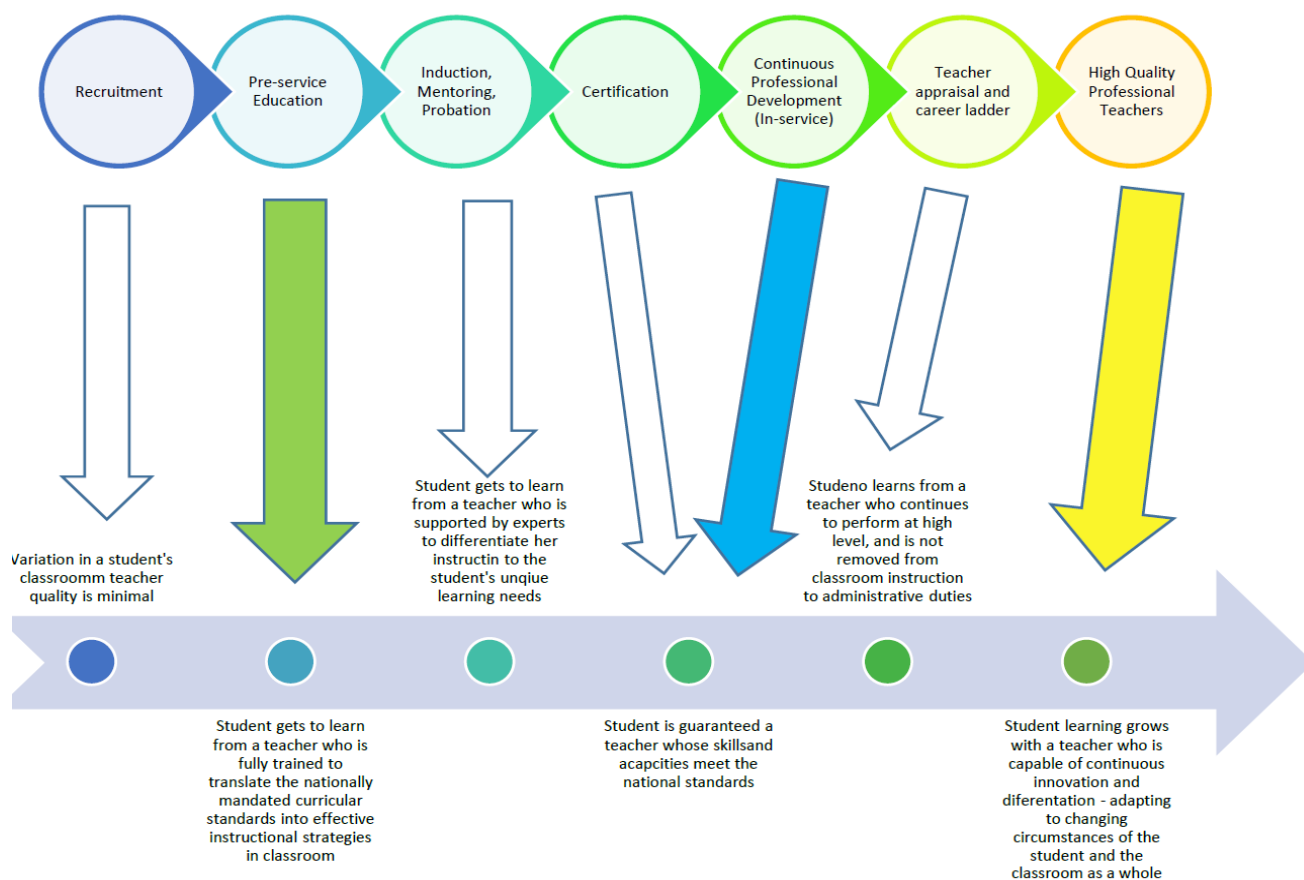
With regards to the teacher development aspect alone, a systems approach would have followed “the challenges that education systems face at different stages of teachers’ careers—ranging from when individuals seek to enter teaching to when they join a school as teaching staff and become classroom instructors” (Vegas and Gaminian, 2013). In their 2013 report of the published by the Inter-American Development Bank entitled “Theory and evidence on teacher policies in developed and developing countries” the authors observe these interdependencies:

*“The main policy issues that education systems face in managing teachers effectively are: (1) setting clear expectations for teachers; (2) attracting the best into teaching; (3) preparing teachers with useful training and experience; (4) matching teachers’ skills with students’ needs; (5) leading teachers with strong principals; (6) monitoring teaching and learning; (7) supporting teachers to improve instruction; and (8) motivating teachers to perform. While there are other ways to organize the evidence, this framework reminds us that policies such as certification requirements or evaluations are designed to achieve goals, and should thus be evaluated on the extent to which they reach them. The degree to which an education system addresses the challenges in one stage of the teacher pipeline can make it easier or harder to tackle the challenges in subsequent stages. Also, the extent to which an education system deals with these challenges for a stock of teachers at a point in time will make it easier or harder for the system to deal with challenges for the incoming flow of teachers.”*

*Vegas, Emiliana and Alejandro Gaminian. 2013. Theory and evidence on teacher policies in developed and developing countries. Inter-American Development Bank. IDB WORKING PAPER SERIES No. IDB-WP-438*

A systems approach would have explicitly linked every phase of the teacher’s life-cycle to student learning – in the spirit of WDR 2018. Schematically, this could look like displayed below:





Certainly employing a systems approach in education would require significant capacity and efforts on behalf of the Ministry at multiple levels. The national leadership, and the strategic advisory unit mentioned in the previous segment (ownership), should be well-enough informed by the Ministry's various sections / units to appraise the systems efficacy of any policy or programme under their purview. This would require resource and capacity commitments at multiple levels. Ideally, the national and subnational administrative authorities should all undergo a professional orientation about the systems approach as the guiding principle of their work at their own levels. And there needs to be transparent communications and knowledge / plans sharing between Government experts, the PIUs and their consultants / team-members, and national experts and researchers from local higher education institutions to continually deepen broaden the analytical and experiential knowledge base. This issue is revisited in the final segment on building institutional capacity.

Examining the policies and programmes from a systems perspective should begin with the Ministry seeking answers to the following questions within its leadership levels, along with its key external stakeholders:

What steps must be taken at the MOES level to ensure that the various interlinked subsystems of the education sector (such as the systems for the teaching profession, learning assessment and so forth) are continually assessed and adapted for maximizing synergy and efficiency?

What mechanisms can be put in place to ensure that the substantive resources of development partners are used for system building and capacity development – and not for unsustainable and low-impact “pilots”?

What mechanisms must be put in place to ensure that the education system as a whole functions as a learning system – continually and demonstrably improving from lessons learned and experiences gained?

What concrete steps must be taken to revitalize and sustain a real-time Education Management Information System for informed policy and programmatic actions?

As these questions suggest, ensuring a systems approach is as much a governance challenge as it is a technical-operational challenge. An important development in education governance in Kyrgyzstan recently has been the transfer<sup>55</sup> of the Secondary Vocational Education (SVET) system to the Agency for Primary and Secondary Vocational Education (APSVE), which was formerly responsible for primary vocational education (PVET) with the aim of improving “integration of the sub-systems of education, enhance consistency in their programmes of study enabling improvement of progression opportunities for students willing to move upwards, and to improve the efficiency of public TVET resources utilization.”

**A systems approach to education policy will also ensure a much more symbiotic relationship between academically oriented higher education institutions and vocationally focused TVET institutions.** While much discussion in Higher Education concerning national education policy focuses on either preparing school educators or faculty scholars for higher learning and research, the arena of vocational education remains somewhat ignored. However the dramatic influence of new ICT in all aspects of life, and the changing nature of what is “vocational” requires a more deliberate role of HEI in TVET. When it comes to TVET, understanding labour market demands and ensuring close relationships with employers are rightly seen as of paramount importance. However, while it is important to understand what employers need, it is equally important to remember that these “needs” will evolve dramatically in a volatile world. Hence the key is to ensure a link with industry for knowledge and experience transmission. Here a clue could be taken from the Charter Schools in the United States that have created their own teacher preparation institution, for their own supply of labour. Similarly, employers in Kyrgyz Republic – through collaboration between the Employer Associations and the MOES TVET agencies – could consider developing their own instructional cadres, practitioners who are also equipped with tools and methods of effective adult learning. Such instructors – better informed about the labour market and business knowledge, due to their industry experience – could qualitatively transform the VET sector. Here too HEIs can play a critical role in retooling industry practitioners into an effective TVET faculty.

The lack of a systems perspective also diminishes the many capacity development efforts that are supported by the MOES and its development partners. A systemic challenge to administering and gathering learning outcome data remains the lack of capacity improvement for carrying out such learning assessment work among educators and other stakeholders in Kyrgyzstan’s system. A noteworthy effort to improve the assessment capacity of educators and other stakeholders was the Russia Education Aid for Development (READ) project, run through the World Bank. READ was set up in 2008 to increase institutional capacity in eight developing countries (including Kyrgyzstan) to develop, carry out, and use data from student assessments. In the framework of a number of similar projects by international agencies, such as the World Bank, ADB and USAID, several learning and teaching sets were developed, and thousands of teachers were trained in student assessment. However, the training was only project-related and was not integrated into the professional and academic development system. Teachers were not provided with structured support, and the outcomes of these programmes have not been analysed. To make matters more problematic, assessment is largely absent as a subject matter in the pre-service and in-service professional development spaces for teachers and school leaders. All of these continue to maintain the status quo of fragmented, half-baked, and ad hoc teaching and learning in school education in Kyrgyzstan today.

To help advance the ongoing use of the systems approach within the various levels of the Ministry and its partners, a list of guiding questions for an initial set of thematic areas are provided in the Appendix. In addition, an instrument to assess system efficacy of specific policies and programmes – built from the GPE sectoral plan appraisal toolkit – has been presented in the Appendix.

The robustness of the systems approach would in turn help determine the soundness of implementation effectiveness. Indeed, the success of a planned implementation would depend very much on how well that plan has taken into account the various interlocking elements in the education system, and their inter-relationships with each other. The issue of implementation is discussed next.

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<sup>55</sup> Government Decree 897 “On amendments to Ministry of Education and Science Decree 119 of 20 February 2012”, of 31 December 2015

### 7.3. Focus on the Implementation of Policy and Delivery of Results

If WDR 2018 brings the notions of system-approach and system-alignment to the centre of education policy debates, then the 2004 WDR is important for **unpacking the complexity of implementation**. Titled “Making Services Work for the Poor”, WDR 2004 observed the significance of implementation in achieving systemic impact in social development, and has inspired a global network of scholars and practitioners who continue to contribute to the emerging field of “science of delivery”, a phrase increasingly referred to by World Bank President Dr. Kim.

At the same time, the issue of implementation should not be seen in isolation from a systems approach: a point made in the concluding paragraph of the previous segment. As the illustration in the previous segment on teacher development suggested, for implementation to produce the desired outcome, there has to be a systems approach to policy and programme design. In other words, every instance of implementation should have a system view embedded to be effective. The WDR 2004 articulated this point emphatically:

*“Effective solutions are likely to be mixtures of voice, choice, direct participation, and organizational command and control, with functional responsibilities distributed among central, regional, local, and school administrations. The pieces have to fit together as a system. More scope for parental choice without greater information about schooling outputs will not necessarily lead to better results. Information systems that produce data on inputs but do not change the capabilities or incentives of frontline providers cannot improve quality. Schools and teachers cannot be made more accountable for results without also receiving sufficient autonomy and resources and the opportunities to build capabilities. Conversely, schools cannot be given autonomy unless they are given clear objectives and regular assessments of progress.”*

*WDR 2004. P 113-114*

Thus, in thinking about successful implementation, MOES personnel and their counterparts in the educational institutions must also employ a systems approach. Such an approach would then pay special attention to the system-wide institutional weak links and dependencies where implementation might break down, and consider remedies to address those breakdowns.

As was briefly mentioned in the discussion on ownership, the issue of governance affects both ownership (at the top) and implementation (downstream). This is particularly so given the overlapping mandates of the various governmental entities that embody the “multi-tiered and complex stakeholder dynamics” of Kyrgyzstan’s education landscape. (One recent development in augmenting the Ministerial authority has been the establishment of the Republican Teacher Training Institute under the direct purview of the Minister of Education. Until July 2017, teacher training was also under the jurisdiction of the KAE.)

As a recent briefing of European Commission observes: “Such dependency also permeates in the day-to-day management of the school system, as the latter rests with the rayon (municipal) administration authorities. This administrative structure in turn affects the clarity of the financial management of the Education Sector. While the MOES has been afforded greater responsibilities for management of the sectoral budget, resources for the operations and maintenance of schools is provided through the state budget directly to the municipal administrations. Elsewhere, teachers’ salaries are paid by the Ministry, with the exception of teachers employed in the city Bishkek - who are paid by the Bishkek city administration. This diffusion of the sector budget affects the ability of the MOES to fully control the allocation and spending of its resources.”

As observers of Kyrgyzstan’s education system note, in the current state of affairs, introduction of a new policy is typically understood by the Government as the signing of an official decree (‘prikaz’). Even in the reports of international development partners, issuance of a decree is marked as a policy achievement; for example: new competency-based standards have been introduced for all grades (World Bank), or training manuals have been distributed to all ECD centres (UNICEF). However, it remains unsaid and unclear what such introduction or distribution entails. It is even more unclear how a decree on competency-based standards signed at the MOES travels downstream to the regions, is interpreted and communicated and acted upon, and finally changes how teachers conduct their lessons and students develop desired competencies.

The above line of argument suggests attending to two inter-linked issues for successful implementation. First, implementation and governance are closely related, with the former reflecting the latter. Second, ensuring unfailing implementation will require a clear command and control structure – also understood as accountability.

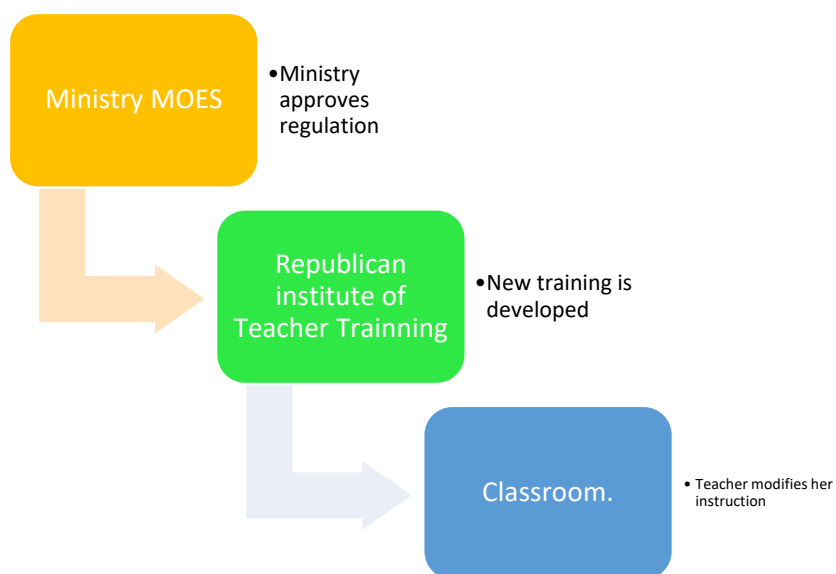
In discussing governance in education, authors Lewis and Petterson argue that “good governance in education requires enabling conditions: the existence of *standards*, *information on performance*, *incentives* for good performance, and, arguably most importantly, *accountability*.” They further elaborate: “in education, poor governance results in inefficiency in service provision, and in some cases no service at all. Lack of standards, information, incentives, and accountability can not only lead to poor provider performance but also to corruption.” However, the authors caution about the blurring line between poor governance and corruption, as it is unclear “Is poor service a function of corruption or simply of mismanagement?” Irrespective of how one studies this debate, it is clear that implementation that delivers results must go hand in hand with accountability, as was made emphatically clear in the WDR:

“What successful education systems share is a working structure of accountability: clear objectives, adequate resources, and capable and motivated providers.” WDR 2004. p114

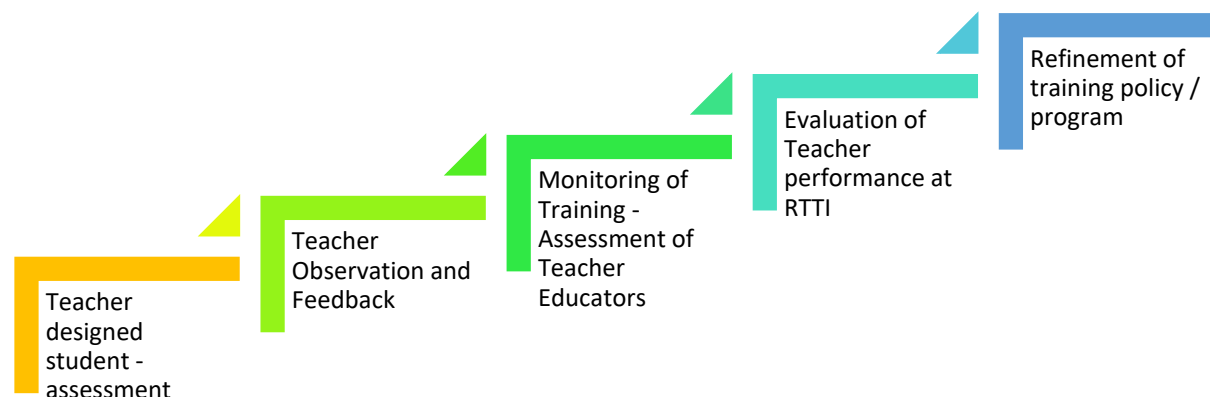
Second, assessing the effectiveness of implementation will require a robust information system that provides reliable and measurable feedback on the outcomes achieved at every level of implementation and the “results chain”. “The results chain is an explicit articulation of the causal and temporal sequences that an education system experiences in relation to some pre-defined inputs into the system”. Result chains allow potential sources of implementation problems to be identified through the implementation life cycle. These include: Interpretation Issues or Mission Drift, Organizational Mission Issues, Organizational Coordination Issues, Resource and Organizational Capacity Constraints, Timeline Issues, Political Interference Issues, Program Operator Issues, and Target Compliance Issues.

As a way of illustration, the Figures below present these two-stream dynamics - implementation path and accountability chain - for a policy about in-service teacher training.

### From Ministry to Classroom



### From Classroom to Ministry (The Feedback Loop)



In reality, these processes are far more complex given the multi-tiered governance structures and overlapping mandates of Kyrgyzstan's education system. Thus it will be crucial for the Government to articulate – and visually communicate as much as possible – these linkages and pathway.

A relentless focus on implementation will uncover all the associated ambiguities. It will ask questions such as: What are the overlaps? Hot button issues? What is the accountability mechanism? What is the feedback loop? Are there checks and balances? By asking and seeking answers to these questions as a pre-analysis of implementation dynamics, the Ministry will also invariably touch upon and attend to issues of governance.

Implementation regimes often break down when reaching out to the hardest to reach. This is the “last mile” problem. This also gives rise to equity challenges in perpetuity. Hence any roadmap of implementation must demonstrate how **vulnerability** and equity, particularly the situation of education for marginalized groups, including girls and children with disabilities, will be addressed.

**Implementation of the planning process:** Finally, one area deserving of particular attention in the implementation discussions is the process of development of plans and strategies themselves. Given the multitude of funding sources and agencies, it is important to ensure that there is a reliable and consistent process of plan and strategy development. It is imperative that while the Ministry develops its periodic plans and strategies, the plan development team works closely with the various units of the Ministry at the national and subnational levels who will be charged with implementing the plans and strategies. In other words, the policy development process should not be divorced from policy implementing units. To ensure a higher propensity of success, and to seek innovative ideas from the ground, it is necessary to have a broadly consultative process of plan development – with appropriate protocols for such consultation. An inclusive and transparent consultation – from the very beginning of the planning exercise – will strengthen the institutional capacity of the Ministry for future planning, and increase the implementation success potential of the plans and strategies.

**Optimize, Prioritize:** There will be resource constraints in Kyrgyzstan for the foreseeable future in the education sector. To do more with less, the country has to be prudent in its planning and implementation strategy. One readily understood but politically difficult strategy is to be selective in implementation – do less well, than do more poorly. In other words, while employing a systems perspective to chart its course, implementation of education programmes must be strategic to maximize the return on investments in resource-constrained environments such as Kyrgyzstan. The WDR 2004 articulated this insight using the construct of “strategic incrementalism”:

*There is no quick fix in an area as complex and extensive as schooling, only the hard slog of gradual improvement through strategic incrementalism, which links current operational actions with long-run institutional strategies and goals.*

– WDR 2004. *Making Services Work for the Poor*. Page 114

This is politically challenging because the pressures might be too much to do a little for everyone – and thereby dilute the impact altogether. The Ministry needs to champion the narrative of building “centres of excellence” within the public education system, so that the bright and motivated students are able to avail of high quality educational opportunities inside the country, thereby enabling a virtuous cycle of human capital formation and circulation in Kyrgyzstan. In this regard, the Ministry’s Innovative Schools seem to be a good idea, although efforts must be made to ensure the innovations from these schools are shared widely in the system. Similarly, the country can prioritize a certain region / oblast or district to bring together a multitude of proven initiatives and innovations to demonstrate how “success” happens, or what “good education” looks like for pupils in the public system. This could be particularly useful strategy if the country is considering participation in PISA 2019, which this analysis considers a premature and expensive exercise. Instead of expending significant resources on PISA, the country would be better served by using those resources to create a robust information management system or comprehensive suite of assessment tools for various levels of education. Regardless of whether Kyrgyzstan participates in PISA 2019, employing resources in fewer priorities adequately will be a much more welcome strategy than the prevalent mode of spreading too thin, and achieving little in the end. There has to be a critical mass of success before there can be a momentum for change. Consequently, the metaphor for Kyrgyzstan should be “Shanghai first, Singapore next”.

Delivering results through a relentless focus on implementation is - in the words of two foremost systems-implementation thought leaders - “systems action that is strategic, powerful and pursued in practice.”<sup>56</sup> One of these thought leaders – Sir Michael Barber – has been a strong advocate of “deliverology”: an approach to managing and monitoring the implementation of activities that have significant impacts on outcomes.

In “How to Deliver Improved Outcomes for School Systems”, Michael Barber makes the strong case for “delivery” (or deliverology – as he coins the terms) – ‘effective sustained implementation’ (p.4). Barber’s key mechanism for achieving or delivering results is the setting up of a “Delivery Unit” within the Ministry of Education that would set the priorities and targets, and then work intensely to monitor progress and support the implementation so that targets are met. At the same time, Barber echoes the point made earlier about embedding implementation in a systems perspective: “...success is about much more than a unit. While an effective delivery unit can undoubtedly play a major part, more important is a sustained, thought-through systematic approach to getting things done” (p.5).

The report goes on to describe the possible strategies a Delivery Unit might adopt to ensure that delivery actually happens, and could be a useful point of departure for the leadership of the Ministry to consider (and some are already under consideration – such as vouchers / contracting out of in-service teacher training, or devolution and transparency within per-capita funding, or as considered within the context of ECD decentralization, and such)

Seen as a mandate of the highest level of leadership within the MoES, the Delivery process is marked by the following key steps as set out by Barber:

Deciding on priorities, deciding on level of ambition, setting a small number of well-designed targets (such as improved performance in literacy), setting benchmarks for those targets, checking for perverse or unintended consequences (not just once, but periodically), consulting with stakeholders without conceding on ambitions, crafting a compelling narrative (of why the Ministry wants to focus on these targets and benchmarks)

The organization of the delivery process would begin with a Delivery Capacity Review that would be expected to show both areas of strength and opportunities for growth. Significantly, building system capacity all the time is considered the lever for creating irreversibility of the improved outcomes that are expected to be delivered. Irreversibility is understood as “seeing the change through so it will stay changed”. In other words, building institutional capacity throughout the system – discussed in the next segment – is the long term guarantor of implementation success.

As the recommendations from Barber and colleagues underscore, reliable and timely information about progress (or lack of it) is absolutely crucial for managing implementation and delivering results. In *Designing Systems for Delivering Results* Barber argues: “This implies setting clear and ambitious targets that are measurable for each district and then putting in place a system that allows monitoring progress in real-time.” Data should be level – this would give a clear timely picture to leaders at the district level to take

<sup>56</sup> Barber, Michael and Michael Fullan. 2004. *Tri-Level Development: It’s the System*. Position Paper

immediate corrective actions to resolve issues and improve results. This reinforces the case for a robust EMIS to be urgently operational in the MOES.

Conceiving and depicting a robust delivery chain, assigning key performance indicators assigned to relevant stakeholders, and adopting '3-feet' implementation programmes – not the 30,000 feet or high level perspective, but focus on reality close to the ground – are some of the specific options a Delivery Unit could consider. All of this would be reliant on data – and constructing a data trajectory (the line from where the data / metric is now to where it should go based on targets set out with the policy aspirations).

Routines have to be established to review progress and ensure a constant focus on implementation “Reviewing progress constantly with a relentless focus on implementation require putting in place processes and routines that pass through all levels of the system. In each conversation officials at all levels of the system would be asked whether they are on track to meet their goal and how to respond when they are not. A combination of pressure and support would underpin a system of “sharp accountability” where clear ownership and responsibilities are mapped for every target every indicator and every goal.”

The preceding reinforces the fact that success of implementation will depend on availability and quality of information and data about the inputs, processes and outcomes. In other words, building a robust EMIS should be a concurrent priority underlying all implementation and delivery initiatives.

## 7.4. Build Sustainable Institutional Capacity and Support Innovation

Observers of international development note that much of the reason reform agendas do not deliver as planned is because of weak institutional capacity on behalf of the partner state. Consequently, building institutional capacity at all levels should be an absolute priority of the education policy agenda of the Ministry and its partners.

This report makes the distinction between two levels of capacity – capacity at the top – in the central / national leadership circle, and capacity downstream – within and across the many functional units of the MOES.

When it comes to the capacity at the top, there is a highly qualified and capable group of people leading efforts within the Government. The leadership is advised by a small group of national experts who bring an enviable mix of talents, experience and expertise. The advantage of being a relatively small country is that over the years a relatively stable circle of outstanding professionals has been formed who often move between government roles, academia and international donor-funded assignments. All of this means that at the highest levels of the Ministry – and its advisory circles – there is no shortage of competence or experience to assume leadership and affirm ownership of national agendas and priorities. What is required, however, are the institutional governance mechanisms that would enable the Ministry to act as the rule-definer and agenda-setter with international development partners: partners who bring their preferred initiatives and funding attached with such initiatives to the policy formulation process.

The literature on organizational management and international development points to the importance of capacity of administrators at the agency and subnational levels downstream to implement, monitor and deliver results for policies articulated at the top. This downstream functional capacity, starting with units and agencies within the central Ministry and going to regional and local levels, remains uneven, and to some extent beholden on the legacies of the Soviet system. The staff in the Ministry, as well as civil society actors, are candid about the obscure laws and regulations that often restrict the flexibility and responsiveness of action, in turn diminishing the chances of stakeholders to take initiatives and explore innovations. Even when laws may be enabling, the mental schemas of the Soviet system hold back many (educated and socialized in that system where only instructions from the top gave one authority to act) from taking initiatives and attempting experimentation to resolve challenging situations. This is not to say that the system is lacking bold, creative leaders at ground level – in schools, districts or regional administrative education offices. The point is that the overall culture of management and organization is still biased towards a top-down administrative view of the world.

To both address the existing inertia in downstream capacity, and harness the creativity and initiatives of entrepreneurial stakeholders at local levels, the Ministry needs to take deliberate action that leads to sustainable impacts on both fronts. This is where the role of Kyrgyzstan's higher education institutions (HEIs) becomes critically important. By supporting robust engagement and partnership mechanisms with the country's HEIs, the Ministry (and its international development partners) can ensure on one hand that capacity building and professional re-tooling of staff takes place on an on-going basis – as a professional service of the HEIs for the Ministry. On the other hand, HEIs would be well equipped to research, document and disseminate the innovations and initiatives on the ground as part of their own academic and outreach activities.

Indeed, beyond the issue of administrative capacity, the lack of sustained capacity to generate evidence and knowledge about policies and programmes remains a serious impediment to improving the education sector. As observed by Barber:

*In most settings there are few evaluations of new interventions, and so no effective innovation and improvement in the productivity of services. Evaluating innovative service arrangements—such as new forms of accountability—is rarer still. If systems don't build in ways of learning about how to do things better, it should be no surprise when they stagnate. Relying on research from other countries, while useful, is not enough. Finding out how a particular intervention works in each country setting is crucial, since history, politics, and institutions determine what works, what doesn't, and why.*

<https://www.cfr.org/blog/emerging-voices-sir-michael-barber-improving-education-pakistan>



In this regard, Kyrgyzstan's higher education institutions can be also leveraged to build the knowledge base necessary for evidence-based policy, as they are uniquely positioned in society to generate and support such knowledge creation endeavours through their core mission with faculty and students. Therefore, the Government and its development partners need to make deliberate efforts to actively engage the HEIs.

It is truly a missed opportunity when international development partners engage highly expensive research teams from universities in the global north, when resources could be utilized to build long-term sustainable research capacity in universities at home. This is even more ironic because very often the imported fly-in fly-out researchers rely on the expertise and experiential knowledge of scholars working in local universities and research centres. This is an artificial dependence that has little meaning in today's interconnected world, as scholars and researchers in Kyrgyzstan's universities can reach out to and collaborate with preferred partners anywhere in the world. In other words, the tradition of contracting out large chunks of research and policy making responsibilities to foreign universities should be reversed. Instead international research collaboration should be encouraged and incentivized for local higher education institutions – so that they too can raise their game and perform the vital social research needed to move Kyrgyzstan's education sector forward.

At the same time, it is important to acknowledge in the context of capacity building for the education sector, that HEIs are as much part of the problem as they are part of the solution. Most local universities are cesspools of corruption and are unable to provide students with the skills they need for the 21<sup>st</sup> century. As critical observers of Kyrgyz higher education and labour market outcomes have observed, the higher education system is awfully behind the learning curve when it comes to preparing young graduates for the workforce of tomorrow.<sup>57</sup> In a world where rapid change in technology will continually increase the knowledge premium in any profession, and where many careers may be replaced altogether by machines, the higher education system must move away from narrowly specified vocational skills, and embrace flexibility and critical thinking skills. In the words of the President of American University of Central Asia: "It is easier to teach people stuff than it is to teach them to think. This is particularly true now when ubiquitous technology allows for easy information retrieval but does little to help anyone process, filter, and work with that information."<sup>58</sup>

Consequently, starting a network of relatively few well-regarded HEIs, especially those that have benefitted from international collaborations through the EU-supported Erasmus+ and TEMPUS initiatives, could be a good start. This has to be a symbiotic relationship: the more the Ministry and development partners help HEIs to strengthen their capacities, the more those institutions could become the bedrock of sustainable capacity for the functioning of the education system at all levels. In other words, the task of building national capacity fits organically with the mission and scope of Kyrgyzstan's HEIs, and should be explored as a priority – and not as an afterthought – by the Ministry at the national and subnational levels.

**Research of and for Practice:** The need for research-informed policy is urgent in Kyrgyzstan today. For example, the data presented in this report (courtesy of the NSC and the MOES) reveals certain noticeable in-equity patterns when it comes to school enrolment, learning outcomes or and self-selection of candidates aspiring to become teachers. However, there are few studies to draw on to explain why such patterns and variations exist. Without addressing this knowledge gap through on-going research and evaluation efforts, it would be impossible for the Ministry and its development partners to make informed policy decisions using secondary data alone. For example, there is a need to carry out school-level studies in urban and rural schools, using different languages of instruction. What are the reasons for regional disparities in results, particularly for differences in results between urban and rural schools? How does the language of instruction influence the quality of education? Similarly, the research of Valkova and colleagues aptly demonstrated that the quality of learning is uneven in the early childhood space. However, to understand how exactly sub-par quality manifests itself, and more importantly how to remedy that situation, the Ministry needs to have multiple studies of what happens in specific ECD contexts: community-based, school-based, and centre-based among others. The qualifier multiple is key in the previous sentence. There has to be a culture and practice of doing research, and using research findings to inform knowledge. And realistic hope of achieving that goal would depend on how well the Ministry has enabled and engaged the country's HEIs to carry out such work through their faculties and students.

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<sup>57</sup> Aziz presentation Taza Koom

<sup>58</sup> Andrew Wachtel

One such study should occur as soon as possible, before significant resources are committed to teacher education efforts: a study on teacher trainers. The Rationale and Methods for Study of Teacher Educators are presented in the Appendix.

In short, researching about, and learning from practice at the classroom and learner level will need to become the bedrock for making any policy decisions for the country's education. A research focus on actual "practice", as opposed to purely philosophical exploration of education issues, is what Bryk has suggested should be the centrepiece of the new generation of education scholarship. Not only would the new focus generate greater understanding of how implementation occurs in general, but it would also enable the Ministry to uncover "positive deviant" cases of homegrown innovation.

The Rationale and Methods for Study of positive deviant government schools are outlined in the Appendix. Supporting innovation through continuous learning and experimentation at all levels, and embracing it when it occurs – should be a hallmark of the Government's administration of education.

**Evaluation:** Robust engagement of HEIs in the education sector knowledge development process has the potential to qualitatively transform the state of evaluation research – and hence the evidence base – for policy and practice of education in the Kyrgyz Republic. To any careful observer of education literature in / about Kyrgyzstan – it is evident that there is a dearth of rigorous research and policy / programme evaluation. While the actual volume of the literature is significant, most is programme reports by development partners that describe country context, supported activities and outcome, without undertaking a research or a study that examines the underlying causes or correlates the outcomes.

Certainly there are exceptions, and the analytical reports by CEATM are a prime example of that. But even for the large-scale donor driven programmes, there is only a handful of research studies. What is more concerning is that among this handful, almost all of the highly-expensive research is outsourced to foreign universities or consultants associated with them. Certainly, collaboration with international scholars is an enriching professional endeavour, but it should be a collaboration and not an outsourcing model, especially when there are highly qualified professionals in the country's own higher education institutions. Supporting this latter group and their institutions will in turn create the much needed "country capacity" that donors and development scholars consistently argue to be the single most important enabler for development success.

The most rigorous study to date on early learning outcomes comes from the USAID-funded Quality Reading Project. The scale of the USAID Quality Reading Project – which provided training to 60 per cent of the primary-grade teachers across the Kyrgyz Republic for three years – was considerable. The Project worked in 1,350 schools (60 per cent of schools in the country) and its main activity was in-service training (IST) for a total of 10,666 teachers, supplemented with ongoing mentoring in the classroom. The USAID Quality Reading Project also supplied reading materials in Kyrgyz and Russian languages to schools and libraries, and organized out-of-school reading activities for children.

Besides the teachers, who were the direct beneficiaries, USAID worked at policy level to promote ownership and sustainability. For instance, project staff worked closely with government institutions to develop competency-based reading and writing standards, and worked with the National Testing Centre of the Ministry to use assessment data for decision making. While the evaluation results cast a shadow on the efficacy of the intervention at improving the literacy outcomes of 4<sup>th</sup> graders, it is indeed plausible that there will be lasting benefits from the allied capacity building activities long after the actual IST is over.

While it is commendable that USAID allocated substantive resources to undertake a meticulously planned evaluation and make its results publicly available, the entity tasked with this work was AIR – a Washington DC-based consulting firm. If the project wants to continue its implementation (as is happening now in the Reading Together project) with the benefit of ongoing, on-demand and customized research and evaluation support, it would have benefitted far more by having invested in the capacity of local HEIs in Kyrgyzstan's education eco-system.

Indeed, this situation is not unique to USAID. A similar approach is seen in EDI – World Bank, or University of Virginia CLASS, or ADB's continued reliance on a single senior faculty from Teachers College, Columbia University. This is not to undermine the scholarship of the foreign faculty. But the way the research and evaluation activities are structured invariably puts local institutions in a subservient position: tasked to carry out activities planned by international experts. This should be the other way around, with local institutions leading the effort and bringing in international capacity as they deem necessary. This way the enhanced technical knowledge stays and grows in-house, as the institutions become savvier in managing such

complex research-practice interfaces. The latter is a marketable critical resource in a globalized knowledge economy, and enshrined in the rules of the WTO.

It is also remarkable how little relative cost-benefit analysis takes place in making education policy in Kyrgyzstan. While one could draft the world's most elegantly formulated policies and standards, it is the costs and benefits manifest in implementation that matter most in the end. Institutional capacity in HEIs and a network of HEIs could also significantly boost the Ministry's capacity to undertake independent cost-benefit analysis of donor-proposed projects and policies.

In the foreseeable future, most of the funding for such knowledge and evidence generation activity will be coming from international development partners. This is the reality of Kyrgyzstan, as the country overcomes the financial constraints of delivering direct services in education at all levels. Therefore the Ministry should be affirming its leadership about how donor resources for conducting research and building evidence are allocated; and the development partners should be intentional about building institutional structures for research and knowledge in-country. Taking a cue from how China negotiated entry of multinational corporations from the United States and Europe into its market opening in the early 1990s – by insisting on FDI and joint-venture manufacturing firms with sharing of technology know-how, Kyrgyzstan's Government and its international development partners could invest in existing HEIs to enhance sustainable capacity for knowledge production for all aspects of the education sector – from impact evaluation of ECD to labour market outcomes of higher education graduates, from social-psychology of teacher motivation to political economy of corruption in education, from optimal use of web-video technology for teacher mentoring to management studies modules for school leaders and education administrators at sub-national levels.

Besides research capacity, the HEIs should also be supported to develop their training capacity for the various efforts of the MOES. Indeed, a striking aspect of the donor-driven projects in Kyrgyzstan is their significant scale of training – often aiming for 50 per cent or more of the target group. As this report is being drafted, ADB is undertaking training of 1,000 government school principals (slightly less than half the total number), USAID is doing a second round of in-service teacher training of the 40 per cent of the teaching force that were not covered in its first wave (Quality Reading Project), and ADB is rolling out another in-service training for teacher in higher grades for 10,000 teachers. These are large numbers for a small country – and they certainly speak to the commitment of bilateral donors and multilateral development organizations to Kyrgyzstan's education system. However, given the waves of large-scale donor-driven projects that have failed to produce sustainable improvements, this analysis strongly recommends investments in institutional capacity by strengthening existing institutions of the country.

Thus, instead of creating a separate training enterprise for 10,000 teachers – with short-term international and national consultants – strengthen the teacher training faculties in existing higher education institutions and their linkages with relevant government entities (such as Republican Teacher Training Institute) would be a far more desirable option. Instead of training 1,000 principals in rushed one-size-fits-all training by international consulting firms (who in-turn scramble to put together a team of national consultants to actually deliver the training); it would be a far more effective to strengthen an existing higher education institution that can carry on such training on an ongoing basis, with adequate attention paid to needs-analysis and post-training follow-up to maximize the benefit of the training for school principals. Not only are these sound strategies for developing sustainable capacity, but they are also prudent use of taxpayer money from the donor countries.

A distinction needs to be made here between local faculty engaged as consultants to international donor projects, and local institutions being engaged. The former is a widely practiced model, and indeed is detrimental to local higher education system capacity. As the faculty members' time is far better compensated in international project consultancy, they may have less incentive to focus on their institutional commitment to teaching, research and student advising, and allocate more time and effort to donor projects – which are unlikely to be sustainable in the first place. When higher education institutions are engaged, then the knowledge exercise becomes part of the higher education institution's fabric, with multiple faculty and their students getting exposure to international research collaboration and supplemental income opportunities. This in turn creates a deeper knowledge pool and new knowledge avenues – perhaps a new research methodology would find its way in the subsequent course offering, perhaps a new media initiative can get started at the university as part of a donor project as so on. Perhaps more important, by creating the avenues for engaging young college and university students, such projects manifold increase the creative energy and innovation potential in the domain of work in focus.

With support from the Ministry and its development partners, the higher education institutions can truly become knowledge hubs for all aspect of education sector policy and practice. Indeed, much like in the OECD countries, certain networks of HEIs might specialize in certain aspects of education policy, thereby making the entire ecosystem far more cost-efficient and yet diversified. Such HEI-based / HEI-allied knowledge hubs or research centres could be at the forefront of education research and research-informed policy making in Kyrgyzstan.

Once a critical mass of such efforts are supported and nurtured within the local environment, the entire education ecosystem will begin to operate with much more creativity, productivity and flexibility. Innovations in education – the much-desired ingredient for dramatic improvements in the system – will only begin to appear once a threshold of capacity is achieved within the country’s education system.

Building sustainable institutional capacity will also require engaging the private sector in education. Kyrgyzstan’s Government – and the MOES in particular – have been open to working with the private sector in various PPP arrangements. Conducting a SABER exercise on PPP – with local HEIs leading that effort – would be a timely endeavour as the country launches its Taza Koom campaign. One encouraging trend in private sector engagement has been the active role of employer associations in the TVET sector. Going forward, a more robust engagement strategy for the MOES should be to not only consider the private sector as a funding partner (i.e. supporting government initiatives with private capital), but also as a knowledge partner: bringing cutting edge industry knowledge and practices to bear upon the functional and intellectual aspects of the work of the MOES.

Innovation should also entail engaging youth energy, creativity and dynamism in finding new solutions to educational challenges. Today worldwide, innovation in education is largely driven by harnessing the potential of information and communication technology. This is one area where youth have a tremendous advantage over the older generation, as the most recent State of the World’s Children Report demonstrate. This makes the current Taza Koom initiative of Kyrgyzstan’s government a unique entry point for building the high-impact institutional capacity building bridge. As the IT ecosystem matures in Kyrgyzstan, there have to be deliberate efforts on behalf of the Government and development partners to spur education innovation among all stakeholders, particularly young people. Whether it is a low-cost digital learning tool or video-based in-service teacher training – young people must be taught about the entrepreneurial opportunities in education. More encouragingly, the leadership in the Government and private sectors in Kyrgyzstan is keen to use technology as a lever to transform the skills and employability of Kyrgyz youth. Nurturing a new generation of education innovators and entrepreneurs would go a long way towards unleashing creative solutions to many of the persistent education challenges in the country. To paraphrase Professor Easterly, instead of creating solutions, the development partners should invest in solution-seeking systems.

With the strong commitment of its ministerial leadership, the eager-to-learn youth population, and the bold digital ambitions government, Kyrgyzstan has all the levers needed to leapfrog the current educational barriers that are holding it back. Judicious allocation of scarce resources to build long term institutional capacity – with “strategic incrementalism” – can unlock its true potential as a thriving democratic country in the 21<sup>st</sup> century.