

Reviews of National Policies
for Education

Kyrgyz Republic 2010

LESSONS FROM PISA



THE WORLD BANK

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Foreword

In the Kyrgyz Republic education is widely perceived as key to development and to the prosperity of the young generations. Supported by the development partners, the Kyrgyz authorities are planning and implementing an ambitious reform agenda, and parents are investing a substantial part of their family's budget in the education of their children.

Participation of the Kyrgyz Republic in the 2006 round of the Programme for International Student Assessment (PISA) is clear proof of the importance the country attributes to the education sector. In a move to better understand the underlying causes for the unsatisfactory performance of Kyrgyz students in the survey, the Government of the Kyrgyz Republic invited the OECD and the World Bank to jointly conduct a review of Kyrgyz education policies. The present report identifies shortcomings in the education system affecting the quality of education, and recommends ways to close the current gap between aspirations and education reform achievement. The biggest challenge thereby is to ensure that the education provided is of good quality.

Based on information provided by authorities and development partners, as well as on information gathered in meetings in the course of site visits in Bishkek and the regions of Osh, Issyk-Kul, Chui and Jalal-Abad, the examiners' report focuses on main sub-sets of the education system, such as governance and funding arrangements, curriculum, pre-school and early childhood education, textbooks and learning materials, assessment and PISA outcomes, teacher education, higher education and research, and vocational education and training. The findings and recommendations of the report are summarised in its final chapter.

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Acronyms

ACCELS	American Councils for International Education
ADB	Asian Development Bank
AKDN	Aga Khan Development Network
AUC	American University of Central Asia
BA	Bachelor of Arts
B.Ed.	Bachelor of Education
CAARN	Central Asian Applied Research Network
CEATM	Centre for Education Assessment and Teaching Methods
CDS	Country Development Strategy
CEE	Central and Eastern Europe
CIET	Centres of Innovative Educational Technologies (KAE affiliated)
CIS	Commonwealth of Independent States (formerly the USSR)
CRC	Convention on the Rights of the Child
CWD	Children with Disabilities
DAC	Development Assistance Committee (OECD)
DFID	Department for International Development (United Kingdom)
DPSOE	Department of Pre-school, School and Out-of-School Education
EACD	European Academy of Childhood Disability
EC	European Commission
ECCE	Early Childhood Care and Education (UNESCO and Education for All)
ECD	Early Childhood Development (World Bank)
ECEC	Early Childhood Education and Care (OECD)
EC-SGD	Early Childhood Care for Survival, Growth and Development (UNICEF)

EdNet	Education Network Association
EDS	Education Development Strategy (<i>Strategic Programme for Development of the Education System of the Kyrgyz Republic</i>)
EFA	Education for All
EFA-FTI	Education for All – Fast Track Initiative
EFA/MDG	Education for All – Millennium Development Goals
Erasmus	European Region Action Scheme for the Mobility of University Students (EU)
ESCS	PISA Index of Economic, Social and Cultural Status
ETF	European Training Foundation
ETS	Educational Testing Service (United States)
EU	European Union
FA	Formative Assessment
FEIS	Foundation for Education Initiatives Support
FSU	Former Soviet Union
FTI	Fast Track Initiative
FTI-CF	Fast-Track Initiative – Catalytic Fund (related to Education for All)
GAT	General Admission Test (Georgia)
GDP	Gross Domestic Product
GNI	Gross National Income
GOSSTROY	State Agency for Architecture and Construction (local branch)
GSE	General Secondary Education
GTZ	<i>Deutsche Gesellschaft für Technische Zusammenarbeit</i> (German Technical Co-operation)
HE	Higher Education
HEI	Higher Education Institution
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HPE	Higher Professional Education
ICT	Information and Communications Technology
IEP	Individual Education Plan
ILO	International Labour Organization
IMF	International Monetary Fund
ISCED	International Standard Classification of Education

ISSA	International Step by Step Association
IT	Information Technology
JCSS	Joint Country Support Strategy
KAE	Kyrgyz Academy of Education
KGS	Kyrgyz Som (currency)
KIHS	Kyrgyz Integrated Household Survey
KRSU	Kyrgyz-Russian Slavic University
KTMU	Kyrgyz-Turkish Manas University
LFS	Labour Force Survey module of the Kyrgyz Integrated Household Survey
MDG	Millennium Development Goals
MICS	Multiple Indicator Cluster Survey
MLA	Monitoring of Learning Achievement
MOES	Ministry of Education and Science
MOF	Ministry of Finance
MOH	Ministry of Health
MOLEM	Ministry of Labour, Employment and Migration
MOLSP	Ministry of Labour and Social Protection
MPC	Medical-Pedagogical Commission
MSCE	Medical-Social Commission of Experts
MTBF	Medium Term Budget Framework
NAS	National Academy of Science of the Kyrgyz Republic
NCF	National Curriculum Framework
NGO	Non-governmental Organisation
NQF	National Qualifications Framework
NSBA	National Sample-Based Assessment
NSC	National Statistical Committee
NSMC	National Scientific and Methodological Council
NTC	National Teaching Centre
NTTI	National Teacher Training Institute
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development

ORT	<i>Obsherespublikanskoe Testirovanie</i> (a SAT-type, multiple choice test)
OSI/SFN	Open Society Institute and Soros Foundation Network
PCF	Per Capita Financing
PEAKS	Participation, Education and Knowledge Strengthening Project (Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan)
PEC	<i>Programa Escuelas de Calidad</i> (Quality School Programme, Mexico)
PFM	Public Financial Management
PIRLS	Progress in International Reading Literacy Study
PISA	OECD Programme for International Student Assessment
PIU	Project Implementation Unit
PMPC	Psycho-Medical Pedagogical Commission
PVE	Primary Vocational Education (also Initial Vocational Education or VET I)
QA	Quality Assurance
R&D	Research and Development
REP	Rural Education Project (Government of Kyrgyzstan/World Bank)
SAT	Scholastic Aptitude Test
SAPTE	State Agency for Professional-Technical Education
SDC/SECO	Swiss Cooperation Office
SEN	Special Educational Needs
SES	State Educational Standards
SGBP	State Guaranteed Benefit Package
SMEC	State Migration and Employment Committee
SVE	Secondary Vocational Education (VET II)
SWAp	Sector Wide Approach
TIMSS	Trends in International Mathematics and Science Study
TOEFL	Test of English as a Foreign Language
TRF	Textbook Revolving Fund
TRS	Textbook Rental Scheme
TTI	Teacher Training Institute
TUESW	Trade Union of Education and Science Workers
UK	United Kingdom

UN	United Nations
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children’s Fund
US	United States
USAID	United States Agency for International Development
USSR	Union of Soviet Socialist Republics
UTS	United Tariff Scale
VET	Vocational Education and Training
WB	World Bank

Executive summary

Education reforms have been a persistent element in the political and social development of the Kyrgyz Republic since the first years of its gaining independence in 1991. The effort to establish a new political structure, to cope with a changing economic environment, to build a new civic and social order is still underway, demanding much of the financial and human resources of the country and the attention of its policy makers.

The dramatic political changes which started in the months of completion of this report (see Chapter 1) are unlikely to diminish the importance attached to education by policy makers and parents. Education is in fact considered to be “the most important indicator and priority direction of public development”.¹ Yet, even after 15 years of transition, the Kyrgyz Republic still faces daunting challenges in re-shaping and developing its education in line with a new value system and a changed social policy and structure.

The present report was prepared to support the authorities in the Kyrgyz Republic in better understanding the reasons for the unsatisfactory performance of Kyrgyz students in the 2006 PISA round (last place of 57 participating economies), despite significant resources and efforts invested in education by schools, parents and government. The report reveals that a number of policy areas are in need of attention, such as curriculum, textbooks, teaching materials, modes of pupil assessment, teacher education, governance and funding arrangements, data, higher education and vocational and education and training.

To achieve major educational reform in any country has been shown to be a complex and time-consuming process, involving sophisticated policy, good resources, competent leadership and time. The present report finds that to date, there has been a gap between policy aspirations and the achievement of major reform in the Kyrgyz Republic. The State has made admirable strides in the provision of educational opportunities for a large proportion of the population, but significant shortcomings still exist, and the biggest challenge remaining is to ensure that the education provided is of good quality.

Finance, governance and management of the system

Despite the impressive effort to devote resources to school education (the share of GDP for education rose from 3.9% in 2001 to 6.5% in 2007, with over 20% of total public expenditure reserved for education throughout that period), the Kyrgyz Republic fails to achieve satisfactory returns in terms of education quality. A high proportion of the population (37%) is under 18 years of age and puts a heavy financial burden on the schooling system. The teaching force is large and expensive, and pupil teacher ratios and teacher contracted hours are very generous by international standards, albeit with limited educational value.

Much of the spending inefficiencies are due to shortcomings in budgetary management and governance arrangements. The indicators used in drafting the budget are not quality oriented and need to be linked to results to address both quality and efficiency. The Ministry of Education and Science (MOES) has neither insight in the overall spending for the sector, nor in the execution of parts of its own budget (donor spending for reforms), and its capacities to assess the needs of the system and to monitor reform implementation are limited. There is considerable dependency on external expertise and funding, and a top-down policy approach without stakeholder involvement.

The review team recommends strengthening the capacities on local level and creating incentives for decentralised delivery of educational services, while equipping the Ministry of Education and Science with the means to meet its responsibilities for the definition and monitoring of policies and quality standards. The Ministry should further be in position to keep track of and control (all) educational transferences, and integrate pedagogical with administrative policies. The analytical capacities of the Ministry should be expanded through access to information from all relevant institutions, in particular the Ministry of Finance (MOF), and through a better mobilisation of the analytical resources currently resting with the Kyrgyz Academy of Education (KAE). The review team further recommends introducing mechanisms for more equitable distribution of resources in the system.

Early childhood care and pre-school education

Eager to reverse a longer lasting trend of declining enrolments in early childhood education, in 2009 the Kyrgyz Republic introduced a new Law on Pre-School Education. The government also entered a number of international partnerships for promoting good international practice, and guidelines for the education and care of young children were elaborated and integrated in the State Standard on Pre-School Education.

The successful implementation of these commendable policies will depend on how well the Kyrgyz Republic succeeds in co-ordinating the currently

fragmented services for young children, and on the quality of pre-school education. The review team recommends revisiting the pre-school curriculum and making it more flexible, modernising the pre- and in-service training for pre-school teachers, and ensuring adequate pre-school provision in remote and rural areas and for disadvantaged children.

Curriculum, textbooks and learning materials

The structure, conceptual basis and content of the curriculum at present impede student achievement and the quality of teaching and learning. There is an overload of subjects and hours, and the time for practical, creative or integrated learning is too limited. The conceptual framework is narrowly subject-based and academically oriented, and offers limited choice to the students. The textbooks and learning materials are inadequate to support the curriculum, are in short supply and, where available, are often out-of-date.

These problems highlight core concerns relating to the quality of the education available to pupils in schools. To help remedy such problems, the review team recommends introducing a National Curriculum Framework (NCF) to provide a coherent (also cross-subject) view of overall educational objectives for each major stage of education.² Schools should have the freedom to adapt parts of the Framework to their own needs and the number of subjects should be reduced to allow for more in-depth studying.

The report suggests a longer-term plan for textbook renewal, reforming the textbook development process, and a revival of the previously existing textbook rental scheme. Ideally, the effort would be complemented by a better supply of school libraries with books.

Assessment and examinations

Pupil assessment is an in-built, regular feature of schooling in the Kyrgyz Republic, but assessment tends to focus on the reproduction of content rather than on how well pupils apply, analyse and understand the material. Undue emphasis is placed on coaching the small percentage of high-ability students for success at the “Olympiads”, with insufficient attention to the needs of the average pupils and the low-achievers. The review team considers that it is crucial for the Kyrgyz Republic to establish standardised educational goals and a standardised assessment system. Formative assessment should be used to build pupils’ self-confidence based on realistic levels of achievement.

The current national examinations which are taken at grades 9 and 11 have a number of shortcomings, most notably the fact that in most cases the exam questions are known and published in advance. Students are hence never faced

with an exam question they have not seen before, or with a task that requires them to apply their knowledge in a different way.

Access and equity

While the access of children to schooling provision is very good in the Kyrgyz Republic, the key problem is the inadequate quality of education to which they have access. About 4% of school age children (approximately 35 000) are not attending school at all or not attending regularly. About 30 000 young people leave school completely after basic school, with inadequate skills to compete and cope in the labour market. The categories of children which face most difficulties with regard to participation in education are the children with special educational needs and those with disabilities.

The quality and availability of data on pupil attendance, transition and drop-out needs to be improved, and labour market oriented training needs to be provided for early school leavers. Kyrgyzstan needs to plan for improved provision for children with special educational needs/children with disabilities (SEN/CWD) so as to meet its national and international legal commitments in this regard. This will require increased funding.

Assessment and registration procedures need to be simplified, and health, education and welfare policies need to be better co-ordinated at national, *rayon* (district) and *aiyl-okmotu* (community) levels.

Vocational education and training (VET) and adult education

The Kyrgyz Republic has initial professional education (VET I), administered by the State Agency for Professional-Technical Education (SAPTE),³ and Secondary and higher professional education (VET II), administered by the MOES. This institutional separation reflects a conceptual separation, with VET I schools often serving as second-chance pathways.

Key strategic policy decisions are required to ensure that the country benefits to the optimum from its VET provision. Half of the age group 15 to 29 years is unemployed, as transition to market economy meant a decline of state-owned enterprises and the loss of traditional jobs. This gives rise to a major re-training challenge.

Sustained efforts are needed to build the capacity to provide adult education through appropriate methodologies, and to disseminate good practice to all licensed providers. VET should focus on the lifelong development. Career information and guidance need to be given much more attention in education and employment policies, coupled with reforms of information data on the labour market. The VET sector strategy needs to incorporate reliable monitoring,

transparent reviews, political support, stakeholder consultation, and needs to be linked to economic planning. Special attention should be paid to recognition and certification of learning. The establishment of a comprehensive framework of qualifications would provide valuable linkages between VET I and VET II, as well as improve student mobility in a lifelong learning perspective.

The teaching career and teacher education

Teaching as a career in the Kyrgyz Republic is experiencing major problems which, if not addressed, will undermine other efforts at educational reform. Despite good percentage salary increases in recent years, the salaries of teachers only amount to about 60% of the average wage. A number of pilot projects, undertaken with donor assistance, hold promise for improving teacher conditions, but need to be mainstreamed. Teacher contract hours and pupil teacher ratios are more favourable in the Kyrgyz Republic than in many richer, developed countries. Recruitment of high-quality candidates into teaching is very inadequate, and the retention of good teachers in the career is proving very difficult. Women provide the vast majority of the teaching force, which is also an ageing profession. The attractiveness of teaching career is low, and teacher education is provided by a diverse range of institutions, varying greatly in quality. In-service teacher education is taking place in regular intervals, but needs a re-appraisal in terms of content, methodology, evaluation and staffing.

The teaching career is in need of comprehensive, co-ordinated policy based on a consultative approach, with teacher remuneration as a core issue. The teaching workforce should be smaller but better paid, and the potential of good school leadership should be better mobilised. As to teacher training, the licensing and accreditation of teacher education institutions should be conducted by an independent agency, and a new framework for pre-service teacher education should be introduced, together with a raising of entry standards to teacher education.

Higher education and research

There is a pressing need to modernise higher education in the Kyrgyz Republic so that it can respond to the needs of a small economy for educated human capital, while also meeting individual needs. The government has embarked on a programme to align higher education with the Bologna Declaration, but the vast majority of undergraduate programmes still follow the traditional five year specialisation model. The review team recommends the MOES to take a leadership role in the development of a national strategy for higher education, addressing the size and efficiency of the sector and ensuring optimal use of resources, including buildings and equipment.

The establishment by the MOES of the proposed National Accreditation Council, covering all areas of the post secondary system, is the most important immediate step towards improving the quality of higher education. However, it is estimated that only about 20% of universities are ready for such a form of quality assurance at present.

In the area of research levels of investment are low, and there is a lack of co-ordination among the institutions involved. The research infrastructure is often old or obsolete, there are no resources to replace it, and salaries for scientists and researchers are low. The review team recommends to better focus funding for research. The emphasis should be on applied rather than basic research.

The existing testing system (*Obsherespublikanskoe Testirovanie* or ORT) for selection into higher education should be retained. It should be further strengthened by expanding the subject component of the test to better reflect student attainment and competences in relation to national curriculum standards and goals.

The development and introduction of the proposed National Qualifications Framework would greatly facilitate degree recognition and career progression. The Ministry of Education and Science and the Ministry of Labour should collect, analyse and disseminate labour market information, and the Higher Education Institutions (HEIs) should expand their career centres and involve employer input.

Notes

1. Country Development Strategy of the Kyrgyz Republic, 2007-2010, p. 61.
2. In the weeks of finalisation of this report, the review team was informed that the Ministry of Education and Science has approved a National Curriculum Framework.
3. The professional education cycle includes primary and secondary vocational training, and higher education under the heading “higher” and “post graduate” vocational (professional) training. See Chapter 3 for more details.

Chapter 1

Introduction

This chapter gives a brief overview of the economic, political and demographic background of the Kyrgyz Republic and its educational context, and outlines the rationale, structure and main findings of the present report.

Kyrgyz Republic: the general context

A historical note

The 70-year Soviet period forms only a tiny part of the history of what is today's Kyrgyz Republic, but its impact was profound, resulting in the settlement of people who had been largely nomadic for more than 2 500 years. Moreover, the recent division of Central Asia into five modern states¹ is entirely artificial, devised by Stalin for political reasons, and only partly reflecting the cultures and civilisations that had lived in Central Asia for thousands of years. Historically and geographically, Central Asia was always a single entity; distinctions were made only between steppe and mountain, desert and oasis. The mountain nomads within the borders of what is now the Kyrgyz Republic lived (and still do, to some extent) an entirely different lifestyle from the peoples in the Fergana Valley and the Chui steppes.

The native Kyrgyz are Turkic people who, in ancient times, first settled in the Tien Shan Mountains. They were traditionally pastoral nomads. There was extensive Russian colonisation in the late 1800s, and Russian settlers were given much of the best agricultural land. This led to an unsuccessful and disastrous revolt by the Kyrgyz people in 1916.

Kyrgyzstan became a Republic of the Soviet Union in 1924, and was made an autonomous republic in 1926. It became a constituent republic of the Union of Soviet Socialist Republics (USSR) in 1936. The Soviets forced the Kyrgyz to abandon their nomadic culture, and brought modern farming and industrial production techniques into their society. On the positive side, early education campaigns brought impressive levels of literacy and numeracy, at least in Russian language and in the larger towns and settlements. Kyrgyz remained a largely oral language without an agreed orthography until 1923; then it was originally written in a modified Arabic script until the 1950s, when a Latin script was briefly used. However, due to Soviet influence, a modified form of the Cyrillic alphabet eventually became standardised and has remained so to this day.

Kyrgyzstan proclaimed its independence from the Soviet Union on 31 August 1991. On 21 December 1991, Kyrgyzstan joined the Commonwealth of Independent States (CIS). The country joined the United Nations (UN) and the International Monetary Fund (IMF) in 1992 and adopted a “shock-therapy” economic programme. Voters endorsed market reforms in a referendum held in January 1994, and in 1996 referendum voters overwhelmingly endorsed proposed Constitutional changes that enhanced the power of the President.

The political framework

Kyrgyzstan is a democratic republic with an adopted constitution. At the time of visit of the review team to the country (April 2010) the President had far-ranging powers while the Prime Minister formed the head of government.

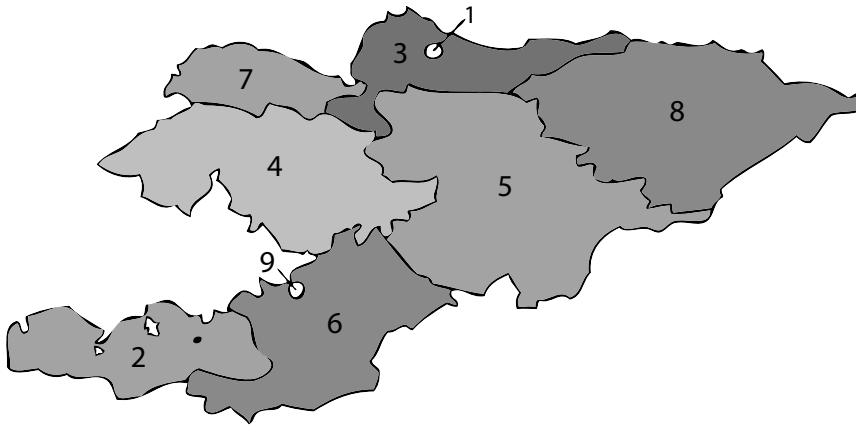
On the establishment of independence in 1991 Kyrgyzstan faced many problems in shaping the new state. Political life has been turbulent with periods of instability and upheaval. One such upheaval, in March 2005, got the sobriquet “The Tulip Revolution”. Struggles for power between the presidency, the Government and the Parliament have engendered active political debate and participation, but also some public disenchantment with politicians. The instability is reflected in that, during the period from 1990 to March 2005, there were eleven Governments and ten Prime Ministers, with the average duration of cabinets being just over one year. The most recent political upheaval took place in the months of April-June 2010. Subsequently the Parliament was dissolved, the Constitutional Court – disbanded, and the interim government set a date for a Referendum on constitutional amendments related to the distribution of executive powers in the country.

The dynamism of political life gave rise to frequent changes of personnel in key political offices. This in turn, has led to lack of continuity and consistency of policy and the lack of the guiding hand of political experience in many portfolios. A policy area such as education, where the long-term view and consistency of policy are crucial, does not benefit from frequent changes in guiding personnel. Furthermore, it is only in recent times that the importance of a merit-based civil service has been recognised, and steps taken to implement reforms concerning the competitive selection of civil servants (World Bank, 2007, p. 11). A well-trained, professional civil service, with the capacity to implement agreed policy measures, is a vital linch-pin for the realisation of reform aspirations.

The Kyrgyz Republic is divided into seven provinces (*oblasts*) administered by appointed governors. The capital, Bishkek, and the second-largest city, Osh, are administratively independent cities (*shaar*) with a status equal to a province or *oblast*.

Each province (*oblast*) comprises a number of districts (*rayons*), administered by government-appointed officials: *governor* (in *oblast*) and *akim* (in *rayon*). Small settlements of up to 20 villages are governed by executive bodies of self-government (*aiyl-okmotu*), and by locally elected councils (*aiyl-kenesh*).

Figure 1.1. Provinces of Kyrgyzstan



The map shows the *oblasts* and independent cities as follows:

- | | | |
|------------------|----------------------|---------------------|
| 1. Bishkek city | 4. Jalai-Abad Oblast | 7. Talas Oblast |
| 2. Batken Oblast | 5. Naryn Oblast | 8. Issyk-Kul Oblast |
| 3. Chui Oblast | 6. Osh Oblast | 9. Osh city |

Source: http://commons.wikimedia.org/wiki/File:Kyrgyzstan_provinces_map.png.

Landscape and demography

Kyrgyzstan is a small landlocked country in Central Asia, bordering Kazakhstan, China, Tajikistan and Uzbekistan. The mountainous region of Tien Shan covers over 80% of the country. While nature has bestowed magnificent scenery in the form of mountains, valleys, rivers and forests, most attractive for tourists and outdoor sports enthusiasts, only about 7% of the country's land is arable. Kyrgyzstan's physical location, combined with an under-developed physical infrastructure, causes difficulties for trade and transport. The land mass area is almost 200 000 square kilometres.

The population is about 5.2 million people, with a population density of about 25 per square kilometre. Rural dwellers, amounting to 65% of the population, greatly outnumber those living in urban areas. As regards ethnic composition, Kyrgyz people comprise 69% of the population. The other ethnic categories are Uzbek at 14.5%, Russian at 9% and "others" forming 9.4% of the population. Kyrgyz is the state language, while Russian has the status of "official language". Uzbek and Tajik are also spoken, mainly in regions bordering Uzbekistan and Tajikistan. The official declaration of religious affiliation is 75% Sunni Muslim, 20% Russian Orthodox and 5%

“other” religions. Declaration of religious affiliation does not necessarily mean active observance, and the patterns of affiliation vary with migratory trends. There is an ethnic and economic divide between the more developed north with its Kyrgyz population, and the impoverished south, which has a large Uzbek population and a diverse group of other ethnicities.

The fact that 37% of the population of the Kyrgyz Republic is below 18 years of age puts very heavy pressure on the educational budget. Net enrolment rates are high compared with other developing countries. Considerable variation in per-pupil expenditure exists between different *oblasts*. A system of inter-governmental transfer of resources seeks to attenuate the variation, but it does not eliminate the disparities which exist.

Economic features

Unlike some other countries in the region, the Kyrgyz Republic does not possess reserves of oil or gas. Its two major natural resources are hydro-power and gold. These, coupled with services and agriculture, have been the main driving forces of the economy. Following grave economic difficulties during the first half of the 1990s, the Kyrgyz Republic’s economy grew at an annual rate of 4.6% during the period 1996-2005 (World Bank, 2007, p. 4). During 2007 the GDP growth was 8.5% and in 2008 it was 7.6%. However, the projections for 2009 are down to 0.8% and to 3.1% for 2010 (World Bank, 2009, p.8). The global economic recession has brought uncertainties and is likely to affect injuriously the Kyrgyz Republic. Traditionally, remittances from Kyrgyz emigrants to Russia and Kazakhstan have been significant for the local population, accounting for 29% of GDP in 2008 (World Bank, 2009, p. 8). The decline of the construction industry in Russia and general contraction in international markets will have backwash effects on the Kyrgyz economy.

Inflation, which had been at low single figures, increased from 5.1% in 2006 to 20% in 2008, but it is expected to return to single digit level in 2009 (World Bank, 2009, Table A, p. 10). The debt burden is high, at over 70% of GDP (World Bank, 2007, p. 5). Furthermore, it is calculated that about 50% of output is produced in the shadow economy. In 2008, the GDP per capita was equivalent to USD 720, and the average monthly wage was USD 107. The average teacher’s salary at USD 47, paid for contract hours, was less than half the average monthly wage. Despite improvements over recent years, the proportion of the population living in poverty remains high. The poverty line is a national poverty line chosen on the basis of the food and non-food consumption of the lower income group of the Kyrgyz population. In 2007, 35% of the population were living in poverty, with 7% living in extreme poverty (World Bank, 2009, Table C, p. 10). Almost three-quarters of the poor and extreme poor live in rural areas. Low wages, under-employment and outright

unemployment are important explanatory factors of poverty in the Kyrgyz Republic. Almost half of the employed work in agricultural and services where productivity and wages are low. In 2008 the unemployed as a percentage of the labour force were 11% (World Bank, 2009, Table V, p. 10). In these circumstances, it is not surprising that emigration to other countries has been a pattern, particularly to Russia and Kazakhstan, where work and better remuneration were available. The remittances of emigrants have been a significant source of income for families remaining at home.

The Kyrgyz Republic has been the beneficiary of assistance over the years from a range of donor countries and from international agencies. Among the donor countries, Russia in particular, would see Kyrgyzstan within its sphere of influence. Many of the agencies such as the World Bank, the Asian Development Bank, and the Open Society Institute and Soros Foundation Network (OSI/SFN) have supported specific projects. Moves towards joint donor action have also taken place such as the Joint Country Support Strategy (JCSS) in support of the Kyrgyz Republic's Country Development Strategy (CDS) 2007-2010. Five support partners are involved in this – the Asian Development Bank (ADB), the Swiss Cooperation Office, the UK Department for International Development (DFID), the World Bank (WB) and the United Nations (UN) agencies. The expert guidance and resources of such support agencies has been valuable during these years of political transition and building up the institutions of state. However, some tensions have also existed in relation to international bodies, and the internal capacity to match policy aspirations of such agencies has not always been in evidence. However, the Kyrgyz Republic has been open to international thinking and influence, and the authorities seek to establish the state as a respected member among the family of nations.

Kyrgyzstan: the educational context

The Kyrgyz Republic inherited an education system that had been structured along Soviet lines. A tradition of regular school attendance was in place, and literacy and numeracy rates tended to be high. Institutions covered the age range from pre-school to higher education. Both pre-service and in-service teacher education were well established.

Despite this inheritance, the Kyrgyz Republic faced daunting challenges in re-shaping and developing its educational system in line with a new value system and a changed social policy and structure. Reforms were required in all areas – curriculum, textbooks, teaching materials, modes of pupil assessment, teacher education, reconfiguration of higher education, developing a reformed vocational and training system, and so on. The educational changes were one significant agenda item within the broader re-structuring that was entailed

in establishing and moulding the new Kyrgyz Republic. Furthermore, the educational challenges were being faced at a time when the state faced great economic difficulties. It was also the case that the modes of policy-making and procedure of the earlier regime had become habituated and they continued to be formidable shaping influences on the new era. For so long, a top-down, unquestioned form of decision-making had been in operation that it could be argued it created a dependency climate which inhibited innovation, efficient policy formulation, and the satisfactory implementation of policy-measures. Frequent changes of the political personnel and of civil servants also inhibited the development of focussed, consistent policy and action.

Eighteen years is not a long time in relation to the re-shaping and re-building of an education system. While the Kyrgyz Republic has achieved a good deal of educational change since political independence, the process is still best regarded as a transition era in which many of the aspirations for reform have yet to be achieved. For the Kyrgyz society the most significant issue of the reform agenda must be improving the quality of the education provided, at all levels.

The Ministry of Education and Science (MOES) has the responsibility for formulating national education policy and its implementation, and for setting the standards for each level of the education system. It also has responsibility for the republican-level educational institutions. There are 40 *rayons* and 11 city councils (*kenesh*), and 59 regional departments of education, functionally dependent on the Ministry. Among other responsibilities the 462 *aiyl-okmotus* and city governments are responsible for the provision of school and pre-school education at local level. The *rayons* have responsibility for methodological support to schools and mediate statistical and financial information between the centre and local levels.² The Ministry of Finance has a major say over the approved budget. The biggest share of the budget is not distributed from the Ministry of Education and Science, but from the Ministry of Finance, directly to *rayons* and more specifically to the local government agencies. Thus, while the Ministry of Education and Science is responsible for education policy and its implementation, it does not have the leverage of budgetary allocation.

Expenditure on education has increased steadily in recent years. Between 2001 and 2007 real expenditure has increased by 147%, and has grown from 3.9% of GDP in 2001 to 6.5% in 2007. As a proportion of total public expenditure, expenditure on education increased from 23.2% in 2001 to 26% in 2006, but declined to 21.2% in 2007 (see Chapter 2). Most of public expenditure is focused on the school system, with relatively little on higher and pre-school education. Because of the large proportion of the population enrolled in schools, the per-capita spending on individual school pupils as a percentage of GDP is not high by international standards.

An area which suffered a serious decline from the inherited schooling framework was the area of early childhood education. Pre-school enrolments fell from 190 100 in 1991/92 to 45 000 by 1999/2000, with virtually all the decline in those pre-schools managed by ministries other than the Ministry of Education and Science. This reflected the collapse of the enterprise- and military-related pre-school systems. The decline in pre-schooling has continued to be a cause of concern in the Kyrgyz Republic and, in 2009, the Parliament passed legislation aimed at redressing the decline and re-shaping pre-schooling along lines proposed by best international thinking on the rights of the child. The National Statistical Committee (NSC) report for 2008 states that in 2006 there were 59 156 children in pre-school education amounting to 10.5% of the relevant age group (3-6 years) (NSC, 2008, p. 8).

Education is compulsory for Kyrgyz children from age 7 to 15 years. Schooling for this age group is referred to as “secondary” education and comprises two cycles. Children in grades 1 to 4 attend the initial or primary cycle and are taught by one generalist teacher, in self-contained classrooms. After grade 4, students enter a five-grade lower secondary or basic cycle where each subject is taught independently by a different teacher. Nearly all children (99% according to United Nation’s Children’s Fund [UNICEF] data 2000/07) make the transition from grade 4 into grade 5. There is a non-compulsory upper secondary education sector (either general or vocational), comprising grades 10 and 11.

After grade 9, about 60% of students continue into upper secondary; most go to grade 10 of the general secondary school, but a small percentage (mostly the low achievers) go to initial vocational education and some leave school system altogether.

Gross enrolment ratios in grades 1-11 were 89.5% in 2006/07. For grades 1-4, the gross enrolment ratio was 101.4%; for grades 5-9, 92.6%; for grades 10-11, 62.3% in the same year. Net enrolment ratios were lower, at 85.8% for grades 1-11, and 88.4% for grades 1-4, 84.8% for grades 5-9, and only 48.7% for grades 10-11. Gender balance is good overall, except that in grades 10-11 (overall gross enrolment: 62.3%) there are fewer boys (58%) than girls (62%) (NSC, 2008).

Officially, in the 2007/08 school year there were 1 517 children and adolescents (age 7-17) who never attended school. However, estimates based on a Multiple Indicator Cluster Survey (MICS) data collected in 2005/06 are that about 30 000 children of compulsory school age are not in school and that during harvest season some 40% of children do not attend.

Two separate government bodies are in charge of vocational education and training (VET). The State Agency for Professional-Technical Education (SAPTE) is responsible for initial vocational education (VET I) grades 10 and 11, and for vocational schools and lyceums. Other line ministries and private

institutions also provide vocational education. The Ministry of Education and Science is responsible for secondary vocational education (VET II) and higher professional education (HPE) and for institutions under its jurisdiction – universities, technical schools and colleges.

In 2007, there were 30 000 students in PVE vocational schools and lyceums, financed mostly from the state budget; only about 20% were contract (fee-paying) students. Entrance to PVE usually requires completion of grade 9 or grade 11 in general education. Students who have completed grade 9 enrol in two-year programmes; students who have completed grade 11 generally enrol in one-year PVE programmes.

Secondary vocational education (SVE) in 2007 had approximately 36 000 student, 22 000 of them “contract” students. It is generally acknowledged that vocational professional education in the Kyrgyz Republic is severely under-financed and under-valued, with only about 10% of total education expenditure spent on VET in 2007.

Class sizes in general secondary schools (grades 1-11) are not large by international standards. According to the National Statistical Committee, in the 2007/08 school year, there were on average 24 children per class in state-owned general education schools. This is slightly lower in rural schools (22) and slightly higher in urban schools (27), although in some city schools (e.g. in Bishkek and Osh) it may be as high as 30 per class (NSC, 2008, p. 59).

There are a growing number of schools that specialise in certain subjects; these are referred to as “gymnasia” or “lyceums”. In school year 2007/08, 225 566 students were studying in such “specialised” schools.

The draft “Strategy (EDS) 2011-2020” states that by 2020, all upper secondary grades 10-11 will be “profilised” into schools focusing on the humanities (gymnasia), schools focusing on the natural sciences (lyceums), and schools focusing on foreign languages, arts, sports and initial vocational education. According to the draft EDS, talented students may already go into specialised gymnasia after grade 4, thus giving them a total of a seven-year gymnasium programme.

In 2005, there were 14 special schools for children with mental retardation, two schools for children with vision difficulties, two special schools for deaf and blind students, three special schools for children with hearing impairments and one special school for children with severe speech disabilities. Disabled children, orphans and “social orphans” (children from dysfunctional families) tend to be cared for in institutions or special schools. However, the numbers appear to be very small, covering only about 1% of the 7-17 age cohort, whereas internationally an average of about 2.5% to 3% of children have disabilities or special needs. Research by the Organisation for Economic Co-operation and Development (OECD) and the Asian Development Bank

(ADB) into provision for SEN/CWD children in Kyrgyz Republic³ shows lack of institutional places for these children, in particular, in poorer regions; however, the poor state of most school buildings and the lack of suitable facilities for special-needs children make it very difficult, at this time, to implement inclusive education in mainstream schools without investment.

There is no formal examination at the end of initial or primary schooling (grade 4). Annual school-based “promotion” examinations take place from grade 5 onwards. National exit examinations occur at the end of grade 9 (incomplete secondary, age 15) and at the termination of grade 11 (complete secondary, age 17). Since 2002 there has been an ETS⁴ – type multiple-choice examination that is used as part of university entrance requirements. This is voluntary and fee-based and is not directly curriculum linked but more focussed on verbal and mathematical reasoning. There are plans to extend this examination to become the only (or main) test for grade 11 school leavers wishing to enter higher education.

Table 1.1 sets out an overview of the school framework, grades 1-11, at the beginning of the school year 2007/08, for the national and *oblast* contexts.

Table 1.1. **The general school structure**

Kyrgyz Republic	Schools (grades 1-11)		Teachers	Students	Students	
	Total 2 168				Urban	Rural
	Urban	Rural	Total	Total		
	417	1 751	72 097	1 080 061	326 687	753 474
<i>Oblast</i>	Schools		Teachers	Students	Students	
	Urban	Rural			Total	Total
Batken	44	181	6 777	98 693	24 263	74 430
Jalal-Abad	73	397	14 610	227 999	48 926	179 073
Issyk-Kul	29	167	6 905	92 108	23 182	68 926
Naryn	14	122	5 697	61 934	9 642	52 292
Osh	23	498	16 971	240 248	22 491	217 757
Talas	13	103	3 714	49 775	8 054	41 721
Chui	52	273	8 372	145 355	31 618	113 737
Bishkek city	123	0	6 116	110 260	110 260	0
Osh city	46	10	2 935	53 689	48 151	5 538

Note: Figures at start of 2007/08 school year.

Source: NSC, 2008.

The total number of students in general education schools has dropped in most of the regions of the country, due to the low birth rate during the 1990s, and a rise in migration. (Approximate decrease of 100 000 students, from 1 180 000 students in 2002/03 to 1 080 061 in 2007/08). At the same time, however, the number of schools (institutions) has grown over the same period, from 2 050 in 2002/03 to 2 168 in 2007/08.

The total number of teachers employed in Kyrgyzstan's general education system is 72 097 of whom two-thirds (approximately 53 000) are in rural schools (grades 1-11). The average class size is slightly greater (by two students) in urban than in rural schools. Class sizes are similar to international averages, but pupil:teacher ratios are relatively low (15:1 for the country as a whole). According to the National Statistical Committee, in the 2007/08 school year, nearly 57% of schools reported a shortage of teachers in some subjects, especially in foreign languages, mathematics, Russian language and literature, and Kyrgyz language and literature.

It is clear from the Table 1.1 that there are far more rural schools (1 751; 80%) than urban (417; 20%) schools. The distribution of students is 326 587 urban (30%) and 753 474 rural (70%). Schools are coeducational and gender distribution is more or less equal. School sizes tend to be large, with 61% of schools having more than 500 students and only 6% having fewer than 100.

Schools with Kyrgyz language of instruction are in the majority, with Russian language schools second, Uzbek third and Tajik language fourth. There are also schools with more than one language of instruction: mainly Kyrgyz-Russian (318 with 266 593 students), but also Kyrgyz-Uzbek-Russian (17 schools). This mixture of languages creates problems with teacher supply, books and materials, and time-tabling, especially in schools with several shifts.

A small number of schools operate on a single shift per day (414), but most (1 668) have two shifts and a few (86) have three. Interestingly, two- and three-shift schools are predominant in rural areas. This is often because of a shortage of classrooms and subject teachers. Class sizes are not large, especially in rural schools and in upper grades.

Student flows are difficult to track. Calculations based on grade cohort progression over 10 years (1998/99 to 2007/08) appear to indicate that nearly all students continue from grade 4 into grade 5, but that at the grade 9/grade 10 interface about 35% do not continue into general upper secondary grades 10-11. Some grade 9 graduates go into primary VET schools or other forms of additional education; but clearly a significant number of 15 year-olds do not continue in school. Overall, it appears that about 59% of those entering grade 1 in 1989/90 completed grade 10 in 2007/08.

There has been a large expansion in the number of higher education institutions (HEIs) and in student enrolment over recent years in the Kyrgyz Republic. The percentage of the age cohort going to higher education increased from 10% in 1992/93 to 48% in 2006/07. It is striking that approximately 75% of grade 11 student graduates go on to tertiary education. In 2008/09, there were 50 HEIs attended by 243 028 students. The great majority of students, nearly 90%, attend the 31 state-financed HEIs.

Each year about 50 000 grade 11 graduates apply for higher education. Of these, the state supports about 5 000 so-called “budget” students. Starting with 2002, these budget (*i.e.* scholarship) students are selected by means of the National Scholarship Test (in Russian: ORT – a SAT⁵ type multiple choice test). Students who do not qualify for a “budget” place but are admitted to university faculties (through a combination of their grade 11 graduation examination and faculty-set entrance examinations) are so-called “contract” students who pay fees. There is now an intention to extend the ORT to all candidates for university entrance, in order to ensure greater probity in the allocation of university places.

There are 19 private colleges, 11 of which are in the capital Bishkek. They are primarily oriented towards commercial occupation: 40% of their enrolment is in economics, 9.3% in management, and 10.4% in law. A very large proportion of the total enrolment in HEIs at 46% is in part-time education, most of which may be classified as distance education. The great majority of undergraduate students follow what is known as the specialised diploma of five years duration. Of those who were admitted to the public HEIs in 2003, it has been calculated that 68.6% graduated in 2008, though it should be remembered that students change plans between entry and graduation date (see Chapter 10). The number of postgraduate students, at 2 451 in 2006, forms only a tiny proportion of the overall number of students enrolled in higher education.

Scope and structure of the review

The request to the OECD from the Kyrgyz authorities was for an overall review of its education system, rather than a thematic review, which would examine one area in detail. There are many inter-linking elements between different features of the system which a general review can highlight. There is growing understanding by the authorities that a reformed education system is crucial for the future economic, social and cultural development of the society.

Despite some difficult economic circumstances and volatile political experiences since independence in 1991, the Kyrgyz Government has sought to re-shape the inherited education system along new lines reflecting a new value system and changing socio-economic circumstances. Reflective of the

government's commitment is that in 2008 it allocated 6.5% of GDP to educational expenditure. However, educational reform is very much a work in progress. Even in propitious circumstances, the achievement of educational change is a slow process which requires sustained, consistent and well-resourced action to bring it about. In the Kyrgyz Republic the education system is still in process of transition and is still heavily influenced by habituated practices and procedures of the previous Soviet era. The change agenda is a comprehensive one. It affects: the process of policy making; the administration of the system; curricular and pedagogic reform with the appropriate learning materials; new modes of pupil assessment, expansion of pre-school education; provision for special needs education; development of vocational/professional education; restructuring of the teaching career and teacher education provision; and the re-organisation of higher education. The *leitmotif* of the reform process is the improvement of the quality of the education provided at all levels of the system.

The review team has approached its work in a spirit of constructive partnership with the Kyrgyz authorities as they go forward with their reform agenda. Some of this agenda is set forth in documents such as *Country Development Strategy, 2007-2010* and in the draft *Education Development Strategy of the Kyrgyz Republic for 2011-2020*. The review team hopes that its analyses and recommendations will be of significant assistance to the Kyrgyz authorities as they work at achieving their educational policy aspirations. The team is pleased to note that some of its recommendations are in alignment with the authorities' plans, and this should give a greater sense of consolidation to the reform efforts. The value of a group of experienced external observers reviewing a system is that they can bring new insights and perspectives on educational problems. It is hoped that such a contribution may be an added value to the reform process.

The following sets out the sequence of themes that the review team has examined and reported on:

- Overview of Educational Expenditure
- Governance and Financing
- Early Childhood Care and Pre-School Education
- Curriculum and Learning Materials
- Assessment and Examinations
- Access and Equity
- Vocational Education and Training
- The Teaching Career and Teacher Education
- Higher Education

Each of these areas is central to the overall reform agenda. For the purposes of clarity and ease of utilisation the themes are examined as discrete issues, but it is realised that there are inter-connections between them, and some cross-referencing highlights this fact.

The financial resourcing of the education system is of fundamental importance. In Chapter 2 the review team has sought to set out the pattern of educational expenditure over a sequence of years and to identify how that expenditure is dispersed between different sectors of the education system. It establishes that while the expenditure on education as a percentage of GDP, and of overall government expenditure is high by international standards, the real per capita expenditure for pupils and salaries for teachers is low when examined from a comparative perspective. The review raises questions as to whether the optimum value is being attained by the current expenditure patterns. It also draws attention to inequalities in financing which exist between different *oblasts* and categories of the population. In the context of governance, the review examines the changes which have been made over recent years in the governance and administration of the system. It explores the relationships which exist between the Ministry of Finance, the Ministry of Education and Science, the *rayons* and the local and municipal authorities. The review makes recommendations on how improvements can be made to make the governance and associated financing more efficient and effective.

The provision of pre-school education declined significantly following political independence. The authorities have been very conscious of, and concerned about this, and have, in 2009, passed new legislation with regard to it. Chapter 4 analyses relevant issues regarding current provision and treatments of areas such as the curriculum, teacher training and child nutrition. It makes a range of specific recommendations to address the problems identified with the aim of putting early childhood care and education on a level required by both the politicians and the public.

Despite attempts at reform, the curriculum in the schools continues largely as it had been in Soviet times. There is general dissatisfaction about its overcrowded and out-of-date character, but the political will to implement planned reform has been lacking. Chapter 5 examines the content of the curriculum, the timetables, the balance between subjects, and availability of curricular documentation. It also highlights the problems which exist regarding the quality and availability of textbooks and learning materials. It makes recommendations on how the situation can be improved regarding learning materials. It also makes recommendations for the policy and implementation processes regarding the curriculum. This is followed by Chapter 6 which sets out the current practices on assessment and examinations, and evaluates them. Major weaknesses are identified in current procedures, which also reflect very unfavourably on the quality of education being achieved by the

students. It proposes changes which, if implemented over time, should lead to a much more satisfactory situation.

Chapter 7 on access and equity explores a concern of most education systems – how best to equalise educational provision and output for all the citizens of a democracy. As well as the problems of inequality for the general population, the chapter makes a particular analysis of the issues which affect special needs children. As of now, it is clear that only a small proportion of Kyrgyzstan's disabled and special-needs children is provided with an appropriate education within the state system. The review examines the barriers which exist and identifies the problems for resolution. It also points to inadequacies in the identification of such students. While recognising the financial difficulties involved in the provision of inclusive education, it makes a number of recommendations to assist the government to move towards meeting its national and international commitments towards disadvantaged and special-needs children.

It is surprising that vocational education and training has been such a weak and under-valued feature of educational provision in Kyrgyzstan. VET occurs in two modes. VET I relates to initial vocational education which is taken at grades 10 and 11 and is under the control of a specialist agency, SAPTE. VET II is part of professional education and is under the direct control of the Ministry of Education and Science. The review chapter examines relevant issues and problems which affect both formats. It also focuses on the interface between VET and the labour market. A range of recommendations are made in Chapter 8 to address the identified problems, which are aimed at ensuring a more prominent role for VET in the system for the future.

It is recognised that the teaching career faces many problems in the Kyrgyz Republic at present. Among these, inadequate teacher remuneration is a core issue. Teaching as a career now has low social status, is not attractive to bright school leavers, and suffers from retention problems and a general consciousness of being undervalued. Chapter 9 argues that a comprehensive, well informed policy on the teaching career needs to be devised as a priority concern of Government. Without significant improvement in the salaries and conditions of teachers, the outlook for other reform measures in the classrooms of the country is bleak indeed. Both pre-service and in-service teacher education need to be re-structured and reformed if teachers are to be equipped to meet the challenges expected of them.

Although higher education gets limited support from the State there has been a great increase in both the number of institutions and the number of undergraduate students over recent years. The State, through the Ministry of Education and Science, exercises considerable controls and responsibilities over the 31 public HEIs. For most students access to higher education is determined by whether or not they or their families can afford to pay the fees.

One of the main reform objectives for higher education has been to modernise the structure and delivery of degree programmes. A key concern regarding contemporary higher education relates to its quality assurance procedures. There is concern also that research is under-funded and is not allocated to maximum advantage. Chapter 10 focuses on the major issues affecting higher education and makes a range of recommendations on the challenges which should be of major assistance to the authorities in the state and in the institutions. The concluding Chapter 11 draws together the key strategic recommendations from those listed at the end of each chapter.

In its analysis and recommendations, the review team bore in mind the political, economic, social and cultural context for the extensive education reform agenda. The authors have been keen to ground their proposals in the practical reality that exists, and they focus on the ways and means of more effectively realising the goals set out for the system. The team seeks to draw the road-map that might guide the Kyrgyz authorities as they plan the way forward.

There are significant resource implications for the implementation of the recommendations when viewed cumulatively. It is accepted that action may not be feasible on all fronts simultaneously, and that the authorities may need to establish priorities and a phasing-in process. It is hoped that the review may help donor countries and agencies to act supportively in relation to the lines of action decided upon in conjunction with the Kyrgyz authorities. The achievement of the overall educational reform agenda is a long-haul process. It would benefit from correct policy decisions, based on sound analysis, and implemented in a sustained and consistent way. The task is great, but its successful achievement will be of landmark importance for this and future generations of the Kyrgyz Republic.

Process of the review

The review was undertaken without the availability of a Country Background Report. The review was a joint undertaking by the OECD and the World Bank, with an in-kind contribution from the European Training Foundation. The review team's site visits took place from 13 to 28 April 2009.

In the course of its visit, the review team held a great number of meetings, sometimes as a plenary group, and more often as sub-groups with particular responsibility for sub-themes. Meetings were held with the Minister of Education, and with senior officials in charge of various parts of the administration of the education system. Team members also met with the leaders of the Academy of Science and of the Kyrgyz Academy of Education (KAE). Meetings were also held with key officials in the Ministry of Finance. The Chairperson and Vice-Chairman of the Education Committee of Parliament

met the team, and the team also had discussions with leaders of the Social Policy Department of the Presidential Administration. Among other key national agencies visited were the State Agency for Professional-Technical Education, the National Statistical Committee, the Centre for Educational Assessment and Teaching Methods, the Institute for Technologies in Education, and the Kyrgyz Chamber of Accounts.

While a good deal of the work was concentrated in the capital Bishkek, the team broke into two groups who spent several days visiting the regions. They met with regional and local education authorities. Overall, the team visited a large variety of educational institutions, schools of various sizes and environmental contexts, VET colleges, pedagogical colleges, universities, and teacher training institutes (TTIs). Members visited both public and private higher education institutions. Members also interviewed the Council of Rectors. A discussion was held with senior officials of the teachers' union. As donors and Non-governmental organisations (NGOs) feature prominently in supporting education efforts in the Kyrgyz Republic, interviews were held with representatives of agencies such as the Asian Development Bank, Save the Children, Open Society Institute and Soros Foundation Network (OSI/SFN), United States Agency for International Development (USAID), Education Network Association, Foundation for Education Initiatives Support (FEIS), Step by Step Programme, UNICEF and the Aga Khan Foundation. The site visit was a very busy and intensive one. The team was fortunate to have skilled organisers at local level to facilitate all the logistics involved.

During their many meetings with Ministers, key officials, heads of agencies, institutional leaders, teachers, students, regional and local officials, the review team was met with great courtesy, co-operation and open discussion. The team wish to place on record its deep appreciation of all the assistance received, and of the generosity of time given to it by its interlocutors. Team members learned a great deal from the visits to institutions and the meetings held, which greatly complemented their study of much documentary material. The interest of the general public in education and its development is a valuable asset for the Kyrgyz authorities to draw on as they plan for the future. It is the fervent hope of the review team that its report may be a worthwhile contribution to the educational tasks which lie ahead.

Notes

1. Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. The division was made along roughly linguistic lines, although clearly there are significant linguistic, ethnic, religious and cultural “overlaps” among all five states.
2. The Ministry of Local Self-Government, which supervises the *ayil-okmotus* and city authorities, also has a key role, as difficulties in implementing per capita financing have shown. Under *ayil-okmotus*, schools are powerless to manage funds or savings generated from allocated funds.
3. See OECD (2010), *Reviews of National Policies for Education: Kazakhstan, Kyrgyz Republic and Tajikistan 2009: Students with Special Needs and those with Disabilities*, OECD Publishing. Also Policy Studies in Education: Chapter 4. Inclusive Education. Manila: ADB Second Education Project (2008).
4. Educational Testing Service (or ETS), founded in 1947, is the world’s largest private non-profit educational testing and assessment organisation, based in the United States.
5. The SAT Reasoning Test (formerly Scholastic Aptitude Test and Scholastic Assessment Test) is a standardized test for college admissions in the United States.

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Chapter 2

Patterns of educational expenditure with comparative perspectives

This chapter compares the patterns of education expenditures in the Kyrgyz Republic to other countries at all levels of the education system. It also looks at the transfers from central government to poorer regions.

Total educational expenditure

Expenditure on education has been increasing steadily in the Kyrgyz Republic since the beginning of this decade. Between 2001 and 2007 real expenditure increased by 147% and grew from 3.9% of GDP to 6.5% (Table 2.1). Expenditure on education increased from 23.2% of total public expenditure in 2001 to 26% in 2006, but declined to 21.2% in 2007. The decline relative to total public expenditure is explained by a sharp increase of public expenditure in 2007, where it reached 30% of GDP.

Table 2.1. **Education expenditures**

	2001	2004	2005	2006	2007
Million KGS	2 847.6	4 556.4	5 066.8	6 568.4	9 079
Million KGS of 2007	3 670	5 369	5 722	7 028	9 079
As percentage of GDP	3.9	4.8	5	5.8	6.5
As a share of total public expenditures ^a	23.2	24.2	25.2	26	21.2

Note: a. Figures include private fees charged by private institutions.

Source: MOF.

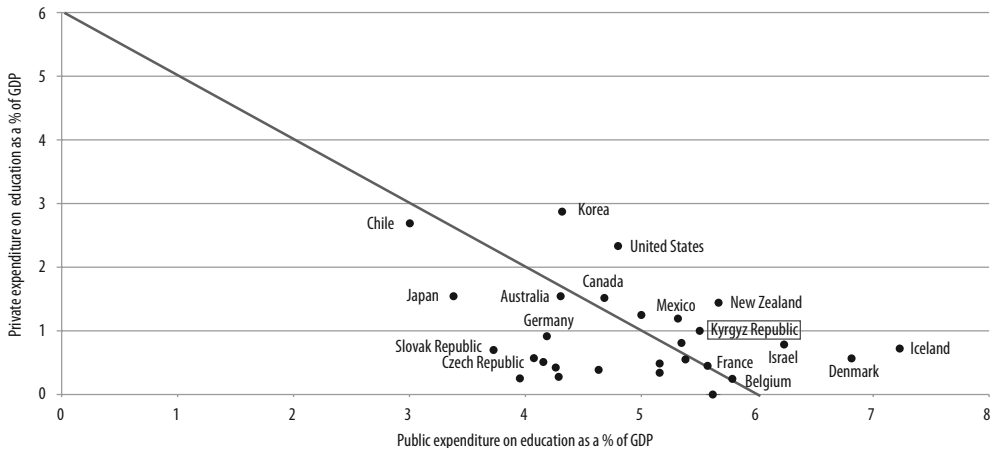
The increase in educational expenditure during the decade is impressive and reflects a strategic priority assigned to education by the Government. Expenditure as a percentage of GDP, which is a measure of country's relative effort compared to production of other goods and services, was low by international standards at the beginning of the decade. However, after an increase of 2.6% in 2007, the Kyrgyz Republic is among the countries with the highest total expenditure in education in proportion to its GDP. Figure 2.1 shows that few countries included in the 2008 edition of the OECD report *Education at a Glance* (OECD, 2008) attain such a high share of GDP devoted to education. Only Israel, Iceland, Denmark, Korea, the United States and New Zealand had higher total expenditure as a proportion of GDP, and this is mostly due to higher overall public expenditure. Note that if the figure for 2001 were included, the Kyrgyz point would have been the lowest in the graph. The Kyrgyz figure is not standardised for cross-country comparisons and, therefore, the point should only be considered as an approximation. However, it is probable that the figure underestimates the total education effort by the Kyrgyz Republic as figures for other countries include fees in fully private institutions.

Considered as a fraction of total public expenditure, the public education effort looks even more extraordinary. The OECD average in 2005 was 12.9%, with most countries below 16%. Only Mexico with 23.2% and Malaysia with 25.2% have shares above twenty percent.

Interestingly, if expenditure is restricted to non-tertiary institutions, the Kyrgyz Republic appears with the highest relative total expenditure. In terms of spending by level of education, in 2007 only 1% of GDP was spent on higher education, of which 75% was funded from private fees. Given a total of private fees of 1% of GDP for that year, public expenditure on non-tertiary education is 5.3% of GDP and private expenditure is 0.2%. For the sake of visual clarity in Figure 2.2, the scale of the y-axis is not the same as the x-axis. To facilitate visual inspection of total expenditure a line has been drawn depicting public and private expenditure adding up to 5% of GDP. Only the Kyrgyz Republic and Iceland are above that number. In terms of public expenditure the distance with respect to other countries is more impressive, as only Iceland (5.2%), Denmark (4.4%), Sweden (4.2%), Israel (4.2%) and New Zealand (4.0%) are above 4% of GDP. Sweden is not depicted in the figure because no estimate is presented for private expenditure.

In contrast to overall education spending, total expenditure on higher education is below the OECD average of 1.5% or the average for the nineteen

Figure 2.1. **Public and private expenditure in education as a percentage of GDP**



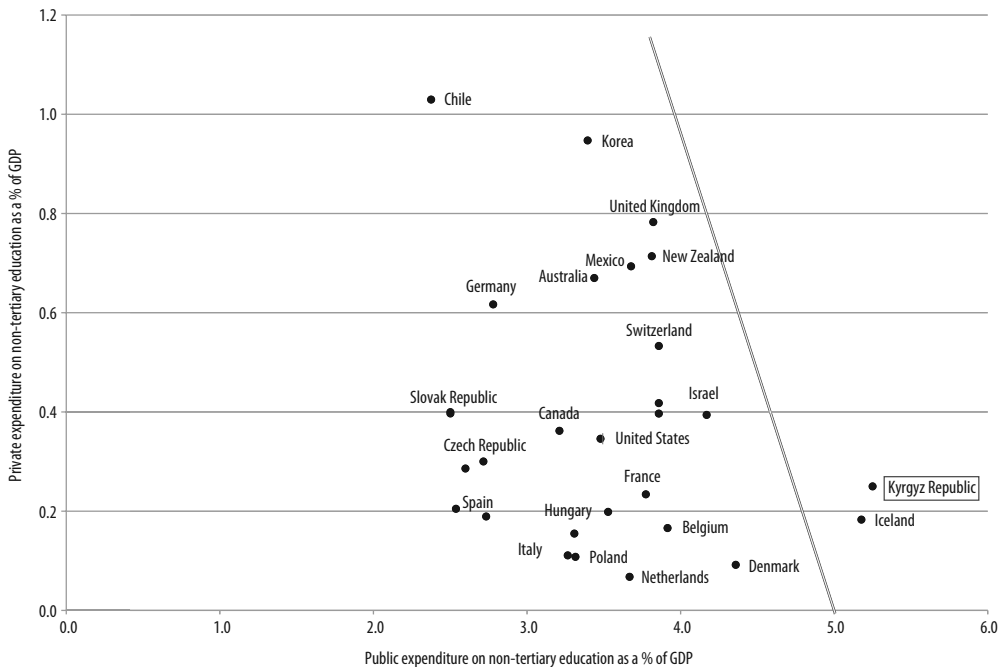
Note: Figures for most countries correspond to 2005. Kyrgyz Republic correspond to 2007. Data for Kyrgyz Republic might not be strictly comparable with other countries as data sources are different. In particular, private expenditure in private education institutions is not included. Some country labels have been suppressed for the sake of visual clarity.

Source: OECD (2008), MOF and NSC (2008).

members of the European Union of 1.3% (Figure 2.3). Among developed nations there are only a few that spend a lower proportion of GDP than the Kyrgyz Republic (see 1% line in the figure). Moreover, the Kyrgyz Republic has one of the largest shares of private financing of higher education (as the line starting from origin shows, only Chile and Korea exhibit higher shares). Given that expenditure on higher education is mostly financing undergraduate studies, relying on private contributions is also recommended from an efficiency point of view, unless there are liquidity constraints that limit the possibility of contributions by families, an issue further analysed in Chapter 10.

In summary, the effort the country is undertaking in financing its educational system is admirable. Moreover, this success is even more remarkable

Figure 2.2. **Public and private expenditure in non-tertiary education as a percentage of GDP**



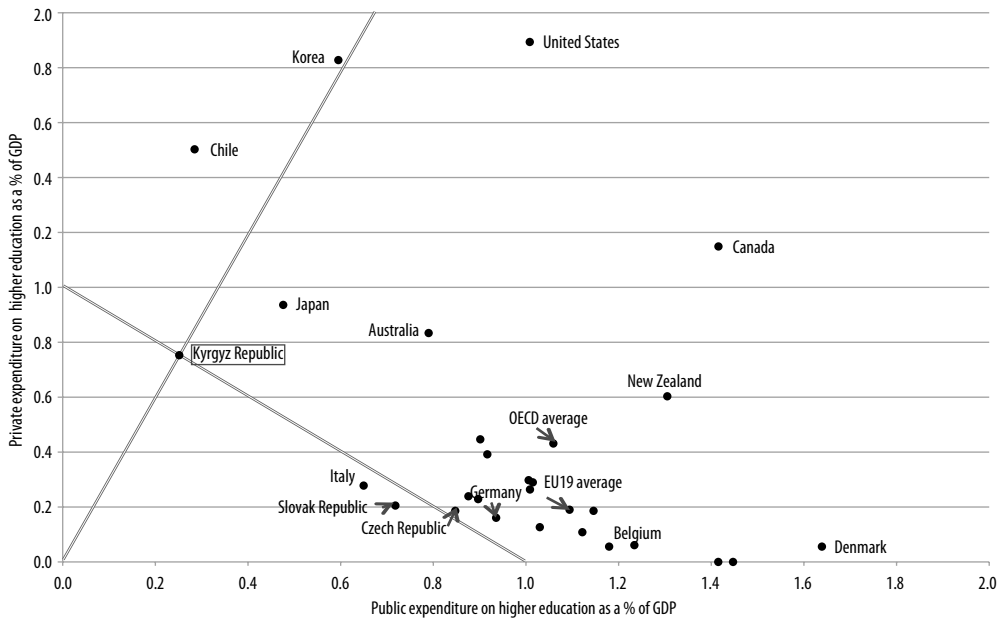
Note: Figures for most countries correspond to 2005. Kyrgyz Republic correspond to 2007. Data for Kyrgyz Republic might not be strictly comparable with other countries as data sources are different. In particular private expenditure in private education institutions is not included.

Source: OECD (2008), MOF and NSC (2008).

when considering expenditure in non-tertiary educational institutions. The question is: *where is this money going?*

First, it is interesting to look at the extent to which this high expenditure is translated into expenditure per student. In Figure 2.4 it can be observed that Kyrgyz public expenditure per student as a percentage of GDP is not high in international ranking. The answer is, of course, that the country has a much larger proportion of its population enrolled in the educational system compared to OECD countries that, while spending less, end up devoting to each student a larger share of their per capita GDP. The Scandinavian countries and countries in the South of Europe rank particularly high due to this reason. This issue and the degrees of freedom that the country has to improve the resources dedicated to advancing students' learning is discussed later in this chapter.

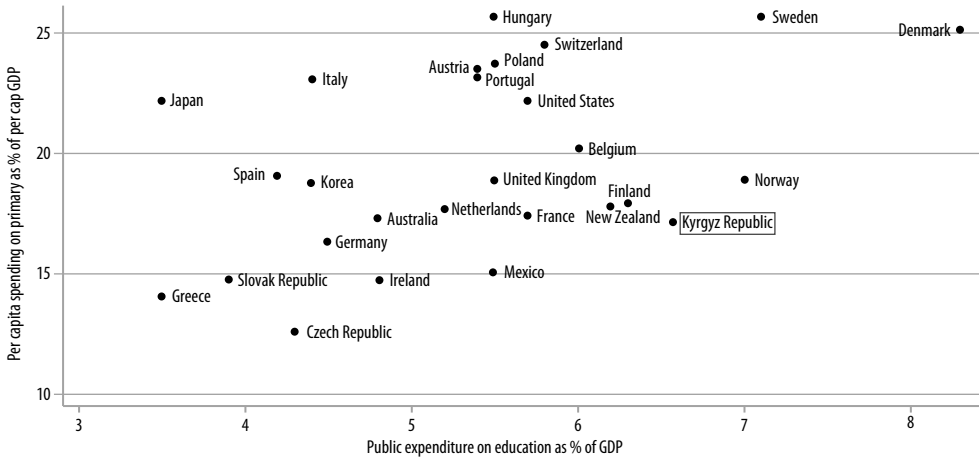
Figure 2.3. Public and private expenditure in higher education



Note: Figures for most countries correspond to 2005. Kyrgyz Republic correspond to 2007. Data for Kyrgyz Republic might not be strictly comparable with other countries as data sources are different. In particular private expenditure in private education institutions is not included.

Source: On the basis of OECD (2008), MOF and NSC (2008).

Figure 2.4. Expenditure in education and per capita expenditure in primary education, 2007



Note: Data for Kyrgyz Republic might not be strictly comparable with other countries as data sources are different.

Source: World Bank (2009) and NSC (2008).

Table 2.2. Expenditure by level 2007 (KGS million)

	Budget			Private fees paid to public institutions (<i>special means</i>)			Total
	Total	Republican	Local	Total	Republican	Local	
Pre-school	420	24	396	104	12	91	524
Regular schools	4 440	65	4 375	73	3	70	4 513
Initial vocational	277	273	4	38	37	0	315
Secondary vocational	126	111	15	72	64	8	199
Higher education	355	355	-	1 069	1 069	-	1 425
Orphanages	25	15	10	1	1	-	26
Non-school	85	11	73	3	2	1	87
Special needs	75	75	-	3	3	-	78
Music schools	48	5	43	3	1	2	51
Other	1 012	897	115	111	104	7	1 123
Investments	836	786	50	-	-	-	836
Total	7 700	2 618	5 082	1 476	1 297	180	9 176

Source: MOF.

Expenditure by educational level

Most of the budget resources are spent on school and pre-school current expenditures: of the total education budget 57.7% was spent on general schools, 5.2% on vocational schools, 1.6% on special needs and musical schools, and 5.5% on pre-school education (Table 2.2). An additional 10.9% is classified as *investment*. In contrast, 72.4% of *special means* – which are fees charged for services by public institutions, including fees to be paid by families – are concentrated in higher education. In 2007 *special means* corresponded to 16% of the total reported in Tables 2.1 and 2.2. In other words, private expenditure was at least 1% of GDP in 2007. It is the lower bound estimate of the actual total private expenditure because fees paid to private institutions are excluded from governmental budget figures.

The estimated expenditure per student by level for 2007 is presented in Table 2.3, based on Table 2.2 and the last figures of enrolment provided by NSC (2008). Expenditures per student in pre-school and regular school have increased and this partly explains why the ratios look more in line with OECD standards. The number of students considered in the computations for vocational and higher education is also higher. For instance, if all students enrolled in public universities are considered instead of only those receiving scholarships or public support, the ratio of expenditure per student of total expenditure, compared to expenditure on a student in primary and secondary regular school is 2.1 in pre-school, 3 in vocational primary, 1.2 in vocational secondary and 1.5 in higher education. The last column in Table 2.3 shows that considering only public resources spent on each level the ratios compared to regular schools is 1.8 for pre-school, 2.7 for primary vocational, 0.8 for secondary vocational and 0.4 for higher education. That is, considering public money, only vocational primary is expensive relative to regular schools. These estimates contrast with some report figures for 2006 (Socium Consult, 2007), where the average annual expenditure per student was KGS 6 010 in pre-school; KGS 2 229 in primary and secondary general schools, KGS 11 980 in initial vocational, KGS 10 234 in secondary vocational schools and KGS 8 530 in higher education. It is possible that some of these figures, and especially the last ones, correspond to a formula per student for providing public financing to educational institutions. The ratios compared to the average for primary and secondary students is 2.7 in pre-school, 5.4 in initial vocational, 4.6 in secondary vocational and 3.8 in higher education.

Vocational education before the tertiary level should not be much more costly than secondary general education, if both are efficiently managed. A slight difference in favour of vocational education might be explained by the need to have special equipment or small courses for applied work. The actual difference might be due to inefficiently low student teacher or staff ratios in vocational education or enormous differences in other current expenditures.

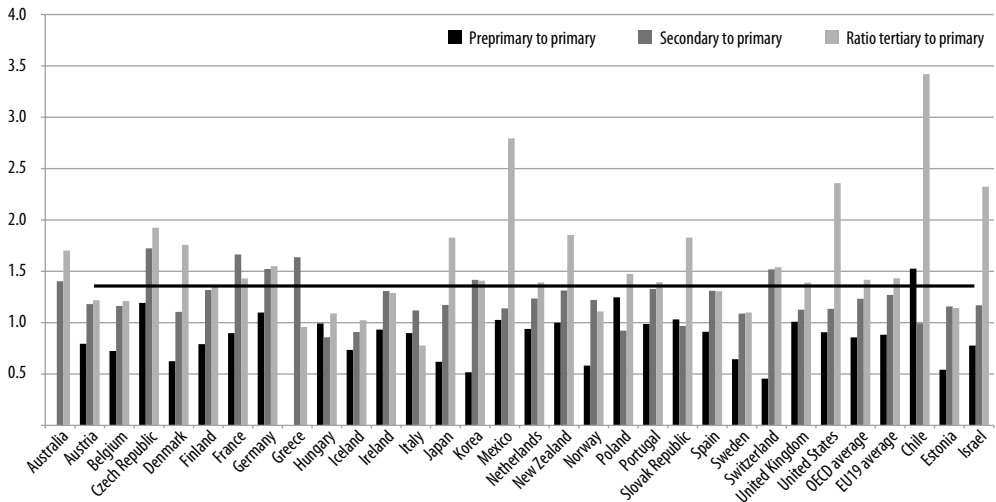
Table 2.3. Approximate estimates of expenditure per student by level, 2007

	Students ^a	Per student total	Per student public	Per student fees	Total ratio to secondary	Public ratio to secondary
Pre-school	59 156	8 854	7 098	1 756	2.1	1.8
Regular schools	1 095 242	4 121	4 054	67	1	
Vocational primary	25 525	12 333	10 856	1 477	3	2.7
Vocational secondary	40 086	4 952	3 149	1 804	1.2	0.8
Higher education (HE)	225 577	6 315	1 576	4 740	1.5	0.4
HE excluding distance learners	108 567	13 122	3 274		3.2	0.8

Note: a. Only considers students in state institutions.

Source: Table 2.2 (MOF) and NSC (2008).

Figure 2.5. Ratios of expenditure per student on educational levels relative to primary education



Notes: The black horizontal line corresponds to ratio pre-school to regular school in Kyrgyz Republic when food is excluded from educational expenditure. The grey dotted line corresponds to higher education ratio to regular school in the Kyrgyz Republic when students in distance education are included in the denominator.

Except for Israel, Chile, Denmark, Iceland and Japan, tertiary education is discounting expenditure in research related activities.

Source: OECD (2008).

This might be due to enrolment below what might be necessary for benefiting from economies of scale. This issue is further considered in Chapter 8.

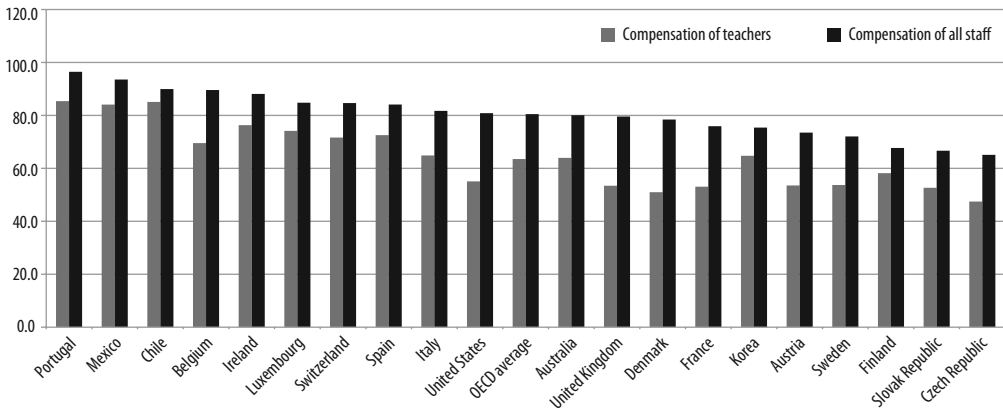
The low ratio in higher education is explained by the high enrolment in that level. Figure 2.5 shows that this is in line with international practices, as most countries reported in OECD (OECD, 2008) have ratios between 1 and 2, with an OECD average of 1.4. This is in line with total per student expenditure of 1.5 in the Kyrgyz Republic, although the number is not strictly comparable because the OECD statistics consider full time equivalent students and they have not been corrected for the full time equivalence of distance and evening students. OECD also reports a number including research activities, which is higher and less comparable with the Kyrgyz Republic given the low expenditure on research. The OECD average for the ratio that includes research activities is 1.9 (OECD, 2008).

The level of pre-school per student expenditure to school expenditure is high by international standards. This is partly explained by the fact that the OECD (2008) data only include children 3 years and older. An important part of the difference is explained by the importance of food in current pre-school expenditure as shown below. It might also reflect the fact that pre-primary school teachers are paid less than school teachers in some countries, the use of more materials in school education in other countries, fewer staff or larger class size. This issue is further treated in Chapters 4 and 5.

National Statistical Committee (NSC, 2008) reports figures for educational expenditure between 2002 and 2006, where expenditure for pre-school and school is disaggregated by salaries and food components. As a proportion of GDP, salaries amounted to 1.9% in 2002 and jumped to 2.5% in 2006. Food rose from 0.2% to 0.4% in the same period. While, in 2006, 41% of pre-school current expenditure was spent on salaries and 37% on food, in primary and secondary education 69% was spent on salaries and only 9% on food. If the expenditure on food was the same as it was in school education, pre-school expenditure would have been 68% of what it was in 2006. With this proportion, the expenditure per student in pre-school compared to regular school would have been 1.46 instead of the ratio 2.1 reported in Table 2.3. And salaries would have represented 61% of pre-school current expenditure instead of 41%. This is more in line with figures for other countries.

Figure 2.6 shows the situation in primary education for OECD countries in 2005. The OECD average for the share of salaries in current expenditure is 80% both in primary as well as secondary, also above what is observed in the Kyrgyz Republic. Only Finland, the Czech Republic and the Slovak Republic have shares below 70% in both primary and secondary education, and Sweden for secondary education.

Figure 2.6. Salaries as share of current expenditure in primary education



Note: The horizontal line at 76% represents non-wage educational expenditure for primary and secondary education in Kyrgyz Republic. This estimate does not consider food as an educational expenditure.

Source: OECD (2008).

What seems to be large is the expenditure on food, which represents 8.7% of primary and secondary current expenditure. Nevertheless, even if the costs of food are discounted from total expenditure, total salaries would be 76% of total expenditure, still below the OECD average. Therefore, the perception among some observers that food and salaries are not leaving room for other current expenditures is not correct. As a share of total current expenditure other uses of resources are important relative to the situation in other countries.

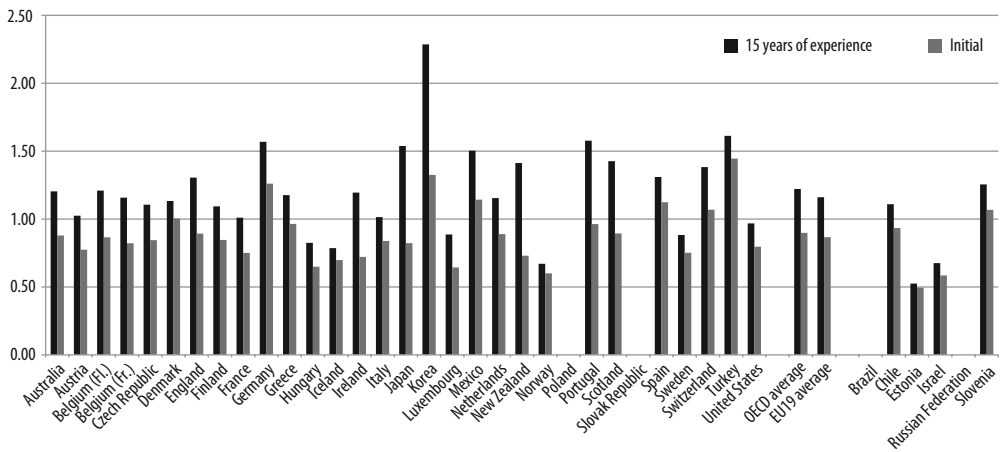
Teacher salaries in the Kyrgyz Republic are determined by a fixed pay scale defined in the Teacher Statute which is readjusted by the central level, especially by Presidential Decree. Table 2.4 shows the structure of teacher salaries for rural school teachers in KGS per month. While there is a widespread perception that the level is low, the recent government effort at improving its level is very impressive. Teacher salaries were increased every year by 15% from 2002–2005, then by 20% in 2006, and by 30% in 2007. Correcting for inflation, this implies an increase of 126% in real terms between 2001 and 2007.

Multiple school visits and interviews by the review team revealed a strong inherent commitment and professionalism hampered by poverty and demoralisation among the teachers. Average teacher salaries are equal to the GDP per capita. From an international perspective, the Kyrgyz Republic is below most countries reported in OECD (2008) when comparing average wages with salaries for 15 years of experience, as reproduced in Figure 2.7. Teachers in Germany, Korea, Japan, Portugal and Turkey earn above 1.5 times the GDP

Table 2.4. **Monthly salary for rural school teachers in KGS (2007)**

Category	Level	Basic teaching workload	Number of hours per week	Additional payments					Total monthly salary	
				Student work check-up	Additional lessons	Classwork	Newly recruited (young) teacher	Rural factor (or coefficient)		Rayon coefficient
Highest	11	1 833.8	18	15	366.76	10		15	2 240.56	
1 st Category	10	1 701.3	18	15	340.26	10		15	2 081.56	
2 nd Category	9	1 568.8	18	15	313.76	10		15	1 922.56	
Newly recruited (young) teacher	5	1 049.4	18	15	209.88	10	200	15	1 499.28	
Newly recruited (young) teacher in a school located in highland regions	5	1 049.4	18	15	209.88	10	200	15	1.5	2 248.92

Source: MOES. World Bank financed Project Implementation Unit.

 Figure 2.7. **Teacher salaries as a proportion of GDP per capita 2006**


Source: OECD (2008).

per capita. Only a few high income countries, such as Luxembourg, Iceland, Norway and Sweden, along with Estonia, Hungary and Israel pay teachers below their GDP per capita.

In any case, this comparison shows that the Kyrgyz Republic does not pay particularly low teacher salaries in relation to its GDP per capita. The key problem behind the perception of low salaries seems to be the low level of GDP per capita. The question turns out to be: is the only way to increase educational inputs or teacher wages to increase even further the already high total educational expenditure? For this purpose, a look at the key aggregate factors explains the actual allocation of resources.

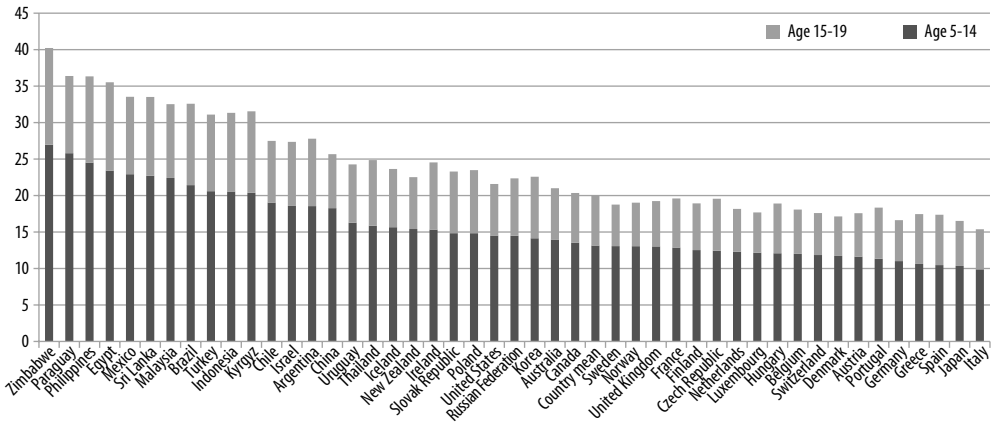
Aggregate indicators explaining overall expenditure pressure

There are a few indicators that explain differences in aggregate expenditure by country and differences by educational level within a country. Overall spending is affected by the demographic pressure arising from the share of pre-school and school age population. All other things being equal, the larger this share the larger the fraction of GDP that needs to be devoted to education. On the resource utilisation, most important uses for resources dedicated to education are to: increase enrolment, reduce student teacher ratios (or class size), increase teacher salaries or augment other expenditures per student. These indicators illustrate the key aggregate trade-offs of educational policy. The last two have been treated in the last section.

Figure 2.8 shows the percentage of the population represented by two age cohorts that are normally reported to summarise the demographic pressure on the educational system: 5-14 and 15-19 year olds. In the Kyrgyz Republic both age groups add up to more than 31% of the total population, while in most developed European countries they are below 20% (which is the average of the OECD countries). In the Russian Federation and in the United States they represent 22% of the total population. This reflects the fact that the Kyrgyz Republic is a young country; 37% of its population is below 18 years old, and this puts heavy pressure on its educational budget.¹ For instance, to achieve the same expenditure per pupil as a share of GDP as the OECD average, the Kyrgyz Republic needs to devote 1.6 times more of its GDP to education, if all other things were equal. This difference explains why, as seen earlier, despite the share of educational expenditure of GDP being one of the largest in the world (Figure 1.1), the investment per student as a fraction of GDP is below average (Figure 1.4).

There are important variations in net enrolment that might explain different pressures for educational expenditure within the budget. A very important asset of the Kyrgyz Republic is high enrolment rates at the different levels. Net enrolment rates are high as compared to other developing countries, as is the case in much of the former Soviet Union.

Figure 2.8. Share of the population aged 5-14 and 15-19 years old (approximately in school age)



Source: OECD (2007) and NSC (2008).

Table 2.5 presents other basic indicators for 2006. The average institution size as measured by the student per institution ratios is reasonable for each level, except for the small size of vocational institutions, as high school institutions are normally larger. This is partly explained by the fact that in the Kyrgyz Republic, vocational institutions enrol students for a short period. The ratio of students to teachers is extremely low in initial vocational education and still very low in secondary vocational education, despite recent increases in the number of students (57% between 2002 and 2007 when considering only public institutions). This explains in part the higher expenditure per student at this level, but only to a modest extent since student teacher ratios are also low in primary and secondary general education. Student teacher ratios are higher for pre-school education, but lower ratios are recommended. This is not due to abnormally high student teacher ratios in pre-school education but low ratios in secondary and vocational.

Student teacher ratios in Table 2.5 can be compared with other countries presented in Figure 2.9. Pre-school student teacher ratios are well above most countries except Mexico, Turkey and Israel. With regard to primary education, the Kyrgyz Republic is close to the OECD average,² Spain and the United States. However, many countries with more resources and lower shares of the population at school age have higher ratios: France, Germany, Japan, New Zealand, Slovak Republic, the United Kingdom and Israel. Korea, Mexico, Turkey and Chile have ratios above 25. The ratios for secondary education presented in Figure 2.9 include upper secondary, and therefore might

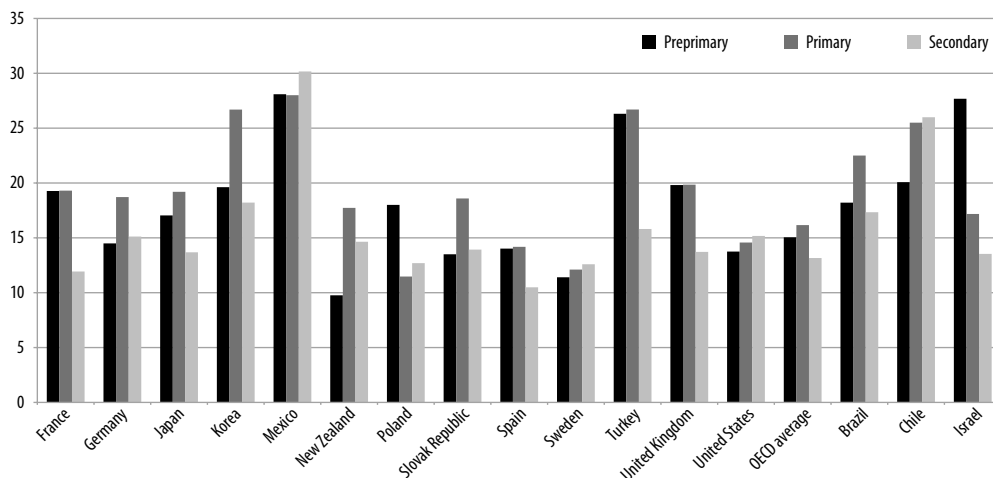
be compared both with secondary and vocational education in the Kyrgyz Republic. The latter ratio is below the countries used for reference but secondary is more in line with countries such as Japan, the Slovak Republic, the United Kingdom, Sweden or the OECD average. Still, it is below richer countries such as Germany, Korea or the United States, and much below countries that are more comparable in terms of share of the population at school age such as Mexico and Chile.

Table 2.5. Indicators by educational level, 2006

	Institutions	Students	Teachers	Students per institution	Student teacher ratio
Pre-school	465	59 156	2 462	127	24
Secondary	2 183	1 098 250	73 620	503	15
Initial vocational	111	29 319	3 281	264	9
Secondary vocational	82	43 413	3 410	529	13
Higher education	49	250 460	14 400	5 111	17

Source: National Statistical Committee (2008).

Figure 2.9. Student-teacher ratios, 2006



Note: Except for Israel, Chile, Denmark, Iceland and Japan, Tertiary education is discounting expenditure in research related activities.

Source: OECD (2008).

Note that if the objective is to improve educational quality, expenditure on food or in maintaining low student teacher ratios are considered by experts some of the least cost-effective policies in Latin America (see Schiefelbein *et al.*, 2000) and English speaking Africa (Schiefelbein and Wolff, 2007). Low effectiveness of student teacher ratios is a result of the production function literature (Hanushek, 2008).

Expenditure by region

Indicators related to expenditure by region are presented in Table 2.6. Annual expenditure per student goes from a minimum of KGS 2 893 per year in Jalal-Abad to a maximum of KGS 4 812 in Bishkek. The next columns present the categorical grant per student – the main transference from the republican budget to the local budget, mostly to pay for salaries, social fund and nutrition – and the equalising grant per student, intended to ensure a certain minimum standard of provision.³ It can be appreciated that Bishkek does not receive any transfers from the republican budget. The reason is evident in the next column, depicting general revenues of the local budget divided by the number of students. This gives a flavour of the capacity of the local governments in each *oblast* to attend to educational needs without support of grants from the republican budget. While Bishkek general revenues per student are KGS 14 765, Naryn only raises KGS 776. Chui and then Issyk-Kul are the *oblasts* with second and third income generating capacity, both with more than KGS 4 000 per student enrolled. The next columns present total salaries divided by the number of students and poverty rates by *oblast*.

Table 2.6 reflects important inequities in the distribution of resources in the educational system and even beyond its borders. The possibility of attending expenditures on so called non-protected items (such as instructional materials, repairs and utilities) depends on the income generating capacity of local governments, and this capacity varies widely between and within *oblasts*. Although we have been able to characterise only the first variation due to the aggregate level of our information, the review team's interviews suggested wide gaps between local governments even within *rayons*. This disparity is one of the most important equity concerns with any process of decentralisation of education financing. Considered per student, general revenues in Bishkek are 19 times higher than in Naryn or 16 times in Batken. The minimum difference is with Chui, which raises 31% per student of what Bishkek is capable of generating.

For redressing these inequities a system of intergovernmental transfers is required. In the Kyrgyz Republic there are two mechanisms, which are not sufficient to correct for inequities at the *oblast* and city level.

First, the equalisation grant, which represents a tiny 6% of expenditure on the school system and per student attains a maximum of KGS 770 per student per year in Naryn – representing 16% of per student expenditure in Bishkek – followed by Osh 9% and Batken 6%. However, the basis for distributing this grant is not clear, as other poor districts such as Batken or Jalal-Abad obtain considerably less per student. Jalal-Abad has higher poverty rates and lower income generating capacity but receives a lower equalisation grant per student than Talas and ends up with the lowest expenditure per student.

Second, the categorical grant is designed to cover salaries and food. The exception is Bishkek, which, given its high general revenues, does not require this support and thanks to this independence enjoys a high autonomy from the central government for expenditure on items other than salaries (in fact Bishkek spends the largest proportion of the educational budget on food, despite having the largest per student budget and a lower poverty rate).

Differences in average salaries between *oblasts* are less pronounced than differences of expenditure per student. This relative uniformity might be explained by the Teacher Status Law which sets a national wage scale. From the last two columns in Table 2.6, the student teacher ratios are easily

Table 2.6. **Expenditure related indicators by oblast 2006**

	Expenditure per student	Per student categorical grant	Per student equalisation grant	General revenues per student	Average salary per month	Poverty (%)	Total students in public institutions ^a	Total teachers ^b
Jalal-Abad	2 893	1 619	99	1 107	2 393	55.9	239 259	15 254
Issyk-Kul	3 746	1 666	–	4 113	2 058	51.7	97 085	7 450
Naryn	4 514	2 635	784	776	2 791	51.2	65 140	5 776
Osh ^c	3 130	1 338	446	1 303	2 200	55.9	308 707	20 599
Talas	3 597	1 912	134	1 511	2 190	44.4	52 420	4 155
Chui	4 030	1 751	–	4 611	2 816	22.0	152 980	8 975
Batken	2 998	1 754	270	900	2 353	59.1	102 755	6 918
Bishkek	4 812	–	–	14 765	2 946	10.8	121 654	6 955
Total	3 522	1 546	217	3 325	2 424	43.1	1 140 000	76 082

Notes: a. Corresponds to number of children in pre-school institutions (2006) plus number of students in daytime general education minus students in private schools (2006/2007).

b. Corresponds to number of teachers in daytime general education schools excluding part-time workers plus number of educators in pre-school institutions.

c. Includes Osh *Oblast* and Osh city as poverty indicator was not separated for both areas.

Source: World Bank (2008b), NSC (2008) and Socium Consult (2008).

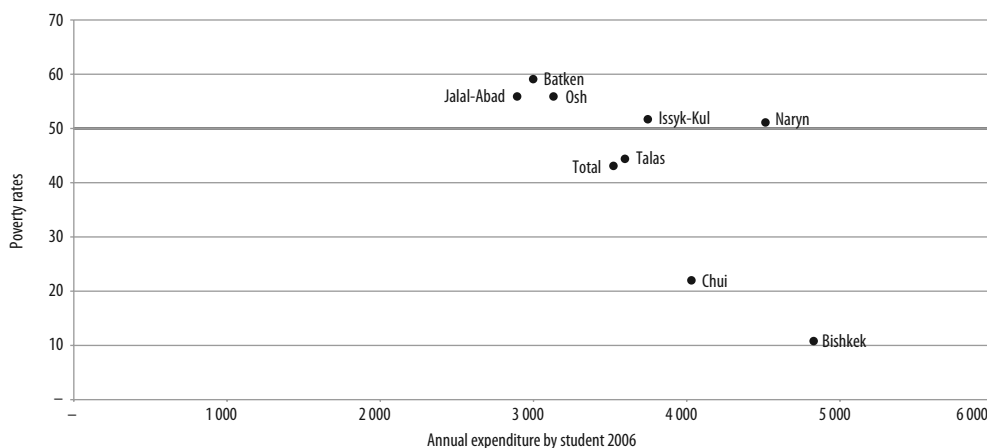
inferred. They range between 13 (Talas and Issyk-Kul) and 17 (Bishkek), except for Naryn that has a ratio of 11, which together with its higher average salary level helps explain its largest categorical grant per student.

The system of intergovernmental transfers attenuates but does not eliminate disparities in per student expenditure. Per student expenditure is correlated with general revenues per student and inversely correlated with poverty rates as shown in Figure 2.10.

The highest average salaries are found in the regions with the largest income generating capacity – Bishkek and Chui, which also have the lowest poverty rates. Naryn, thanks to – by far – the largest per student transference of categorical and equalising grants, is very close to them. In fact, due to the latter, Naryn has the second largest expenditure per student. Due to the high transfers per student from the government budget, Naryn appears as an outlier in Figure 2.10. These differences in per student expenditure between *oblasts* must be taken into account when moving to a per capita funding formula, an issue which will be addressed in Chapter 3.

For poor districts, teacher salaries represent a higher proportion of educational expenditure, as the compensation by the central government mostly occurs for financing this line item. Figure 2.11 shows that the correlation between poverty rates and per student non-salary expenditure is high, Issyk-Kul now being the outlier due to its higher general revenue generating capacity despite its high poverty rate. The coefficient of variation for per student non-salary expenditure is 0.36, and if nutrition expenditure is also excluded, the coefficient of variation reaches 0.38. This implies a larger disparity across

Figure 2.10. Expenditure per student and poverty rates, 2006

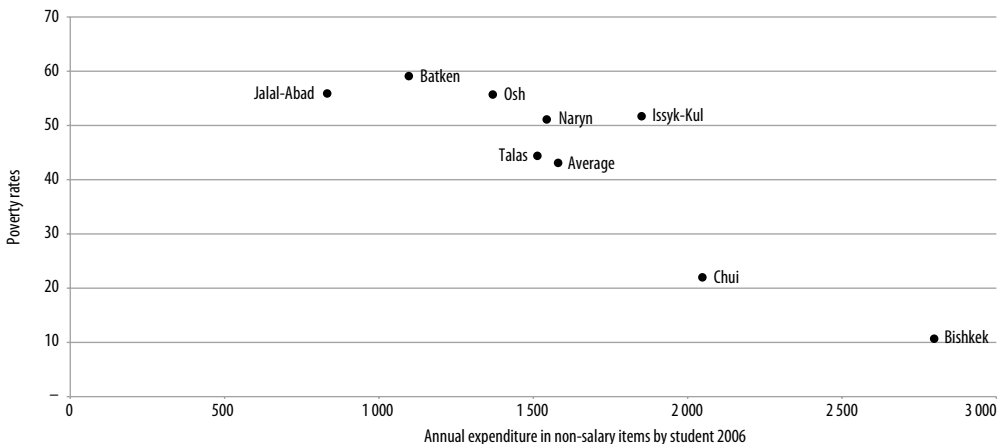


Source: World Bank (2008b), NSC (2008) and Socium Consult (2008).

regions than for salaries (0.14) and total expenditure (0.2). These higher coefficients of variation are explained because the equalisation effect of the categorical grant has been almost removed when deducting both salary and nutrition line items, showing that government transfers have some effect on compensating inequalities between local governments.

The concern with equity is important as literature on education has arrived to the conclusion that equality of opportunity requires reversing the inequalities in favour of poorer areas.⁴ Equality of inputs does not guarantee equality of learning because there is a positive correlation between learning outcomes and the socioeconomic status of families (see Hanushek, 2008, for a synthesis of the literature). This has been recognised recently through the use of funding formulas that give more resources for vulnerable students by countries as diverse as South Africa, the Netherlands and Chile. On the contrary, the decentralisation of educational financing in other countries has produced similar or larger inequalities than those observed in Kyrgyz Republic. Even centralised systems have detected inequities in terms of per student expenditure due to the concentration of more qualified and better paid teachers in certain areas. Therefore, the issue of equity is only recently being addressed in developed countries as well. It is a challenge for the future, requiring a stronger system of intergovernmental transfers or a recentralisation of educational financing.

Figure 2.11. Annual expenditure on non-salary items and poverty rates, 2006



Source: World Bank (2008b), NSC (2008) and Socium Consult (2008).

Education and resources by income quintile

Household surveys are a powerful instrument for characterising and analysing the situation of a country in relation to social services. In the Kyrgyz Republic household surveys are conducted regularly but appear not to be used for strategic decisions of educational policy. This in itself is a matter for concern.

Household surveys are important to evaluate access and targeting of social services. Table 2.7 presents net enrolment rates for pre-school and school education by consumption quintiles. The higher the consumption quintile the higher the percentage of children aged 0-7 enrolled in pre-school institutions. Only 4.3% of children aged 0-7 living in households of the first consumption quintile are able to attend pre-school or school, against 18.7% of their counterparts in the fifth quintile. The ratio is 4.4.

From these figures it is not possible to appreciate directly the targeting of public pre-school services as some of the enrolment, particularly in the upper quintile, might be in private institutions. However, according to official figures only 2 749 children were enrolled in private pre-school institutions in 2006, a number that has been increasing steadily from 1 636 in 2002, and therefore should not be very much above that figure for 2007. This means that most of the enrolment in Table 2.7 is in public institutions and, therefore, access to public pre-school services is regressive, despite the intention of favouring the poor. This is an issue of incentives, excess demand and the rationing mechanism used to allocate the scarce supply, further treated in Chapters 3 and 4 of this report.

As in most developing nations, it is possible to appreciate from Table 2.7 that the percentage of children is sharply declining with the per capita consumption of the household. There are 2.2 times more children aged 0-7 in households belonging to the first consumption quintile than to the fifth.

Table 2.7. **Distribution of enrolment in pre-school education 2007**

Consumption quintiles	Number of children (in age 0-7)	Children attending pre-school or school	Percentage of children attending pre-school or school
1	236 075	10 124	4.3
2	188 756	20 497	10.9
3	147 912	22 063	14.9
4	140 505	17 694	12.6
5	107 978	20 232	18.7
Total	821 226	90 610	11.0

Source: World Bank staff calculations based on Kyrgyz Integrated Household Survey (KIHS), 2007.

Table 2.8 presents the enrolment rates in vocational and higher education of young people between 18 and 24 years of age by consumption quintile. Access to higher education is heavily biased towards higher income groups, with access in the upper 20% being 24 times higher than in the lowest quintile. Only 2% of youth aged 18-24 had access to higher education compared to 47.4% in the upper quintile. This is very restrictive by international standards and is an issue that requires policy intervention as suggested in Chapter 10. Access to vocational education is more balanced although very low.

Table 2.8. Percentage of youth aged 18-24 enrolled in vocational or higher education

	Vocational education	Higher education
1	1.7%	2.0%
2	3.0%	12.3%
3	2.8%	14.7%
4	7.3%	30.4%
5	5.7%	47.4%
Total	4.3%	23.1%

Source: World Bank Staff calculations based on Kyrgyz Integrated Household Survey (KIHS), 2007.

Table 2.9 shows private expenditure on education by income quintiles. In 2007, households in the lower consumption quintile spent KGS 340 per year on education, those in the upper quintile spent KGS 4 044 per year, or 12 times more. Given that households in the upper consumption quintile also have fewer children, this difference reflects an important difference of opportunities between children according to socioeconomic status. Expenditure on education as a share of total consumption of households is more stable between 2.5% and 4% except for the first quintile where it reaches only 0.7%. The difference in per capita total consumption between upper and lower quintiles is only 2.1 times, but differences in private expenditure on education probably reflect differences in access to pre-school, vocational and tertiary levels.

In fact, the difference in expenditure between consumption quintiles is mostly determined by the payment of education fees that reflects the regressive access to higher education institutions in the country. Another major difference is the expenditure in pre-school education, where the lowest quintile spends only KGS 202 per year against KGS 1 153 per year of the highest quintile. Combining this information with the figures for enrolment in Table 2.7, it might be inferred that children in pre-school age from the fifth

**Table 2.9. Private expenditure on education for different educational levels, 2007
(KGS per year)**

	Consumption quintiles					Average
	1	2	3	4	5	
Total expenses for education	340	1 696	1 822	3 207	4 044	2 221
Education fee	42	990	525	1 675	2 185	1 083
Textbooks	1	4	5	2	2	3
Library	1	2	2	6	2	3
Tutors	0	9	8	13	35	13
Transport	24	128	120	213	316	160
Repair of schools	3	7	10	13	16	10
Non-official payments	36	38	96	110	114	79
Other expenses	30	120	274	381	222	205
Pre-school education	202	398	783	794	1 153	666
Total consumption of households	49 583	59 190	72 148	80 061	106 358	73 457
<i>Percentage of educational expenses in household consumption</i>	0.7	2.9	2.5	4.0	3.8	3.0

Source: World Bank Staff calculations based on Kyrgyz Integrated Household Survey (KIHS), 2007.

Table 2.10. Employment indicators by educational level, 2006

	Labour force	Unemployment rate, %	Employment rate, %	Economic activity, %	Distribution of employed, %
Total	2 285 012	8.3	60	65	100
Primary professional	233 185	7.5	79	85	10
Uncompleted university	53 588	16.3	44	52	2
Secondary professional	308 813	6.3	72	76	14
University	371 909	4.9	77	81	17
Secondary	1 106 449	9.0	65	71	48
Basic	155 727	12.7	33	38	6
Primary	50 703	8.8	18	20	2
No education	4 639	14.8	14	16	0

Source: World Bank Staff calculations based on Labour Force Survey module of Kyrgyz Integrated Household Survey (KIHS), 2006.

quintile count on average with 2.9 times more private resources per student than those in the first quintile. Given that local resources are also correlated with household income levels, it can be concluded that pre-school resources are skewed towards high income groups.

Table 2.10 depicts employment, unemployment and economic activity rates for the population aged 15 years old or above by educational attainment. University graduates have the lowest unemployment rates among all educational groups and the second highest economic activity rate after primary professional. This contrasts with the perception that university graduates are experiencing a difficult time finding employment, which might be true for the small group of university dropouts. However, many graduates obtain jobs for which they are overeducated. Graduates from professional education have also higher activity rates and lower unemployment rates than other educational groups.

The tables in this section illustrate some of the potential of household surveys to obtain a better diagnosis of the current situation of the educational system. Other information that might be obtained include average income, income profiles and rates of return by educational level; and comparison of teacher income with other workers of similar education.

Conclusions

The priority assigned to education by the Government of the Kyrgyz Republic is reflected in gradual and systematic increases in the amount of resources invested in the sector. In 2007, the country achieved one of the largest relative investment in school and pre-school education, both in terms of the share of its GDP and as a fraction of total government expenditure. The contrary occurs with higher education, especially in terms of public sector money.

This prioritisation is correct and reflects clear implementation of strategic thinking. Investing in school and pre-school education is not only socially profitable but also follows from ethical issues assumed by the world community regarding children's right to education, requiring its provision free of charge at least for the first six years of compulsory schooling. The Kyrgyz Republic extends this compulsory schooling free of charge to grades 7-9. In contrast, higher education tends to be profitable from a private point of view and externalities are believed to be more important in school education. These justify relying on private resources for financing teaching services in tertiary education. This poses, nevertheless, a problem of equity insofar as students from poor households might be denied entrance due to inability to pay.

Despite the impressive effort in terms of resources devoted to school education, teacher salaries and per student expenditure in school education

are below international averages. A high proportion of the population in school age and high enrolment rates explain an important pressure on the educational budget, but other countries succeed in paying teachers more by achieving higher student teacher ratios or spending less in complementary inputs. This analysis illustrates the major trade-offs of educational policy in the Kyrgyz Republic. The review team praises the emphasis on sustaining a high enrolment rate. It has doubts about the low student to teacher ratios that are close to the ratios exhibited by countries of much higher development and smaller proportions of the population in school age. Other countries with similar proportions of the population at school age and with important rural sectors show that student teacher ratios might be much higher.

The team also has doubts about the educational value of this low student to teacher ratio as long as it arises from wrong incentives at the local level and an overloaded curriculum. Similar concerns might be expressed regarding the food policy for pre-school and school students although, from a nutritional and social perspective, this might benefit the students.

To give an idea of the magnitude of savings that would accrue from increasing student to teacher ratios, an increase from the actual figure to 20 would allow increasing teacher salaries by a third, which is almost double of the expenditure in non-wage inputs excluding food.

There are important inequities in the distribution of resources in the educational system and beyond its borders. The income generating capacity of local governments is very diverse. Equalisation and categorical grants reduce but do not eliminate disparities in per student expenditure due to dissimilar general revenues of local governments. Per student total expenditure is correlated with general revenues per student and inversely correlated with poverty rates. Differences in average teacher salaries are less pronounced due to the Teacher Status Law, but still exhibit a similar correlation, with some exceptions. In any case, in poor districts teacher salaries represent a higher proportion of educational expenditure as the compensation by the central government mostly occurs for financing this line item. Expenditure on non-salary items is more diverse and exhibits a higher correlation with general revenues per student or with poverty rates.

This inequity of resources reinforces the influence of the socioeconomic status of families on learning outcomes. Addressing this issue might be important when considering changes in funding mechanisms as those discussed in Chapter 3.

Examination of the household surveys conducted for this report shows that enrolment patterns in pre-school, and especially in higher education are strongly biased towards higher income groups. In pre-school this is even the case for public institutions and contrasts with a discourse favouring

access by the poor. The lowest consumption quintile spends less than 1% of its consumption on education while the top 40% around 4% of their higher budget. This does not reflect a better access to public free education but, instead, reflects differences in access to pre-school and higher education as most of the difference is explained by average fees paid in pre-school and higher education institutions. Vocational education is more accessible to the poor but enrolls only a tiny proportion of the population. Finally, contrary to a widespread perception, university graduates exhibit lower unemployment levels than other educational categories, and together with professional graduates have the highest activity rates. However, many university graduates are employed in jobs for which they are overeducated.

Notes

1. Although it might have been more appropriate to have used the 6-14 and 15-17 (or 7-15 and 16-18) age groups.
2. An international definition for grades 1 to 6 encompassing part of what is secondary education in Kyrgyzstan.
3. *Equalising grants* are “transfers from the Republican budget to finance expenditures of local administrations in order to provide a stable social and economic position in accordance with the minimal state social standards.” *Stimulating grants* are “transfers from the republican budget for local administrations to stimulate effective budget funds, funds of the state programmes and projects, funds of the projects directed to increase the incomes of the local budgets and to stimulate mobilisation of the local sources of revenues.” This latter type of grant is provided to local administrations on competitive basis (Law on the Main Principles of Budget Rights, No. 78, dated 11 June 1998, with the last amendment No. 110, dated 15 July 2006).
4. For instance, Betts and Roemer (2005) have arrived to the conclusion that to compensate for actual differences observed in the labour market, black students from poor households would require eight times more resources than white middle class students in the United States.

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Chapter 3

Governance and management of the system

This chapter examines changes of recent years in the governance and administration of the system. It explores the relation between the Ministry of Finance and the Ministry of Education and Science, the rayons and the local and municipal authorities, and looks into the forward planning capacities of the education system. The review team expresses serious concerns about the lack of capacity within the MOES to assess the systems' needs and to monitor reforms, and gives recommendations on improvements to make governance, management and associated financing more efficient.

The education system

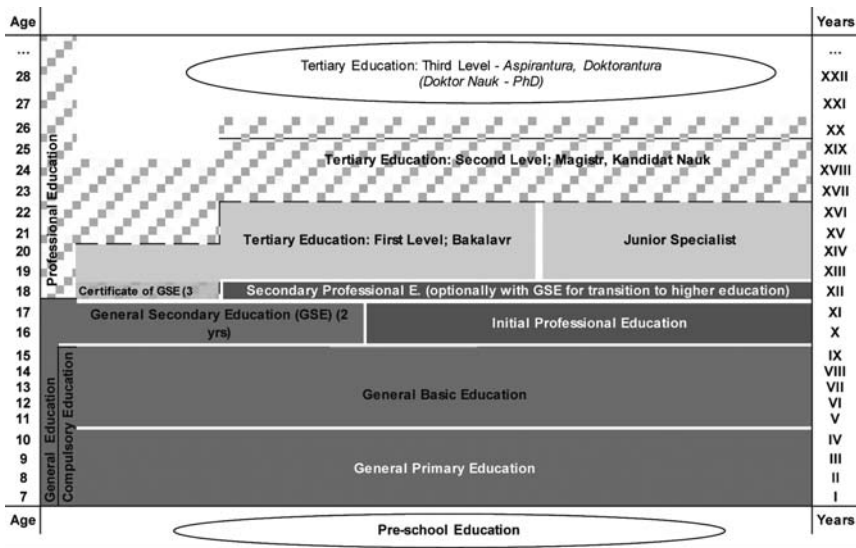
Structure

In 2007 Kyrgyzstan had an estimated 1.1 million children of compulsory school age and a total number of 465 pre-schools (2006), 2 183 general education schools, 191 professional education schools (2006) and 49 state universities (NSC, 2008).

As in other countries in the Central Asian region, the Kyrgyz education system is structured around a general and a professional (vocational) education cycle. School starts at the age of 6 or 7. The general cycle comprises primary (grades 1-4), basic (grades 5-9) and secondary (grades 10-11) general education. Education is compulsory from grades 1 to 9 and pre-school education covers children from age 0 to age 6 or 7. The professional education cycle includes initial and secondary vocational training, higher education under the heading “higher professional education”, and “post-graduate” professional training. General primary and basic schooling is obligatory for all citizens of the Kyrgyz Republic and is provided free of charge in the state and municipal educational institutions (Kyrgyz Republic 2003).

Typically, successful completion of at least basic education is a condition for progression to professional and to secondary general education, but the law *On Education* envisages the creation of special programmes also

Figure 3.1. The Kyrgyz system of formal education



Source: Review team, based on relevant legislation.

for children without this minimum credential. Access to higher education depends on the results of a Republic-wide testing (*Obsherespublikanskoe Testirovanie – ORT*) at the end of grade 11, admission tests administered by each University and ability to pay (see Chapter 10 on Higher Education and Research for more details). Successful completion of general secondary education is a precondition for admission in any case.

The majority of school types are defined in line with the set-up of the formal system according to the level and type of education offered. Yet, private education institutions and some state schools which can afford to retain good quality teachers (*i.e.* through raising fees for additional education services), often integrate professional and general education paths, offer profiled upper secondary education in close co-operation with universities, and/or prepare their prospective students for entering formal education during a “zero grade” school year.

Since the adoption of the law *On Education* in 2003, there has been a substantial increase in the number of private education institutions, most notably in general and secondary education (almost threefold increase in numbers to a total of 55 in 2008), and in secondary vocational education (fourfold increase to a total of 12 in 2008) (NSC, 2008). The ownership landscape is particularly diverse in secondary vocational education, where a total 82 institutions fell under the responsibility of five line ministries, bigger state Universities, two State Commissions, one Union, one Association, and of various private institutions (2008).

Governance arrangements – education process

In principle, the MOES as the central governmental agency for education is the focal point of education policies and system management. According to the law *On Education* in its version of 2003, the MOES is responsible for developing the state educational standards (SES), for approving the rights and authorities of educational organisations, for appointing the heads of republican pre-schools, schools and state universities, for defining policy priorities in the context of the country development strategy, and for co-ordination of curriculum development, teacher training, state examinations, accreditation and donor involvement (Kyrgyz Republic, 2003). For fulfilling its tasks the MOES resorts to a limited number of subsidiary institutions, the largest of which is the Kyrgyz Academy of Education (KAE).

The MOES also works with 59 regional (*rayon* and city) education departments with responsibilities for policy implementation and development, monitoring and control of the education process, development of regional education programmes, co-ordination with the local administrations, aggregation of data from schools on statistics, achievement and assessment, human resources and in-service teacher training. The *rayons*, municipalities like Bishkek, Osh, and small towns have direct responsibility for all the educational institutions on their territory, with exception of the republican institutions which are in the competency of the MOES.

In 2002, budgetary responsibility for almost all educational institutions (except those in the cities of Bishkek and Osh) was devolved to the newly created *aiyl-okmotus* (local government administrations), leaving the *oblast* and *rayon* education departments out of the process of regular budget formation, execution and reporting. On their side, the *aiyl-okmotus* have no responsibility whatsoever for the education process. At the time of preparation of this report the MOES had direct budgetary and methodological responsibility for only about 115 education institutions, mainly central- and regional-level higher educational institutions, secondary professional and specialised secondary schools, gymnasiums and boarding schools as well as various centres, inspectorates and editorial offices. A very limited number of boarding schools is under the authority of larger cities like Bishkek, Osh and Jalal-Abad.

Following a rationale of streamlining the state administration,¹ in the course of internal reorganisations at the time of preparation of this report and of outsourcing of policy areas, in 2007 the *oblast* education departments were abolished and as of 2009 the MOES was restructured into three divisions, eight units and one protocol sector with 82 staff positions.

A snapshot of the current institutional practice reveals that the administration of key areas of MOES competence seems *de facto* devolved to (powerful) subsidiary institutions like the KAE, or is rendered possible only through (over-abundant) donor support. Some concrete examples include the development and assessment of school educational standards curricula and textbooks (KAE); the development of student assessments, in particular for school leaving certificates (KAE or alternatively the independent National Testing Centre); the co-ordination of VET policies (shared with the State VET Agency); the co-ordination of donor involvement – by and large led by the development partners themselves in the context of the respective Education Strategy (EDS – currently for the period until 2011). The development and implementation of the Strategy itself takes place almost entirely through donor expertise and management support.

The institutional standing of the MOES is further weakened by a legislative framework which at present fails to “file” some key areas of education system management in its portfolio. Examples include the formation of the sector budget for education, the responsibility for overall policy development, the regulation of institutional relationships in the field of education (Kyrgyz Republic, 2003, Law on Education, Article 35).

Governance arrangements – funding

As part of a bigger decentralisation effort, the government of the Kyrgyz Republic recently introduced a two-level system of budget formation and execution (republican and local) according to which republican and local bodies are in charge of drafting and serving their respective budgets. During

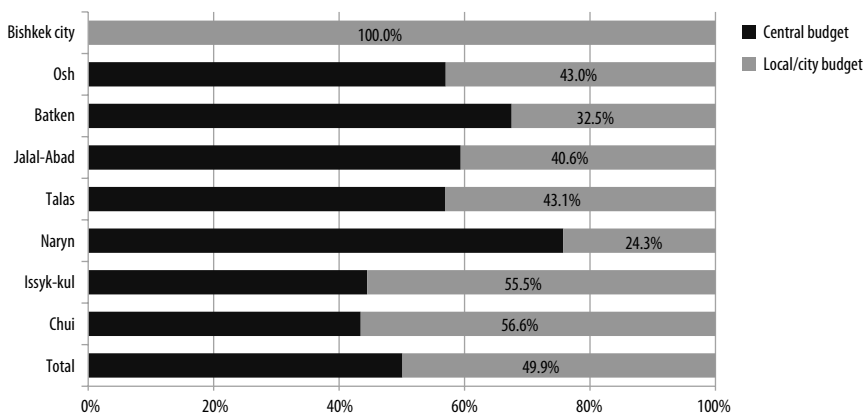
the preparation of this report, the review team was informed that the MOF has reversed this particular reform step by re-introducing a three-level system (republican, *rayon*/city and local), yet keeping the overall aim of the reform upright – to help the local administrations better identify and address local needs, and also to strengthen local budget capacities.

With exception of the 115 institutions under direct MOES responsibility, all educational institutions in Kyrgyzstan are in theory financed by the local governments and some of them by other organisations (such as Medical Academy by the Ministry of Health and the Agricultural Academy by Ministry of Agriculture).

In principle, the *aiyl-okmotus* have the right to be independent from the republican budget if they dispose of sufficient financial resources, *i.e.* from taxes or income from local community property, donations, administrative penalty payments, credits, etc. In line with the possibilities for delegation of republican powers envisaged in the new law *On Local Self-Governance and Local State Administration* from 2008, the local communities are also in charge of infrastructure maintenance and disbursement of funding to all schools on their territory (with exception of the republican schools and some schools funded by other organisations) (Kyrgyz Republic, 2008, Art. 20, Para. 6, point 5).

Figure 3.2 is based on the calculations presented in Table 2.6 and illustrates the extent of dependence of *aiyl-okmotus* on republican funding for the provision of education, exclusive of republican transfers for infrastructure investment. The share of local sources in the respective overall budgets is 49.5% on average (43.2% on average if not taking Bishkek into consideration).

Figure 3.2. Share of central and local sources of funding in the local budget for education in 2006



Data source: World Bank (2008b), NSC (2008) and Socium Consult (2009).

Strategic planning and capacity for reform

Context

Education policy in Kyrgyzstan has a clear, multi-annual strategic dimension (Kyrgyz Republic, 2003, Law on Education, Articles 1 and 4) The strong focus on strategic planning of recent years was triggered by the envisaged introduction of a Sector Wide Approach (SWAp) in education in 2010.² Like the SWAp applied in the health sector in 2006, the SWAp in education is expected to raise levels of ownership and spending efficiency by allowing full alignment of donor organisations' activities to a list of national reform priorities, by stimulating the replacement of project based funding with direct budget support, and by improving co-ordination between government and donor community.

In 2008 the MOES was therefore charged with the elaboration of a sector strategy which would be “compatible” with the indicative mid-term sector ceilings of the Medium-Term Budget Framework (MTBF), to formulate a mid-term development vision for the sector, to include an outline of associated budget implications, and to feed into the Country Development Strategy (CDS). These requirements hold for all subsequent Education Strategies.³

The ambitious forward-planning task mobilises a number of bodies and institutions outside education as well, such as the inter-ministerial Economic Development Council (approval of mid-term ceilings of the MTBF), the Ministry of Economic Development (CDS implementation monitoring), the Presidential Administration (CDS formulation and priority setting), the Parliamentary Committee on Education and, last but not least, the Ministry of Finance. The donor community is involved on a bilateral basis and through the Donor Co-ordination Council, which is not a formal part of this institutional set-up.

At the time of drafting this report, the *Education Development Strategy for 2007-2010* (EDS, 2010), was already replaced with a strategy for the period 2008-2011(EDS, 2011). The tentative timing of the SWAp introduction and the intention of the EU to switch to direct budget support for the sector triggered the early drafting of an education development strategy for 2010–2020, which in the second quarter of 2009 was still with the Economic Development Council, waiting for approval.

A shared rationale

The link between the Kyrgyz EDS and the planned SWAp as an instrument for increasing the effectiveness of aid deserves special attention. Although not binding, the SWAp is nothing less than a “method of working between government and development partners”, a “mechanism for co-ordinating support”, and for “improving the efficiency and effectiveness with which resources are used” (Steiner-Khamsi, 2008).

Following the experience with the SWAp in health, the SWAp in education is, therefore, likely to have a major impact on the way aid is planned and disbursed. The SWAp in Kyrgyzstan would involve a commitment of development partners to streamline their funding along the objectives of the respective EDS and to substantially increase direct budget support. It can, therefore, safely be assumed that the donor community holds a considerable interest in the strategic planning effort – in particular, in a realistic assessment of sector capacities to implement a SWAp in education, in securing the coherence of the sector strategy from 2010 onwards with the respective internal programming, and in the timely availability of the strategic framework.

This points towards a rationale for education reforms which is much broader than the Kyrgyz national interest in a longer term reform agenda. It is a rationale which includes also the accountability of development partners to headquarters and respective governments-signatories of the Paris Declaration on Aid Effectiveness. In such a policy setting where external interests are strong, leadership for reforms becomes a particularly important, but also a particularly challenging task. Despite the commitment of the MOES leadership and staff, at present the potential of the ministry to assume this role can be limited by several factors, all related to governance arrangements and institutional practice, as discussed below.

The evidence gap

The draft EDS 2020 offers the most up-to-date strategic outlook and contains a situation analysis of all levels of education, teachers' qualifications, as well as of adult and informal education, and lists corresponding reform steps. Progress in all areas should be measured through benchmarking and outcome oriented indicators (MOES, 2009a).

Yet, the complexity of both the EDS 2011 and the draft EDS 2020 is in sharp contrast with some of their findings related to the capacity of the system to exercise strategic planning. The draft EDS 2020 identifies lack of comprehensive information about the sector, inexistence of independent, comprehensive monitoring and evaluation, ineffective assessment practice, as well as poor management co-ordination as some of the main deficits (MOES, 2009a). While setting an ambitious reform agenda, the MOES hence underlines that Kyrgyzstan has no capacity to assess its systemic needs and to monitor reform implementation.⁴

Many of these weaknesses are confirmed in the present report and in other analytical work produced by the donor community. Common to all shortcomings seems to be the lack of institutional capacity and clear mandate for collection, analysis and use of reliable evidence, in particular in the area of system performance and budgeting.

Evidence on system performance

Decentralisation

In the past six years decentralisation reforms have led to weakening the regional bodies of education and with them – of the administrative, managerial and monitoring capacity of the MOES (until 2004 Ministry of Education and Culture) on the regional level. In 2007, following an order by the Government and the President, the MOES had to abolish its *oblast* education departments which until then were its main interface to the regions, cities and *aiyl-okmotus* and primary sources of information. All functions of the *oblasts* in education, including non-budgetary responsibilities for most *oblast* education institutions, were transferred to the *rayons* and to the cities. The new administrative arrangements were set-up without “arming” the Ministry for the switch from previously 7 (*oblast*) to now 60 (*rayon*) sources of information about the education process. Recently there was even a reduction in MOES staff numbers.

The *rayons* are also responsible for collection, analysis and reporting on statistics, on student achievement of students and on assessment results. Despite their increased significance for evidence-based management of the education system, the capacity of the *rayons* to collect, aggregate and analyse information and with this – the ability of MOES to exercise informed policy making – has remained weak, the most acute problems being shortage of staff and expertise.

Data collection

Line ministries in Kyrgyzstan, including the MOES, collect and aggregate very large amounts of statistical data on enrolment, graduation, number of staff and institutions that each institution must provide. Unfortunately, the data submitted across all governance levels does not include information on indicators of internal efficiency such as repetition or drop-out rates, student learning,

Box 3.1. Limitations at the local level

After recent cuts in staff numbers, at the time of the review team visit to the *rayon* education department of the Bazar-Korgon-*Rayon*, its 7 staff members were responsible for 32 650 pupils and 2 210 teachers in 7 kindergartens and 65 schools. Only 6 of the department’s staff carry out school visits, and the schools are spread across 9 *aiyl-okmotus*, mostly with poor road infrastructure. The department does not possess any means of transportation, so the staff are using their own cars for the visits, as far as available. The frequency of visits to a particular school depends on its location and on the availability of private vehicles. The team was informed that shortages of this kind are common in other *rayons* as well.

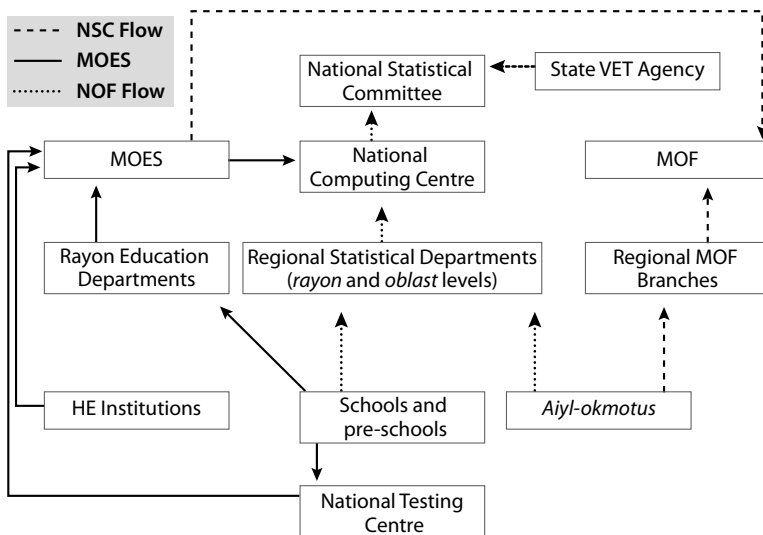
and performance of teachers on a comparative national basis. Information on compliance with the state educational standards is not being collected either.

Monitoring and data collection of this kind is at present beyond the possibilities of the institutionally weak *rayon* education departments and the reports of the newly established National Testing Centre to the MOES on student achievement or the results from ORT are not used in policy formulation. Consequently, there is no information that might be used for accountability purposes whether for informing parents, or as feedback in hierarchical control mechanisms. Policy and decision-makers at present also do not request information of this kind relevant to their area of influence, for instance, on net enrolment rates or internal efficiency indicators of the educational institutions located in a particular region.

As to the *information flows* (Figure 3.3), education institutions and pre-schools submit information to both the *rayon* education departments and the *rayon* statistical departments. *i.e.* on the number of teachers, the number, gender and age of pupils, the number of graduates, the numbers of registered children with special educational needs (for the most part those in institutional care).

As mentioned elsewhere, data flows are separate for budget and education statistics. The latter is duplicated between the *rayon* education departments and *rayon/oblast* statistical departments, whereas the *rayon* statistical

Figure 3.3. Simplified flows of information on education and science, 2008



Source: Review team; National Statistical Committee, 2008.

departments obtain additional information on budget (number of staff) and infrastructure through the *aiyl-okmotus*. There is no practice of cross-checking or information exchange before forwarding to the National Computing Centre and the MOES respectively, which means that on the republican level, in addition to the data collected by various donor organisations and NGOs, there are two parallel, possibly differing official information sources – MOES and NSC.

The reliability of information can further be affected by institutional arrangements at local level. Schools are responsible for taking census of all children in school age in their surrounding area, yet teachers are not compensated for the additional effort and have, therefore, no incentive beyond their personal motivation to fulfil the task. Due to capacity constraints the *rayon* education departments are usually not in a position to verify this and any other information provided by the education institutions.⁵ Furthermore, the local NSC statisticians are dependent on the *rayon* and *oblast* administrations for their salaries, and have no incentive to question the data received from the local entities, in particular not data that may influence levels of republican funding (*i.e.* numbers and workload of teaching staff, condition of school infrastructure etc).

Evidence on budget

There are no legal provisions allowing the MOES to have insight into the overall education spending and/or to exercise internal control. As a general rule, information on budget execution is collected by the institution disbursing the funds, which means that MOES and its *rayon* departments are in charge of monitoring only a fraction of school funding in Kyrgyzstan (around 115 republican schools in 2009). As illustrated in Figure 3.3, the information flow on budget bypasses the MOES structures so that in this respect the vast majority of general educational institutions are “out of sight” for the ministry.

The financial reports for the entire sector of education are collected by the Treasury. According to the most recent fiduciary assessment, the MOES has access to these reports but, at present, has no capacity to process sector level information of this magnitude and hence does not use it for planning purposes (World Bank, 2008b).

MOES is lacking accurate and up-to-date information on the execution of parts of its own budget as well, namely on donor supported reform spending. In 2007 only 13.4% of the overall aid disbursed by donors in Kyrgyzstan made use of the national financial reporting system (OECD, 2008), and not more than 18% of it was provided as direct budget support. The country chapter on Kyrgyzstan concludes that meeting the 2010 target of 66% will therefore be a major challenge (OECD, 2008). Although there is no recent

sector data, the review team was told that these findings hold for education as well. Only very few of the development partners disburse their support to the budget.

The vast share of funding takes place “aside”, as addendum to the annual budget of the MOES. While donors in general provide information on their commitments for aid disbursements, and these are recorded in the Public Investment Programme budget line of the MOF, non-budget donor support is not “captured” in the regular reports on education funding, not even as tentative projection in the MTBF.

There are also reasons for concern about the *reliability and quality* of the vast amounts of information on education spending kept with the Treasury / the MOF. Accounting and the preparation of reports on all levels is done manually, often by poorly trained and overloaded staff. The reporting consists of statements on budget execution, statistical data and tax information (World Bank, 2008b), its primary aim being compliance with external MOF funding requirements. At present, there is no practice of assessing spending efficiency or evaluating budgets. In theory, the Kyrgyz Chamber of Accounts can carry out performance audits and evaluate spending, yet in an interview with one of the chief auditors, the review team was informed that due to a lack of trained staff and a clear mandate, at present the external audits of the Chamber in the education sector do not assess measures undertaken against programme aims.

Impact on governance and policy practices

Donor partnership and analytical dependence

Kyrgyzstan is a long-term recipient of international aid and, in 2007, the net aid disbursed as official development assistance (ODA) amounted to USD 294 million or 10% of GNI (OECD, 2008). Research on aid dependence commonly counts countries with such high levels of aid as “aid dependant”, that is, dependant on external funding and expertise for performing a number of the core functions of government (Bräutigam, 2000; Bräutigam, 2004).

In view of the shortcomings described, a point of concern for the review team is that legitimate donor interest and overambitious reform plans may be pushing the education system towards dependence on external funding, data and expertise, with all the negative effects on institutional capacity and governance, as identified also for other highly aid dependent countries.

It is difficult to quantify this finding, and the OECD Development Assistance Committee (DAC) indicators on ownership levels do not necessarily capture the institutional strength of particular sectors. It is clear though that the high intensity of disbursed and planned aid goes along with considerable analytic work, much of which consists of assessments of sector

capacities to implement a SWAp in education in 2010. A side effect of this is an overabundant, steadily updated and readily accessible (Steiner-Khamsi, 2008) pool of documentation from manifold sources on almost all aspects of education policy. Data on Kyrgyzstan collected for the 2008 OECD aid effectiveness survey suggest that alone in the past two years, the overall number of donor missions increased almost threefold to a total of 324 (OECD, 2008).

The intrinsic evidence gaps described here consequently do not mean that Kyrgyz pre-schools, schools and universities are *terra incognita* for national institutions and decision makers. On the contrary, in the absence of an official background report for this review, seldom did the review team encounter such a vast number of external assessments and thematic reports on various aspects of system performance as in the case of Kyrgyzstan. The majority of reports were authored by local experts contracted by the development partners.

Unfortunately, although some of the documents used in preparation of the present report were marked as Governmental resolutions, none of them was produced or funded by the ministry or by any other national institution with responsibilities for education. Judging from these background materials, the evidence vacuum in the system is filled out by donor expertise, whereas the delivery of information seems to depend to a large extent on the internal planning processes of the donor community, and not so much on an agenda owned by the MOES.

The review team was not able to identify any authoritative, nationally sanctioned sources of evidence or information which could have been used in defining the reform agenda in education for the years up to 2020.

Costing the reform agenda

The budget of the MOES is limited to the institutions under its direct responsibility and to its administrative costs as a line ministry. MOES has no comprehensive insight into the actual sector level budgeting and does not deal with information on the availability of funding outside of its own budget. Due to institutional weaknesses the donor community is reluctant to disburse aid directly to the budget so, in general, support for reforms is allocated via projects implemented by Project Implementation Units (PIUs). This parallel financing means that the (weak) MOES structures are bypassed and the management of funds remains with the respective donor organisations.

Consequently, and also due to the lack of sufficient communication between the MOES and the MOF, the ministry is hindered in knowing the share of overall education budget invested for reforms in relation to mainstream funding, and with this – on the real cost of reform investment in relation to outcomes.⁶ Table 3.1 hints that earmarking the budget for the reform agenda co-ordinated by the MOES is a serious problem. Of the 55 activities listed in the current

Table 3.1. Costed commitments, EDS 2008-2011

TOTAL COSTED FUNDING Strategy 2008-2011: ^a		1 486 873.00	
Donor funding	830 261.00	National funding ^b	656 612.00
Area	In % of donor funding	In % of committed	Institution
Pre-school, including preparatory year	2.12%	NC	MOES (sector budget)
Access and quality of education	36.6%	29.04%	MOF (republican funding)
<i>of which</i>			
<i>Infrastructure</i>	96,92%	100%	
Curriculum reform	8.73%	No	
Teaching materials	11.41%	64.79%	MOF (republican funding)
<i>of which</i>			
<i>Reading Child Programme</i>	55.17%	2.44%	
Outcome based learning	10.64%	6.18%	MOF (republican funding)
<i>of which</i>			
<i>Assessment and monitoring</i>	42.27%	70.41%	
<i>Teacher development</i>	52.73%	29.59%	
Society involvement in education	1.19%	NC	MOES (sector budget)
Per capita funding reform	0.27%	NC	MOES (sector budget)
VET and HE	26.98%	NC	MOES (sector budget)
<i>of which</i>			
<i>Labour market needs</i>	100,00%		
Governance and Management	2.06%		
<i>of which</i>			
<i>Cross-sectoral co-operation</i>	79.12%	No	
<i>Donor co-ordination</i>	2.14%	No	
<i>Aid efficiency</i>	10.71%	No	
<i>Capacity building</i>	8.04%	No	
<i>Outcome based planning</i>		NC	MOES (sector budget)
<i>Set-up of a monitoring system</i>		No	
<i>Sector co-ordination</i>		NC	MOES (sector budget)

Notes: a. All amounts in thousand KGS

b. “No”: no commitment; “NC”: no costed commitment. The majority of national commitments are quoted as being “within the scope envisaged in the budget” and are not costed. The figures on national commitments in the table refer to a limited number of areas for which there is earmarked republican funding.

Source: Review team calculations, based on data from the Education Strategy 2008-2011 Implementation Matrix, MOES (2008).

Education Strategy, in the second year of EDS 2011 implementation, only five have costed budget commitments, all of which from the republican budget under the management of MOF. It must be underlined that the local level of governance is not at all involved in funding (and design) of reforms.

As to the extent of *dependence on external funding* for reforms, according to rough calculations of the review team, between 1997 and 2010 donor investment in education in Kyrgyzstan amounted to approximately USD 82.4 million (or roughly USD 6.3 million per year since 1997), and committed donor support for the EDS 2011 alone sums up to approximately USD 19.3 million (calculations based on the Education Strategy 2008-2011 Implementation Matrix). Project funding amounted to over a quarter of the annual MOES budget for 2008 (World Bank, 2008b). It is not known what is the share of aid in it, but according to data from the Implementation Matrix for the EDS 2011 (Table 3.1), approximately 56% of the costed budget for reforms until 2011 consists of development aid. The biggest share (36.6%) of the latter funding is earmarked for improving access and equity, and 96% of this share is reserved for infrastructure investments). The second biggest item is support for raising the labour market relevance of VET and HE (just under 27%).

The difficulty of MOES (and MOF) to earmark budget along the lines of the EDS could turn into a serious obstacle for scaling up successful projects, and no pilot project is immune against this threat. It is less surprising that so far none of the donor supported reform initiatives has been scaled up nationwide, despite the commendable political commitment of the ministry and the government.

Evidence and governance

Across OECD countries there is a rising interest in evidence-based policy making, and an ongoing discussion on how to make best use of evidence in shaping education policies (OECD, 2007). One of the factors determining the discussion is the shift of focus from inputs to education outputs, and a dramatic increase in information from various sources on what education supposedly delivers.

Theory and research indicate that the use of evidence has an impact on the legitimacy of policy making (OECD, 2007). On one hand, a seemingly more informed stakeholder community would be empowered to hold policy makers accountable. On the other, policy makers who base their decisions on facts would be able to defend easier the chosen course of action, ensure stakeholder support, and secure funding. In practice, across OECD countries policy makers are looking for ways to establish reliable quality “gatekeepers” for separating the wheat from the chaff in the abundance of unsanctioned information. In many cases though, the quality of the vast amounts of evidence often remains unchecked (OECD, 2007).

Kyrgyzstan is confronted with a similar problem, albeit in a more challenging way. The limited capacities for handling evidence, for convincingly sanctioning analytical findings, and for costing reforms make the justification of policy choices *vis-à-vis* stakeholders and other institutions with strategic responsibilities (MOF, Presidential Administration, Parliament) very difficult for the MOES, and might open the door to an element of arbitrariness in the reform planning process. The prospect of frequent fluctuation of policy priorities (partly due also to changes of authorities), makes a longer-term funding commitment a particularly risky undertaking.

The planning process follows an explicit top-down approach, facilitated by dependence on external expertise and funding, and by considerable external interest in shaping the corresponding EDS agenda. An assessment of ownership for the EDS 2007-2010 which was undertaken in 2008 describes it as a donor-driven document, considered by the MOES to be a “Fast Track Initiative (FTI) Strategy” rather than an Education Strategy (Steiner-Khamsi, 2008). The draft EDS 2020 was also catalysed by external pressure because of the envisaged SWAp in education. Although a good quality paper, it was prepared well ahead of its time and without prior evaluation of the implementation of the preceding Strategy. At the time of drafting of this report further work on the draft EDS 2020 was halted by a new initiative of the President called National Education Project, charging the Ministry with the elaboration of yet another strategic document. Its aim was to avoid “the shortcomings of the previous strategies”. The priority areas were set in advance.

In such a setting the involvement of stakeholders in the policy dialogue – schools, parents, and local communities – appears unnecessary and does not take place, which seriously endangers the legitimacy and sustainability of reforms.

Budget and governance – present weaknesses and strengths

The budget as a strategic instrument

In any public system, the budget process is a key governance instrument. The budget plays a fundamental role both for attaining macroeconomic stability and for promoting efficiency in the allocation and use of scarce resources. In fact, since the mid 1990s the Kyrgyz Republic is going through a process of switching from inputs to a programme-based budget. The explicit objective is to achieve fiscal discipline and efficiency. While the actual Public Financial Management (PFM) system appears successful in attaining the first objective (reducing a fiscal deficit as high as 6.9% of GDP in 2000), several observers have reported this has been achieved mostly by reducing investments and expenditure in complementary inputs to education and other sectors, but not by improving efficiency. The absence of strategic indicators in budget

programming and the lack of *ex-post* control mechanisms have been behind poor results at improving external and internal efficiency, and the education sector has lagged behind in making progress in these areas.

Six processes might be distinguished in a PFM system: strategic budgeting; budget preparation; resource management; internal control, audit and monitoring; accounting and reporting; and external audit (Andrews, 2005). As has been referred, strategic considerations have been incorporated in different documents but with inadequate translation into current instruments for implementation. An important instrument of this kind (but which still lacks a long term planning dimension) is the recently introduced Medium-Term Budget Framework (MTBF). The objective of a MTBF is to extend the planning horizon beyond the annual public sector budget, which is expected to favour fiscal discipline and to improve the allocation of resources towards government priorities. It is also usually expected that a MTBF would include adequate planning of recurrent capital spending. The capacity of the MTBF to redirect resources towards government priorities in practice would depend on the extent the plan is respected in each annual budget and whether there are significant reallocations during budget execution.

As the MTBF is a key guideline for resource allocation at least in terms of intentions, it is interesting to analyse its content. The MTBF for 2007-2010 emphasises education as an expenditure priority, in particular school education. So far it has been updated only once, in 2008. At present, the MTBF integrates only donor funding disbursed directly to the budget, which at present is a fraction of the total donor support for education. The budget ceiling for education in 2010 is KGS 9 305 million starting from a budget of KGS 6 024.5 million in 2007, well below the execution for that year (see Table 2.1). For this reason it is interesting to look only at the planned increases for the period. Expenditure in education is expected to increase by 61% in nominal terms, well above the 29% increase for total public expenditure. It is expected that the share of educational expenditure in GDP goes up 0.3 points.

The absolute priority in the text of the MTBF is given to secondary schools. This is confirmed by statements such as “Pre-school education in terms of extreme insufficiency of the state financial resources is not the priority state programme” (p. 60), “budgetary funds released under the programme (higher education) are suggested to be forwarded to financing of the Programme of school education as being more important for the struggle against poverty. . . ”(p. 66) and “the programme secondary education is the priority programme of budgetary financing” (p. 61). This is also stated in the *Country Development Strategy 2007-2010* and the corresponding *Education Development Strategy*. A key initiative is the introduction of per capita financing nationwide, endorsed in all strategic documents, which is described later in this chapter.

Table 3.2 presents the budget framework for each programme in million of KGS per year. Although the text prioritises rural schools, the city schools are expected to receive a larger part of the budget increase. In percentage terms the increase in pre-school education is expected to be even larger, although – starting from a lower basis – in absolute terms it is negligible as compared to the secondary educational budget. The decision not to prioritise pre-school education should be contrasted with the low level of coverage at that level and the apparent high and unsatisfied demand by parents. In addition, the potentially high returns to high quality pre-school programmes documented in other countries have not been considered in other policy documents and the emphasis for this level is on short term school readiness programmes.

Other programmes are expected to be rationalised and the staff, especially in administrative positions, reduced. For instance, for higher education it is proposed to introduce per capita financing with differentiation on specialisation (humanities, technical, medical); increase the average grants to successful students from needy families and orphans and to exclude expenditures that are not related to the academic process, such as expenditures on meals. As regards vocational training, a gradual reduction in the number of teachers is proposed, expecting to achieve students to teacher ratios of 6.4 in

Table 3.2. MTBF for the educational sector (in million KGS per year)

	2007	2008	2009	2010	% increase
Programme 1: Pre-school education	318.4	457.5	513.7	580.4	82.3%
Programme 2: Secondary education	3 429.7	4 326.1	5 103.2	6 000.9	75.0%
Sub programme 1: Rural schools	2 381.4	3 026.7	3 614.1	4 272.1	79.4%
Sub programme 2: City secondary schools	1 048.3	1 299.4	1 489.1	1 728.8	64.9%
Programme 3: Labour technical and vocational training	463.3	448.8	487.3	536.9	15.9%
Programme 4: Higher education	259.3	292.2	326.8	369.4	42.5%
Programme 5: Development of services in sphere of methodology and education support	106.8	103.9	104.2	108.5	1.6%
Programme 6: Out-of-school education	167.7	190.2	202.5	215.9	28.7%
Programme 7: Management and administration	75.8	94.2	110.1	129.2	70.4%
Programme 8: Other educational institutions	153.3	176.5	184.7	193.4	26.2%
Total^a	6 024.5	7 116.6	8 131.4	9 305.6	61.4%

Note: a. The sum of the programmes does not add up to this total because the programme totals do not include special means.

Source: On the basis of Ministry of Finance (2007).

2007, 8 in 2008, 10 in 2009 and 12 in 2010. It is also proposed to reduce the number of administrative and service personnel.

Beyond the problems that affect all sectors, Ministry of Finance officials complain that the Ministry of Education and Science has been particularly weak in incorporating a strategic vision in the budget process. One of the reasons is the lack of human resource capacity, a problem that the MOES has been trying to address since 2007 by re-establishing the Strategic and Analytical Work Unit, which is expected to bring a more strategic vision in the budget preparation process, to develop policy monitoring indicators and to strengthen capacities for budget evaluation.

Budget formulation

Budget formulation follows a top-down approach from the Ministry of Finance to the Ministry of Education and Science or the local governments, and from the latter to subordinate institutions.

The budget for education is largely based on groups of quantitative indicators for costs of wages, instruction hours, maintenance of school buildings (estimated aggregate cost divided by the aggregate number of students per school), meals, professional development of teachers (cost for travel and subsistence for all teachers who are due to attend the obligatory, once in five years in-servicetraining in the respective school year). The budget also includes investment spending determined by expenditures for textbooks and repair of infrastructure.

The laws and regulations in place (*i.e.* the law on *Main Principles of Budget*) are ambivalent as to whether budget design is based on inputs or on outcomes, and focus on distribution of responsibilities for budgeting instead. A Presidential Decree in 2002 requested line ministries to develop programme classifications for their spending, as a first step to more outcome oriented planning and use of funds. Yet the reforms aiming at enabling a transfer to a more result-oriented system have still not generated tangible results, and in most policy areas including education, budget planning is very much an input focused exercise.

Education quality is not a formal factor in formulating the budget. None of the indicators used has a qualitative dimension, and none of them is designed to take into consideration variables like outcomes of learning, performance of schools, or student achievement. MOES and the *rayon* education departments aggregate only statistical data and, at present, cannot influence budget planning for general education schools at any stage of the process. The same goes for the schools which, have no autonomy and often no capacity to articulate needs related to the quality of the education process.

Annual sector budgets should be in line with control amounts and parameters predefined by the MOF in line with its three year Medium Term Budget Framework. In theory, MOES has overall responsibility for submitting annual sector funding request to the MOF, and is responsible for the distribution of its ceiling across its line items, subordinate institutions, etc. In practice, many elements of this particular MOES responsibility are fragmented, both in terms of budget formulation and budget execution. The fragmentation of spending arrangements is discussed below.

After submission of the annual sector budget request, the MOF ensures that the assumptions used for the request are in line with the norms and that the request is within the ceiling determined for the MOES. Line ministries can lobby the respective MOF sector analyst for increases in assigned ceilings, but such requests are usually related to improving the coverage of protected items in the budget, such as wages.

The draft budget is sent for approval to the government where line ministers have a second and last chance for re-negotiation of their budget allocations. Sector increases at this stage are often the result of political deliberations and pressure and, sometimes, overstretch the annual budget to an extent which makes multiple adjustments during the year necessary, in particular internal reallocations within the aggregate maximum budget amounts. According to information from the World Bank, in 2008 the MOES spent 49% less than initially budgeted (World Bank draft note, 2009).

After approval by the Government, the budget is sent for deliberation and approval to the Parliament and then to the MOF which prepares the quarterly spending estimates for each budget line and provides these to the Treasury.

Budget execution

The MOF has a major say over the approved budget and the amount of cash made available for execution. A snapshot of current institutional practice reveals that the MOES and its regional departments, although responsible for all aspects of the education process, are in charge of the spending a comparatively small part of the overall sector budget (around 12% in 2007/2008, mostly for the 115 education institutions under direct MOES responsibility). The Treasury transfer of well over 85% of republican funds (categorical and other grants) for education bypasses the MOES and the *rayon* education departments and is dispersed via the *rayon* treasuries of the MOF directly to the *aiyl-okmotus*.

Budget execution still reflects historic ownership arrangements and is scattered across all levels of governance: salaries for teaching and supporting staff, social security payments and meals for all schools (except for the republican, the former *oblast* and the *rayon* schools) are disbursed by the

aiyl-okmotus. Funds for the state higher education institutions are transferred by the MOES.⁷ The MOES also took over responsibility for the boarding schools of the *oblasts* after their abolition, and *rayons* and cities are spending for the gymnasiums and lyceums and a very limited number of general education schools. In communities where resources are available, the *aiyl-okmotus* are also carrying the burden of non-wage expenditures.

A serious inter-institutional issue is the strong dependence of the MOES on collaboration with the MOF for obtaining key strategic and timely information, insofar as the Ministry of Education and Science does not dispose of information about budget execution for the sector. While the Ministry of Education and Science has responsibility for defining educational policy, the largest part of this policy is not executed through the MOES but through MOF which provides funding for pre-school and school education directly to the local governments. The Ministry of Education and Science is also not involved in transfers to some other educational institutions, in particular in higher education. Given this state of affairs it is important that the Ministry of Finance furnishes the MOES and its Strategic Unit with the information required to accomplish its role in a timely manner.

Issues with funding arrangements

- There are problems at every stage of the budget process which impair the use of the budget for improving efficiency that go beyond the education sector but affect its performance. The government is currently in the process of correcting these problems, and it should be pointed out that the review team's assessment occurred in this transition stage.
- While the Ministry of Finance might integrate the MTBF for providing annual ceilings to line ministries at the beginning of the budget formulation process, local governments and the Ministry of Education and Science do not seem to formulate their budget in congruence with these priorities but based on past history and needs formulated by the institutions.
- It seems that the discussion of the budget draft in Parliament does not use strategic information such as cost-benefit analysis or evaluations from previous years for improving resource allocation, because this information does not exist and is also not demanded. As already mentioned, some bargaining might take place on the basis of political interests. The review team did not find evidence of technical support staff for the Parliament, that would be required for representatives there to have a more active role in sanctioning government priorities

in the legislative discussion of the budget law, or later in monitoring and evaluating its execution.

- The budget's role as a governance instrument is weakened at the execution stage by considerable departures from programme budget, detailed adjustments between line items, delays in the release of funds by the Treasury, and absence of definitions of indicators that might be used to appreciate the costs of these changes. Internal control is weak and not institutionalised. Financial reports do not have a view of improving sector policy and seem to comply only with Ministry of Finance requirements. The Ministry of Education and Science does not have a consolidated view of the educational sector, as the information on the institutions that are not functionally dependent goes directly to the Ministry of Finance.
- A key obstacle to a more flexible and discretionary system is the absence of monitoring and *ex-post* controls, not to mention their integration with *ex-ante* control mechanisms. These weaknesses have been identified by previous reports (World Bank, 2005; Oxford Policy Management, 2005; World Bank, 2008b).
- The difficulty of linking performance and outcomes to budgeting is due also to flaws in governance arrangements. The budgeting process by and large bypasses the MOES and the regional education departments, their involvement being reduced to the aggregation of the same data sets available also through the National Statistical Committee. Given the institutional weakness of the ministry, the limited capacities of the local education bodies, and deficits in assessment (see Chapter 6 on Assessment and Examinations for more details), it is questionable to what extent the ministry is equipped to collect and handle qualitative data in the first place.
- Schools are not in a position to influence budget formation, and have very limited possibilities and incentives to use resources in a flexible and cost-efficient way. It is somewhat surprising to see that the law *On Education* contains provisions which would allow for extensive school autonomy, *i.e.* freedom with the allocation of funds (Article 32), independence in handling organisational, professional, financial and economic issues, and in the selection of methods, appraisal systems, and certification procedures. In practice though, the vast potential of school autonomy for efficient budgeting and better methodology is not being used. Schools do not have the human resources and know-how to benefit from these possibilities and their role in the overall steering of the system is limited to the delivery of statistical data, with a number of tasks like recruitment of teachers, work with students and

parents being charged to the *rayon* education departments. The lack of autonomy seriously impacts the overall accountability of schools.

- The review team was informed about an internal monitoring report of the Ministry of Finance (referred to also in the fiduciary review of the World Bank – [World Bank, 2008b]), from several *oblasts* revealing cases of double payment of salaries, overstaffing in some schools, excessive provisions for overtime payments, payment of salaries to ghost employees, and insufficient and untimely financing of food (report submitted by the Minister of Finance to the Collegiate Meeting of the MOF, April 2008).
- It has been suggested that the auditors of the Kyrgyz Chamber of Accounts, the institution in charge of external auditing, lack the skills and experience that are necessary to apply audit practices in accordance with international standards and most donors rely on private auditors for inspection of donor financed projects. This lack of capacity poses additional problems for innovation or for deepening the PFM reform, as long as this requires allowing more discretion to governmental agencies on the basis of results. For instance, in schools in the *rayons* piloting funding on the basis of enrolment, auditors requested expenditure attached to each and every student as they were used to control bills for each line item. The inertia of old practices and “ways of doing” is a key factor conspiring against the implementation of PFM reform.
- The linkage between administrative information and information used for budget purposes is often weak. While, at present, it would be important to verify the consistency of information on teachers and other staff, with the introduction of funding on the basis of enrolment there might be an opportunity for integrating reporting and monitoring of this variable for both purposes, and for inspecting selectively the accuracy of reporting at the institutional and local level. Sanctions for misleading reporting of information used for budget purposes should be more severe than errors on statistical information, but deterrence requires a positive probability of detection and of application of sanctions.
- The problems of institutional design result in an apparent dissociation between pedagogical policy and budgetary policy, where one is conducted by the Ministry of Education and Science and the *rayon* departments of education while the other is managed by the Ministry of Finance and its local branches, and the local governments.

School and pre-school system governance and financing

Financing of current expenditure and incentives in the pre-school and school system

As indicated earlier, funding of pre-school and school education is by and large the formal responsibility of the local level of governance.⁸ For fulfilling this role local governments count on their own revenues⁹ and on transfers from the republican budget. The latter is constituted of categorical, equalising and stimulating grants (see Chapter 2 for definitions) transferred from the Treasury through *rayon* treasuries. As seen in Chapter 2 the size of equalising and stimulating grants is low as compared to the needs for compensating differences in income generating capacity between different districts.

Box 3.2. Policy interventions for raising spending efficiency – Mexico

Mexico has one of the lowest PISA scores among OECD and non-OECD economies, but spends 5.3% of its GDP corresponds to public spending on education. A recent OECD economic survey revealed a very low efficiency of education spending, low share of non-wage spending and inadequate distribution criteria for the transfer of federal funds to the states, favouring the higher income ones. Yet the need for additional funding tends to be higher in the poorer states. There are also large disparities in student achievement across the states.

The survey underlines that among the main challenges for Mexico is the improvement of overall education outcomes through the provision of equal learning opportunities, the re-balancing of the federal transfer in favour of the lower income states, and the allocation of new spending predominantly to non-wage items.

Mexico has started introducing reforms for addressing some of these issues, i.e. the allocation of more spending to non-wage items. The Enciclomedia project for example aims at digitalising the school curriculum, and the Programa Escuelas de Calidad (PEC) – a quality school programme – targets disadvantaged schools by offering five year grants of up to MXN 50 000 (around USD 4 000) for development and re-structuring, topped up by one additional peso for every peso raised by the school community (up to a certain ceiling). The plans are jointly developed by teachers, parents, students and school administrators.

Schools have no autonomy in financial management. They do not even manage any cash since the local government directly pays the vendors for providing services to the school. Schools are, therefore, susceptible to suffer interruptions of basic services such as electricity or heating for unpaid bills but have little scope to prevent such situations. Internal reallocations between line items might be difficult for schools once the budget is approved. Their budget mostly evolves according to the availability of funds (especially local funds) and historical budget line items, except for items such as salary increases decided at the central level.

It is well known that staffing norms inherited from the Soviet era produced incentives to minimise class size and maximise the number of teachers, a problem that is not exclusive to the Kyrgyz Republic but is common to CIS countries (World Bank, 2008a). Nevertheless, the Kyrgyz Republic has been slower than many other former Soviet republics to address it, due to the abandonment of an early introduction of per capita financing by the end of the 1990s following the inability of many local governments to pay teacher salaries in 2000 (Herczynski, 2002). As a consequence of this experience, providing the funds necessary to pay teacher salaries according to the Teacher Status law is the obligation of the central government and, therefore, hiring new teachers or reducing class sizes do not represent a cost for the local government or the school. In addition, a fragmented and specialised curriculum, with limited opportunity for teachers to teach across related fields tends to inflate the need for teaching staff. The inefficiency of this incentive structure is also reflected in school construction, which tends to promote building of new small sized schools, as will be discussed further below.

In fact, according to World Bank (2008b) during the period 2001-2007 while the number of students has dropped by 31 500 (3%) in the school educational system, the number of schools has increased by 88 (4%); the number of teaching staff salaries has increased by 6 000 (8%); and the number of administrative, management and service staff has increased by 2 000 (6%). The National Statistical Committee (2008) figures for daytime general education are somewhat different but the conclusions are similar. During the period 2002/2003-2007/2008 while the number of students in daytime general education public schools dropped by 102 849 (9%), the number of schools increased by 81 (4%) and the number of teachers and principals declined slightly by 2 088 (2.8%) which translated in a decrease in the student teacher ratio from 15.7 to 14.8 for the period.

The negative consequences at the macro level of reducing class size, hiring excess teachers or building small classrooms or schools – such as the low levels of teacher salaries despite the relatively high expenditure on education – are not appreciated at the micro level and, therefore, do not correct the wrong incentives faced by local governments or schools. In addition, schools

do not have incentives for reducing other current expenditures such as electricity or water, as the bills are paid by the local governments and any saving would be appropriated by them.

Currently schools experience substantial deficits with respect to their needs and the approved budgets. While, as has been said, expenditure on complementary inputs were reduced to achieve fiscal discipline, various fees for rent of textbooks and repair works were abolished in 2006, further starving the schools of essential means of funding. Field visits confirmed that funding for textbooks and maintenance of school infrastructure is, except in richer areas, particularly scarce, as they mostly depend on local funding. However, it was suggested to team members that family contributions to parental associations are still important and not subject to reporting of any kind.

By contrast, pre-schools are allowed to charge fees which, in 2007, accounted for 20% of their funding. While in general education everyone can find a place, this is not the case in pre-school education, where coverage attains a maximum of 12.6% for the age group 3 to 5 years old. This leads to long waiting lists which in some pre-schools reach three times their actual capacity. There is the perception that children who have access are the less vulnerable ones because more educated families are more proactive in registering their children for pre-school and are able to pay the fees. The inequitable distribution of access to pre-school education has been confirmed by household surveys data in Chapter 2.

Some principals also reported that they attempted to obtain donations from private entrepreneurs, but with little success.

Capital expenditure in the pre-school and school system

Capital expenditure follows a completely different set of rules than those governing current expenditure. The decision process for building a new school or replacing a deteriorated old building involves the local government, the *rayon* education department, the Ministry of Economic Development, the Ministry of Education and Science and the Ministry of Finance. Ultimately the Ministry of Education and Science sends a formal request to the Ministry of Finance, which approves the building with no clear formal evaluation process of the investment project but, apparently, on a discretionary basis related to the availability of funds. None of the Ministries possesses an updated “map” of pre-school and school buildings in the country which would provide information on the condition of the buildings, their location, number of pupils and capacity, number of teachers etc. It was suggested to the review team that a mapping of this kind would be useful for securing the efficiency of investment planning, but this utility depends on the advancement of the decentralisation process.

The Ministry of Education and Science does not know about the availability of funds and the Ministry of Finance is not aware of the criteria the Ministry of Education and Science uses to select building projects, if any. After approval, the *oblast* level and the local branch of the State Agency for Architecture and Construction (GOSSTROY) are responsible for execution. A further complication is that parliamentarians have the right to initiate proposals for building schools. Building projects of this kind, being an “expression of the will of the voters”, are not subject to the formal criteria for approval applicable to the “regular” cases.

In 2007, investment accounted for 9% of total expenditure. The construction of schools per year fluctuates around 1% of the current stock since 2000, although declining from a maximum of 27 in 2004 to 14 in 2007. The opening of new schools and pre-schools is slightly higher, especially in 2004 (Table 3.3). Of the total stock, 80% is from Soviet times, and from these 45.2% are from 1970 or before.

Table 3.3. **New schools and pre-schools**

	2003	2004	2005	2006	2007
New secondary public schools	16	21	18	6	20
New public pre-schools	2	19	6	17	n.a.
New secondary vocational public schools	-1	10	1	-3	0
Total	17	50	25	20	n.a.

Source: National Statistical Committee (2008).

Reforming funding allocation mechanisms

Per capita financing reform

The most important reform regarding the allocation of public funding is the introduction of per capita financing (PCF). PCF was piloted in 2006-2007 school year in Tokmok, in 2007-2008 in Issyk-Ata *Rayon*, and is to be scaled up to other areas in 2009 and 2010. According to the private company in charge of designing and implementing the pilot (see Socium Consult, 2009), its objectives are to improve efficiency of resource utilisation by defining school income as a function of average costs of actual service provision per student, to promote savings on variable expenditure, to generate incentives for teacher performance and to optimise the school network.

By defining the amount of resources accruing to a school on the basis of the number of students using a formula that is transparent and easily verifiable, the possibility of inequity in resource allocation across schools is

eliminated. Thus, under the PCF, schools receive their resources as a function of the service provided and not based on inputs used. The new financing scheme promotes savings on unnecessary expenditures and more cost-effective use of resources, as school administrators decide on how to allocate them. The PCF also increases the incentives for schools to increase their coverage, since schools are rewarded for their output judged by students enrolled. Without the reforms the sole incentive to attract more students is based on the teaching staff's altruistic motives of care and concern for children, which in any case, based on the team's field visits, appears to be very high.

Finally, the rationalisation of the school network is another important efficiency gain of the reform. The current situation has led to too many schools in certain areas, which reduces class and school size below what is optimal both from an economic and from a learning point of view. Rationalising the school network in a local area might require shutting down schools and merging others. However, rationalisation is difficult to achieve if resources are transferred directly to the school, especially if resources are enough for the school to pay minimum expenditures. In a sense, it requires empowering the local government with the responsibility and the incentives to rationalise, incentives that must counterbalance the political costs of such a measure. This must be ensured by the mechanism finally implemented.

The formula used in Issyk-Ata *Rayon* considers the expenditure needs per student on the basis of uniform minimal standards set by the law. The “minimum standards of budget financing” depend on the established norms by grades of study, type of school, school size, and conditions of functioning depending on location (rural or city). The latter considers: academic load of teachers, academic load of pupils, norms of administrative personnel, remoteness of school from the *oblast* and *rayon* centre, standard number of pupils in classes for city and rural schools, and other indicators which are ensuring the functioning of the school (see Socium Consult, 2009). Furthermore, under the PCF pilot, an experimental curriculum and programmes on integrated subjects were introduced which led to the reduction of 10% of the teaching load per student. It was suggested to team members that further reductions of the teaching load would be achieved without, or at very low costs, in terms of learning and with consequent savings on total expenditure.

During a field visit to the pilot regions, the review team observed that the procedure to correct for under-financing of small rural schools is rather *ad hoc*. First, different coefficients were awarded to each local community according to the distance to the province and district centres. After applying this correction, 16 out of 55 schools needed extra funds to pay for wages. To reduce the incidence of this situation, special consideration was given to the size of the school. With fewer than 50 students, funding per students were scaled by a factor of 2, between 51 and 100 students the increase was 1.9,

between 101 and 150 the factor was 1.8 and so on until attaining a factor of 1.1 between 451 and 500.

Anecdotal evidence points to problems with external auditing by the Chamber of Accounts, in particular as auditors seem to lack the capacity to understand the new role of school administrators and may not have received complementary training or instructions to conduct audit under the new financing model. It should be noted that, properly managed, the reform leaves less room for corruption at intermediate levels, as accountability is strengthened at the school level and funds are spent directly by the schools.

Pilot schools are allowed to collect fees for extra-curricular non-compulsory activities, such as sports or additional course-work. Principals in the experimental *rayon* praised this alternative as a form of obtaining more free-disposable resources for the school and providing monetary incentives for teachers. Extra-curricular activities are freely chosen by pupils, require a minimum number of applicants and might include students from poor households who cannot afford to pay. The review team was concerned that the teachers may put pressure on students to enrol in extra-classes – as was the case in the past, when extra-teaching for regular courses was conducted on a paid basis – but field visits suggest that schools in pilot areas do not have this problem. Moreover, students from poor families were allowed to participate in the extra-curricular activities for free if there was space available.

Many schools in the pilot *rayon* have been granted autonomy of expenditure except for minimum standards on protected items. Resources are administered by the principal with the support of an accountant and the school budget is approved and monitored by the parents' council, which is an additional source of accountability in the system. Principals and other actors at autonomous schools do not only have the correct incentives to take efficient and effective decisions on resource allocation but also are able to integrate resource administration with pedagogical decisions. Several schools have experienced an important increase in their funding, and have used it for teacher incentives, textbooks and repair works, sometimes attaining significant benefits. This produces empowered principals and a more optimistic mood among school staff.

Revision of the formula

The PCF experiment has correctly recognised that financing per student for small rural schools must be higher than for large schools due to economies of scale. For the moment, the correction for this fact is rather *ad hoc*, designed to minimise the number of schools which are under-financed due to particular characteristics of the school of the pilot *rayon*. It is desirable to define the adjustments to the formula on the basis of an estimation of average

costs for an efficient school with different enrolments. The characteristics of the efficient school should vary also with the type of school.

The efficient model should be translated in a set of factors correcting the formula depending on the number of students according to efficient average costs, and should be revised periodically. This set of correcting factors should continue to apply only for schools located in rural and sparsely populated areas that cannot attract more students.

Regarding the need to rationalise the network of schools, it requires transparent rules to define whether schools are entitled to rural adjustments or not. The principle should be to ensure that all children are able to attend a school within a certain reasonable distance. This might vary according to what is acceptable for the country – usually in terms of walking distance, for instance 6 to 5 kilometres and the topographical characteristics that affect the possibility of crossing this distance in an acceptable interval of time. Rural correction should be made available only for schools located in rural areas provided that there are no other schools at a distance of 6 kilometres. This provides the incentives to merge rural schools of an inefficiently low size. Topographical or other characteristics of the area that might make necessary to set two or more schools at a lower distance must be qualified by the Ministry of Education and Science at the request of the local government, a decision that might be subject to ratification by the Chamber of Accounts. Incentives to provide transportation to students located at longer distances should also be considered to minimise the number of small schools.

PCF provides the correct incentives for taking care of pupils and attracting more students. If families demanded quality education for their children and were capable of identifying it then high quality schools would be the ones with more students and more funding, and the incentives would be there for school managers to implement the most cost-effective decisions in terms of educational quality. To preserve this important incentive the rural factor correction should not be applied to urban schools. However, there is a long lasting debate on whether families will choose according to educational quality, the extent this might cause selection of students by schools and the effects that the instruments for measuring educational quality might have on the behaviour of schools and parents. It is recommended that the government carefully considers the alternatives and the international evidence before deciding on these issues. One possibility is to provide wide access to information about standardised tests results to families but correcting for students socioeconomic conditions for fair comparisons. Standardised tests results are strongly correlated with family characteristics (more than with school efficiency). Another possibility is not to disseminate tests results to families but to give feedback to teachers and principals about their performance. The possibility of selection of students by schools in basic education must be excluded.

The pilot project has devised accountability and monitoring mechanisms. It might be interesting to consider much more training for the persons involved in performing these roles as failures in accountability and monitoring are important weaknesses of the overall PFM system, beyond education. The functioning and attributions of parent councils should be evaluated. It is necessary to conduct proper training to take full advantage of this accountability mechanism. Moreover, as has been mentioned, an internal control mechanism that verifies the number of students enrolled should be put in place and run under the responsibility of the Ministry of Education and Science. The Chamber of Accounts should be trained to conduct proper audits of the new system.

Once per capita funding goes to scale, it is necessary to extend the monitoring to the number of students enrolled, with the complication that a certain number of students are likely to leave the school during the year. It is recommended that schools should be responsible for registering in official documents whenever a student has been absent for more than a week and whether the absence is due to migration or other reasons. These reports should be made available to the local government on a monthly basis.

The capacity of the system to redistribute resources for addressing equity issues is small. It is important that the government considers the introduction of more compensating mechanisms together with the scaling up of the PCF.

Assessment and scaling up nationwide

Other levels of education are affected by similar problems as the ones described for schools outside the pilot *rayon*, except that they do not depend on local governments. The incidence of rigid line item budgeting, untimely release of resources or plain scarcity on institutional management decline as one moves up in the educational system, together with the increasing importance of private fees. In 2007, the share of private contributions in total expenditure is 12% in initial vocational education, 36% in secondary vocational education and 75% in higher education. This means that despite being subject to similar line item controls and public budget restraints, higher education organisations enjoy much more autonomy and flexibility than organisations at other levels. (The situation of these institutions is analysed in greater detail in Chapter 10).

In assessing the governance structure of the overall educational system it is clear that two almost completely separated systems exist: the school and pre-school system, including the institutions functionally dependent on the Ministry of Education and Science or other line ministries in charge of teacher training and vocational education, on the one side; and the higher education institutions, on the other. A key difference arises from the autonomy in management practices.

While the problems of governance of higher education institutions are treated in Chapter 10 of this report, for other institutions one of the crucial

problems is how to move from a system without proper incentives that prevents an efficient allocation of resources and undermines operational efficiency to a system that does exactly the opposite, without resort to private resources. This requires, first, distributing resources according to the service provided by each operational unit and not on an input basis, as requested by those in charge of provision. If users of the service pay for it this would be automatically regulated. In fact, the solution envisaged is that the government pays for the users according to a student based formula. Second, it entails locating somewhere the incentives and the decision to rationalise the network of schools. Third, it requires giving service providers incentives to use resources in a cost effective way and empower them with the necessary autonomy to take these decisions. Fourth, it involves setting up the necessary accountability and monitoring mechanisms to ensure that autonomy is properly used. All these conditions are fulfilled in the pilot experiment on per capita funding, which reflects the outstanding work performed by the persons in charge of its design and implementation. There are some issues in each of these points that might be improved before extending the experiment to a national scale, as will be noted in the recommendations to this chapter.

An important neglected issue so far is equity. In most countries learning results are inversely related to student socioeconomic status and the education of parents. A society that wants to offer equal opportunities of outcomes instead of inputs must consider compensating for this adverse effect of socioeconomic status on learning opportunities. With this objective other societies have attempted compensation in their per capita formula by giving more resources per student to vulnerable households. For instance, South Africa gives seven times more resources for current expenditure to the schools in the bottom quintile as compared to schools in the top quintile, but they do not include teacher salaries in this calculation. Chile has recently introduced a means tested voucher that gives 50% more resources to more vulnerable students with an additional correction for concentration of vulnerable students in the school. However, both are much more unequal societies than the Kyrgyz Republic. In any case, the redistributive components actually present in the system are small and do not redress current inequities as discussed in Chapter 2.

The actual design of the investment process in education in Kyrgyzstan offers a wide scope for improving its efficiency. The wrong incentives for setting new schools could be removed if the PCF goes to scale. Given that the correct incentives to rationalise location will be placed in the local government it is in this instance that the initiative to start preparing a project must be exclusively located. Although it might not be urgent to update a national map of school buildings – given the incentives that PCF will give local government to take efficient decisions and stop building unnecessary schools – it might be useful for deciding on a national policy for prioritising school replacements and, eventually, to assess the need for new buildings in areas where capacity might be below demand for places.

Funding formulas based on the number of students might be appropriate for pre-school or for vocational education institutions within the limits set by the availability of funds for this level. The formula pays for service provided and not for input used, and it also provides the correct incentives for cost-effective autonomous decisions and increases accountability and of monitoring possibilities. By making the availability of funds known in advance (or at least easy to forecast), PCF will provide a basis for efficient medium and long term planning for the development of these institutions.

Recommendations

Governance arrangements

- In the long run, the Ministry of Education and Science must be responsible for the definition, allocation and monitoring of all educational transfers and must integrate pedagogical and administrative policies. While educational institutions gain in autonomy, the role of higher level institutions must be redefined. Free from day to day administration, the MOES might concentrate on key co-ordination activities that are actually weakly exercised, such as the design of educational policy; curriculum development; control, monitoring and evaluation; provision of information; definition of training priorities; and evaluation of pedagogical materials. Human capacities should be strengthened to fulfil these roles. Analytical capacities should be expanded, through access to information on education from all relevant institutions, in particular the MOF, and through a better mobilisation of the analytical resources currently resting with the KAE. Among co-ordination activities priority must be given to a revision of the curriculum on the basis of cost effectiveness criteria, consolidation or suppression of subjects; and to evaluation of programmes and materials. The first two activities are important to tackle the problem of low student to teacher ratios highlighted in Chapter 2.
- The local branches of the MOES should be equipped to better carry the burden of system management on local level. Particularly important is to enable them to be in very regular contact with all schools under their responsibility, and to improve their capacity to not only collect, but also to understand and analyse information, and to formulate recommendations for the MOES.
- At present, the regularly collected information does not capture quality (or the lack of it) and does not allow for assessing the methodological aspects of the education process. As a first step, reliable methods should be developed for monitoring compliance with the state educational standards, as well as for independent assessment of

student achievement, and understanding the methodological needs of the schools. The national assessment by the National Testing Centre (NTC) is an excellent step in the right direction.

Per capita financing

- The efficiency of the system can be improved along two complementary routes: improving the PFM system (see next section) and introducing institutional changes that improve the incentives of the different actors. The latter is the road favoured by the introduction of per capita funding for the school system, which uses institutional change to achieve operational efficiency gains without requiring correction of the flaws at higher hierarchical levels. The effort is commendable and must be supported and scaled-up gradually. The success of the change of rules introduced together with PCF depends on the capacity of schools to benefit from their new autonomy, and this in turn depends on human and financial resources. For this purpose, schools must be equipped with the appropriately trained personnel to manage the school budget and take cost-effective decisions. School councils must receive information and training to serve their role.
- As shown in Chapters 2 and 3, equity is an important issue with regard to the financing of the system. Resources per student must be adequate to allow for efficient functioning. This requires the transfers per student from the governmental budget to compensate budget limitations at the local level in poor regions beyond the cost of protected items. The financing system must give more resources to the most vulnerable and disadvantaged. The redistributive mechanisms in place at present are inadequate as they don't even redress input inequality between poor and richer regions. The new PCF formula for calculating the categorical grants for local budgets takes into account the ability of local budgets to cover the minimum standards of budget financing. In other words, under the PCF the categorical grant also serves as an equalizing mechanism of budget provision between the regions.
- Serious consideration must be given to strengthening the mechanisms for improving equity of outcomes within the educational system. New compensating mechanisms might be introduced in the funding formula.
- It is important to politically support the rationalisation of the school network, as the PCF will bring incentives for the local governments. This might be resisted by local communities. The rural correction should be available only for small schools located away from a walking distance from other small schools. An "efficient school" model

might be used for the permanent fine-tuning of the system and should be made a key responsibility of the MOES.

Strategic planning and capacity for reform

- The EDS 2008-2011 and the draft EDS 2010-2020 are powerful tools for the formulation of reform policies. Yet, the full potential of these instruments can be jeopardised by a fluctuation of reform priorities and by politically motivated external pressures. The decision-making process should be based on authoritative evidence, and should open possibilities for the involvement of all stakeholders, in particular the direct beneficiaries of education – teachers, students and parents.
- Building of institutional capacities on local and central (MOES) levels should be attributed higher priority in the design and costing of education reforms. Because of its significance, strengthening and rationalising data collection could be among the first areas in focus.
- A new process of identification of priorities and timing might be required to produce a strategic report more suitable for budget programming purposes. Using *ex-ante* strategic evaluation for improving allocation efficiency requires comparing the benefits and costs of different alternatives and choosing the ones that exhibit a higher expected return or cost-effectiveness. Other elements that might be integrated in this analysis are the probability of good implementation of the policy and the extent to which it is feasible given the capacities, power and interests of the different stakeholders. This analysis should also consider the synergies and strategic complementarities of different policies. It requires integrating a lot of information and evidence, and fosters the need to define goals and indicators that would help the monitoring and evaluation of implemented initiatives, an area of particular weakness of the PFM system. This kind of strategic exercise increases ownership and improves co-ordination of all policies including donor financed initiatives. It might be even used for offering donors choices among government defined priorities, which would increase integration of donor funding into the budget, as well as co-ordination of donor activities.
- Improving allocation and operative efficiency requires goals and indicators that are integrated in the budget process from the initial phase of discussing priorities and formulating the budget, all the way through the evaluation phases where monitoring and evaluation are used to improve performance, and as inputs for revising priorities and policies.

Monitoring and evaluation

- The development of the system of internal monitoring, control and evaluation and the integration with budget planning is essential for officers in charge of any public organisation to improve efficiency. This internal capacity is essential for correction and improvement of service delivery. External monitoring and control should be seen only as an external guarantee for the proper functioning of the internal system. The control, monitoring and auditing systems must be adapted to the PCF as a new funding mechanism.
- Inspections similar to the ones recently conducted by the Ministry of Finance should be made on a regular basis and should become institutionalised as part of the internal audit. To facilitate inspections local governments should keep, for each school under their jurisdiction, timetables for each teacher along with the calculations of his or her salary, and the auditors should be able to verify the physical presence of the teachers in the school. Similar procedures should be applied to all educational institutions. Appropriate sanctions for violations should be defined. While ghost employees are evidence of corruption, overstaffing might be a consequence either of bad management or of patronage, and is more difficult to deal with. These sanctions must follow government guidelines on anti-corruption policy.

Capital expenditure

- All investment projects should pass a technical and an economic evaluation, the first to ensure the adequacy and conformity of a project with the educational standards as well as with population needs, and the second to check its desirability in terms of social returns. These filters must be formal and compulsory. It might be debatable in which ministry these filters should be placed, but it is better that they are located in different government agencies, *e.g.* a technical filter in the Ministry of Education and Science and economic evaluation in the Ministry of Economic Development (or the Ministry of Finance). The agencies involved should be properly staffed to fulfil this role and standards for school buildings must be updated. Parliamentary initiative for setting up new schools should be eliminated.
- The Ministry of Finance should give advance notice on the availability of funds to the agency in charge of the final decision on project proposals which have passed evaluation. This agency might be a political body dependent on the Parliament, a technical body located in the Ministry of Education and Science, or a political decentralised agency deciding on investments in each region.

Notes

1. See the now abolished Decree of the President of the Kyrgyz Republic *Measures on Further Streamlining of Central Bodies of Executive Power* from 7 February 2004, YII N39a, and Decision No. 10 of the Government of the Kyrgyz Republic of 11 January 2006.
2. Kyrgyzstan was the first country in Central Asia to introduce a SWAp (health sector). The SWAp is now successfully operating.
3. The need for linkage and coherency with sector strategies and the Country Development Strategy is a particular feature of the Kyrgyz MTBF. The annual budget for education is expected to be coherent with this strategic context.
4. According to the 2008 OECD Survey on Monitoring the Paris Declaration, the latter is valid for sectors. The country chapter on Kyrgyzstan underlines that despite efforts made, in 2008 the country was still lacking a reliable, transparent and monitorable performance assessment framework (OECD, 2008).
5. During interviews with the MOF the review team was informed about a 2008 report on inspections in several regions, revealing cases of submission of incorrect figures leading to payment of salaries to ghost teachers, overstaffing of schools, excessive overtime payments, etc.
6. The Kyrgyz Chamber of Accounts only recently started with the preparation of a report with aggregate data on donor funding as part of overall spending for the sector.
7. Except for six higher education institutions which are under the Ministry of the Interior, Ministry of Health, and Ministry of Culture respectively, and which receive their funding directly from the Ministry of Finance.
8. According to Article 37 of the Law on the Principles of the Budget Law, financing of pre-school and school education is a joint obligation on both republican and local levels of governance. The first uses categorical grants, while the second uses intrinsic income.
9. These are made up from Special means of the local budget; extra-budgetary funds; credit resources, transfers, and grants; voluntary contributions and donations; incomes from municipal securities and local loans; deductions from national taxes and other incomes; full amounts received as a result of administrative penalty payments; other additional incomes from activities, organised by *aiyl-okmotus* (for example, income from the enterprises established at the local level depending on the needs of *aiyls*), and revenues received from activity of enterprises and organisations set up for the needs of local communities. The *aiyl-okmotus* also own local community property, which serves as an income-generating source.

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Chapter 4

Early childhood care and pre-school education

The provision of early childhood education and care varies widely between rural and urban areas. This chapter looks at the issues concerning ECEC, pre- and in-service training and curriculum. It also gives an overview of donor assistance and offers recommendations.

Terminology

The International Standard Classification of Education (ISCED) defines pre-primary education (ISCED 0) as “programmes that offer structured, purposeful learning activities in a school or a centre (as distinct from the home), to children aged at least 3 years for (on average) at least two hours per day and 100 days per year”. This definition does not reflect other forms of early childhood care and education, for example for children below the age of 3 or children in non-formal or private settings; it also focuses on learning, whereas many infants and young children are in settings that offer child *care* but not necessarily “structured, purposeful *education*”. This chapter will cover both types of settings, because in many former-Soviet countries (including Kyrgyzstan) the two are often combined in the same institution.

This review will use the term “Early Childhood Education and Care” (ECEC) as commonly used in OECD publications.¹

An international overview

Good-quality early childhood education and care is not just an end in itself. It also lays a strong foundation for later learning, and ensures that young children are physically, socially and developmentally prepared for entering formal schooling. Modern ECEC systems therefore have close links with primary education, but are also concerned with health care, nutrition, and early identification of children with special educational needs. Pre-primary education is thus a valuable investment; many governments have recognised this by making pre-school experience almost universal for children from the age of 3.

Internationally, ECEC systems vary greatly in terms of age group served, number of years covered, type of provision (state or private), and content offered. In most cases participation is not obligatory, and early childhood care (up to the age of 3 or 4) tends to be the responsibility of Ministries of Health or Social Affairs. From the age of 3 or 4, Ministries of Education often assume responsibility, if not in terms of provision or financing then at least in terms of standards and (sometimes) curriculum content. Indeed, some countries have integrated pre-school and primary curricula; for example in the Step by Step curriculum followed by many countries in Central and Eastern Europe, there is continuity from pre-school right through the first four years of primary.

The most common period of coverage is three years (ages 4-6). On average, the enrolment rate for 3 to 4-year-olds is 76.7% for the EU-19 countries² whereas the OECD average is 69.4% (OECD, 2008, p. 339).³

In terms of provision and financing, approaches vary from fully state-funded nursery schools (as in France, for children 3-4 up to school age); to part-time, education-oriented pre-school-entry kindergartens provided free by the state but no public care for younger children (as in England); to the “Nordic” model,⁴ which provides full-time, heavily subsidised care for 0-6 year olds under either the national Ministry of Social Affairs or the Ministry of Education and Science.

Education for All and the Millennium Development Goals: early childhood

The first Education for All (EFA) goal calls upon countries to expand and improve ECEC, through a comprehensive approach that includes care, health, and nutrition in addition to education. The initial EFA Declaration stated that “learning begins at birth”,⁵ and set up a framework for action calling for the expansion of ECEC especially for poor, disadvantaged and disabled children. Similarly, the UNICEF initiative “Eight is Too Late” aimed to bring more children and their parents or care-givers into contact with pre-school provision, not only in the interests of education but to enable early identification of children with health, nutrition, and special-needs issues. This is of particular importance to rural and poor children, who often enrol late in primary school (in Kyrgyzstan, it may not be until the age of 8 in rural areas). These children are also least likely to have been enrolled in any type of pre-school.

Kyrgyzstan has included school readiness-related activities in its Education for All-Fast Track Initiative (EFA-FTI) Catalytic Grant programmes up to 2012, in order to support the long-term goals of the Ministry’s *Education Development Strategy 2008-2011* as well as its proposed Strategy 2011-2020. The FTI framework aims to stimulate government investment in early childhood education as a means to help children make the transition into primary school. Research also shows (e.g. Janus 2008) that there is a positive association between pre-primary participation rates, primary school completion rates (a key indicator for FTI), as well as higher achievement in secondary school: “The earlier in life the investment is made, the greater the pay-off” (Heckman, 2004).

Early childhood education and care in Kyrgyzstan

Legislation

The Kyrgyz Government is well aware of the urgency of improving ECEC provision in the country, and recent legislative and normative actions reflect this concern. In 2004, the Government began to revise the policy framework; in February 2005 the *Concept Paper on Pre-School Education* was ratified, followed by the *State Standard on Pre-school Education and*

Care for a Child (2007). The new State Standard establishes the requirements for pre-school education and child care for children between 6 months and 7 years of age. It promotes community-based pre-schools or other alternative types, and requires equal access to pre-school services for all pre-school-age children in the Kyrgyz Republic (including state kindergartens).

In 2006, with UNICEF's support, the *Code of the Kyrgyz Republic on Children* was developed and adopted by Parliament. The Code (the first of its kind in Central Asia) incorporates into *national law* the norms and standards found in UN instruments, especially the Convention on the Rights of the Child (CRC). Based on this "Children's Code", a Department of Child Protection has been set up, reporting to the Government of the Kyrgyz Republic.

Most decisive of all, Parliament approved on 30 April 2009⁶ the new *Law on Pre-school Education*. The new Law reflects the values and commitments of the UN Convention on the Rights of the Child, by guaranteeing children's rights to pre-school education, protection of their health and well-being; free medical care and protection from any forms of exploitation and actions that are harmful to children's health; and protection from physical and psychological abuse. In addition, the Law requires the State to provide social protection and support to children of pre-school age, orphans, and children deprived of parental care, children with special needs, and children from poor families (Article 21). Medical care and nutrition are also covered (Articles 22 and 23).

The review team had the opportunity to meet with the Parliamentary Education Committee just before the formal adoption of the Law, and was greatly encouraged by the level of commitment shown during that meeting. However, it was not clear at that time whether the Ministry of Finance had given a firm undertaking to provide the additional allocations required by the new Law and by the State Standard. For example, according to calculations made by UNICEF, the reduction of the weekly teaching load from 36 to 30 hours, and from 30 to 25 hours in special-needs pre-schools; the fee-exemption of parents who do not have regular earnings; the cost of enhanced nutrition; and the reduction (in rural areas) of parental contributions for food will all require additional state funding. The Law (Chapter 6, Article 24) simply states that "procedures for calculation of fees for attendance of pre-school education institution by children and their collection from parents will be approved in the order set forth by the Government of the Kyrgyz Republic."

The review team hopes that these procedures will not be contrary to the Law's principle set out in Article 3 that it is state policy to provide "Accessible, high quality services" that can be sustainably developed. If these services are unaffordable for parents, they are clearly not "accessible" for them.⁷

Responsible agencies

There is a complex network of ministries and agencies that affect ECEC in Kyrgyzstan:

- The Government’s Department for Child Protection oversees the implementation of the *Children’s Code*, and by extension the enforcement of the UN Convention on the Rights of the Child.
- The Ministry of Health is responsible for the immunisation of children under 3, and collects data on primary health care at local level.
- The Ministry of Labour and Social Protection is responsible for monthly allowances.
- The MOES is responsible for budget and policy planning and governs the requirements for pre-school teacher preparation, qualifications, salaries and working conditions.
- The Kyrgyz Academy of Education (KAE, under the MOES) sets pre-school standards and curriculum.
- The Government regulations (2006) that established the “Two-Level Budget” system placed community-based alternative pre-schools under the control of local authorities and local budgets.⁸
- *Rayon* education departments are expected to collect data and monitor the activities of pre-school establishments, including community-based and alternative forms of ECEC.
- *Aiyl-okmotus* manage and plan local budgets, and support community-based initiatives. They are also responsible for social work with families. However, due to financial constraints and other priorities (e.g. safe water supply) most *aiyl-okmotus* depend heavily on international organisations and parent-driven initiatives for ECEC.

Finance

As set out in Chapter 3, the Government has introduced a number of public expenditure management reforms, including decentralising budget management to *rayons* and *aiyl-okmotus*, and a move towards results-based monitoring. The Medium-Term Budget Framework (MTBF) 2007-2010 reflects these reforms, as well as plans for increased spending in the social sectors. Public expenditures in health and education have suffered most from the post-1998 fiscal adjustments, especially in the poorer regions, so that at present there are wide variations in the quality of public services throughout the Republic.

Until the adoption of the two-level budget system in 2006 (see endnote No. 8) and the *State Standard for Pre-school Education* in 2007, the “Typical Regulations on Pre-school Establishments” (1997) determined the funding and administration of State-owned pre-primary ECEC. Data on community-based institutions were not available at the time of the review team visit. Under the new system, State education funding goes directly from the Ministry of Finance to the *rayons* and then to local *aiyl-okmotus* and schools.

Health and education take most of the resources managed by *rayons* and *aiyl-okmotus*, but because of the severe constraints on public funds they can only meet the most basic needs. While many households are willing to contribute and other non-public sources of funding can sometimes be found, the most deprived villages and families rarely have access to anything other than public money. Moreover, the Republic’s large rural population (more than 65%) affects both the delivery of and demand for education. Rural schools have relatively high costs, lower teacher utilisation rates, and are often in the worst repair. Years of budgetary neglect, added to unequal capacity for local contributions, have led to uneven quality in service delivery: at present, “education spending favours urban and relatively resource-rich regions”. (ADB, 2007, p. 259 fn).

State financing of pre-school education in 2007 was KGS 537.7 million (approx. USD 12.4 million), substantially higher than in 2006 (KGS 381.6 million or USD 8.8 million), although as a percentage of total education expenditure it dropped from 6% in 2006 to 5.9% in 2007. Nearly all of the available money (96.5% in 2007) is for recurrent expenditure, such as salaries and food, leaving very little money for materials, utilities and small repairs (pre-school building maintenance is, in theory, paid by the local *aiyl-okmotu*). Although the MTBF projects substantial increases in pre-school financing, most of the increase will go to a rise in teacher salaries rather than to learning and teaching materials, or school maintenance.⁹

As noted, pre-school education as a percentage of (state) education spending is currently about 6%; as a percentage of total State spending on general education (grades 1-11 only) it is less than 10%. Compared to OECD and EU-19 countries, the Kyrgyz Republic’s spending on the pre-school sector is low, but considering the small percentage of children served, the per-child expenditure (KGS 6 010 in 2006) is high especially in relation to the quality of ECEC offered. The cost-effectiveness of state-owned pre-schools – in particular in terms of staffing levels – needs to be investigated, now that the State Standard as well as the new Law set more demanding requirements for school quality.

The new Law does not, however, specify how any additional funding is to be generated; it merely states that children in State and municipal institutions pay fees according to procedures approved in the order set forth by the Government of the Kyrgyz Republic. According to a study by the ADB (2007), there is a Government regulation (2001, No. 775) *On participation*

of parents to support the material and educational base of pre-school and out-of-school establishments in the Kyrgyz Republic. Up to now, parents' payments have been "voluntary" except for contributions towards food. Now it remains to be seen whether there will be a *legal* requirement for parents to pay fees. Staff salaries are paid by the state budget.

Pre-school provision: an international comparison

Soviet-era ECEC systems were similar to the "Nordic" approach in that they provided comprehensive coverage for young children, although this was care-oriented in concept and expensive to provide. Comprehensive services were available for children aged 0-6 through government- or enterprise-run crèches, nurseries and pre-school institutions. Technically, this system still exists, but in practice provision, uptake and quality are uneven not only from one *rayon* to another but from one local authority (*aiyl-okmotu*) to another.

Early childhood ages 0-2

Compared to other transition countries, enrolments for this age group in Central Asia are very low. Kazakhstan, Kyrgyzstan and Tajikistan have fewer than 3% of under 3 year olds in early childhood care establishments.

Table 4.1. **Children in early childhood care**
(gross ratio, % of children aged 0-2) in all types of child care establishments

Country	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
Belarus	21.8	20.3	19.4	18.4	16.3	17.3	16.9
Moldova	12	13.6	10.6	11.2	12	12	13.1
Russian Federation	20.9	21	21.2	21.1	21.1	21.3	21.5
Ukraine	12	12.5	13.6	13.4	13.7	14.6	15.2
Armenia	6.8	6	6.4	8.9	6.9	6.5	6.6
Azerbaijan	0.4	0.4	0.4	0.4	0.4	0.3	0.3
Georgia	7.5	7.7	6.2	6.1	6.3	6.9	6.1
Kazakhstan ^a	2.8	2.1	2.4	2.5	2.6	2.7	2.8
Kyrgyzstan	3.1	3.1	3.2	3	2.6	2.6	2.6
Tajikistan	2.8	3.3	2.3	2.4	2.2	2.2	2.1
Turkmenistan	7.6	8.5	8.8	9.2	9.8	10	10.2
Uzbekistan	9.5	10.1	9.7	9.1	8.4	8.3	8.3

Note: a. Children under 3 years attending pre-school institutions.

Source: TransMONEE database 2008, Table 7.1. UNICEF: TransMONEE.

To some extent this is a reflection of a family culture where babies and very young children are looked after at home or by relatives. However, all available research suggests that even for young children there are benefits in exposure to a wider variety of experiences:

“Cognitive, linguistic, social and emotional competencies are inter-dependent; all are shaped powerfully by the experiences of the developing child; and all contribute to success in society... And although adaptation continues throughout life, human abilities are formed in a predictable sequence of sensitive periods... during which they are optimally receptive to environmental influences.” (Heckman, 2006)

Entrance age and school “life expectancy”

Internationally, enrolment percentages rise from the age of 3. Children between 5 and 7 are most likely to be included, although socio-economic factors play a significant – perhaps a deciding – role in whether or not a child goes to pre-school. Urban children are far more likely to be enrolled than rural ones (this is mostly related to a higher incidence of female employment in urban areas as well as to higher levels of disposable income; but parents in rural areas are also less likely to have access to pre-primary institutions within a reasonable distance from their homes).

In a growing number of Former Soviet Union (FSU) countries, the year before the statutory entrance age for primary education has become compulsory; this lowers the traditional primary school entrance age from 7 to 6. Where this “Zero” year is compulsory, content and standards are set by the national ministry of education. Lowering the age of primary school entrance is considered beneficial to children from minority or disadvantaged backgrounds, where “school readiness” can be compromised by factors such as (majority) language development, social skills, or previously un-diagnosed health or nutrition problems. Hungary in fact requires a “certificate of school readiness” before a child can enter first grade.¹⁰

The review team was frequently told that in Kyrgyzstan, where nearly 90% of children do not receive any kind of pre-school education, “school readiness” is a serious problem and compromises a child’s chances of success in the early primary grades. In response, the MOES in 2007 introduced an intensive school preparation programme, which offered pre-primary age children up to 100 hours of school-readiness-related activities in their local primary schools. A number of schools do try to implement the “100 hours” programme during the summer months, but because the measure was introduced without proper preparation, materials, or funding, it appears that many schools are unable to offer it, or if they do they cannot manage to complete “100 hours” as intended.

The (draft) *Education Development Strategy 2011-2020* proposes to develop a structured, 240-hour school preparation programme with standards and a curriculum, and to formulate the necessary legislation to make this a part of compulsory education. Since there are no cost estimates for such a move, and the available space, staff and money are *already* insufficient to serve the present (very low) level of participation, the review team questions whether it is feasible to add 240 hours (approx. 12 weeks) of compulsory schooling for the entire 6-7 year old cohort. Indeed the same (draft) *Strategy* foresees that this will only be reached by 2020, when 40% of children will be covered by the “100 hours” initiative while 60% will have the new 240-hour compulsory school-readiness programme. (used to be footnote: The [draft] *Strategy* also assumes that by 2015 there will be 500 community pre-schools (currently fewer than 250), and that by 2020 60% of all pre-school provision will be in non-State institutions.)

Duration

As for school “life expectancy”, there is also wide variation in the average number of years a child can expect to receive pre-primary education. In Central Asia, the regional average is less than one year; in Central and Eastern Europe, the regional average is just under two years, but the average expectancy is more than four years in Estonia and no more than a couple of months in Turkey (UNESCO, 2007). In the poorest countries in particular, pre-school participation by children 3-5 depends strongly on household income (poorest expenditure quintile has lowest participation) and geographical location (rural children have far lower participation rates than their urban counterparts) (UNICEF, 2006, Fig. 3.5). Participation is not significantly related to gender: on balance, girls are as likely (or unlikely) to be enrolled as boys throughout the region.

Net enrolment rates

In all FSU countries for which data are available, net enrolment rates in pre-school dropped sharply after 1989, due to a number of factors including closure of factory-run child care facilities, higher female unemployment, and a rise in costs to families. Although some countries have now regained or exceeded pre-1989 enrolment levels for 3-6 year olds, Central Asia countries have not, as Table 4.2 shows.

Table 4.2. **Children 3-6 years in pre-primary (ISCED 0) compared to 1989/90**
(net rate, per cent of relevant population)

Country	1989/90	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
Belarus ^a	63.1	84.8	84.1	83.6	83.6	85.6	87.2	88.9
Moldova ^b	61.2	44.1	47.6	57	61.1	63.7	68.6	68.5
Russian Federation	73.4	64.1	65.4	66.7	67.9	68.9	69.6	70
Ukraine ^a	64.2	49.6	53.8	58.7	61.7	65.6	68.7	71.1
Armenia	48.5	15.8	17.5	18.1	18.7	20.9	23.5	26.3
Azerbaijan ^a	25.1	17	19.4	21.5	22.3	22.5	22.7	22.9
Georgia ^a	44.5	25.6	24.8	34	37.5	39.6	39.8	38.2
Kazakhstan	53.1	13.8	13.2	14.6	15.7	16.9	18.4	20
Kyrgyzstan	31.3	7.3	7.7	8	8.6	10.3	11.3	12.4
Tajikistan	16.0	5.5	5.9	6.1	6.7	6.8	7.1	7
Turkmenistan	33.5	19.5	20.3	20.2	20.9	21.8	22.2	22.8
Uzbekistan	36.8	19.1	20.4	21.3	21	21.5	21.3	21.2

Notes: a. Children aged 3-5.

b. The 1989/90 data include Transdnistria; subsequent years do not.

Source: TransMONEE databases for 2006 and 2008. UNICEF: TransMONEE.

Pre-school provision and enrolment in the Kyrgyz Republic

During the Soviet period, the provision of free or low-cost ECEC was often very good, although even then the coverage was by no means universal: Table 4.2 (above) shows that, even in 1989, most countries had fewer than half of 3-6 year olds enrolled in pre-school. Nor was the state budget the sole source of financing: enterprises and state farms provided more child care facilities than municipal authorities did, so that the use of *public* resources for non-compulsory ECEC was low even before 1989. In the constrained circumstances of transition, most governments in the region look for partnerships with donors (especially Open Society Institute and Soros Foundation Network, UNICEF and Save the Children), or encourage community-based provision through targeted social assistance, e.g. via the *Mahallas*¹¹ in Central Asian countries.

In Kyrgyzstan, falling household incomes and a relatively high birth rate along with the virtual disappearance of enterprise provision continue to affect both demand for and supply of ECEC. Estimates show a population growth of 1.4% for 2009 and a birth rate of 23.44 per 1 000 population for the same year. Fees and charges to parents suppress demand, especially if there is

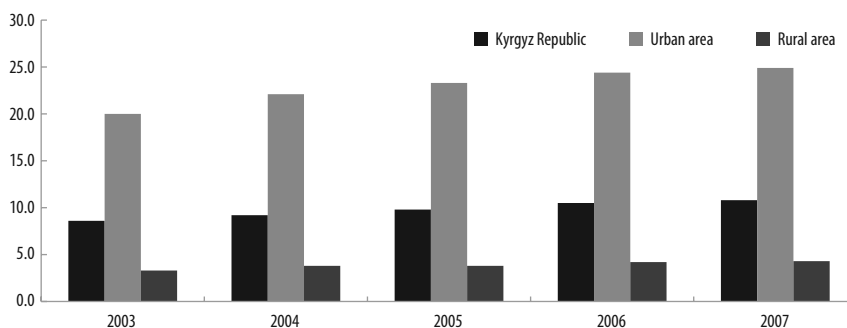
more than one child to pay for. As a result, even though provision has shrunk dramatically (from more than 1 400 institutions in 1992 to 468 in 2007), until now there have been (just) enough pre-school places. This situation has now changed, and parents' demand exceeds the number of places available especially in the cities.

As is clear from Tables 4.1 and 4.2 above, most pre-school-age children in the Kyrgyz Republic do not receive the type of high-quality, accessible ECEC that is declared to be their *right* in the new Law on Pre-school Education. The slow upward trend since 2004/05 is largely due to donor intervention, rather than to expansion of state provision. Cost recovery (in the form of fees and charges *e.g.* for food) has become a fact of life. Moreover, according to the National Statistical Committee, the infrastructure is poor. In rural areas, facilities are often closed during the winter months due to lack of heating or bad road conditions. Originally built for larger enrolments and expectations of full-day care for children from 0-6, after 1992 many school buildings were sold or are now used by local authorities for other purposes; the remaining ones are inappropriately large, decaying, and not designed or equipped to accommodate modern approaches to early childhood education.

Figure 4.1 shows that, although the general trend is upward, coverage is expanding faster in urban areas than in rural ones, where in 2007 fewer than 5% of children of pre-school age were covered compared with about 25% in urban locations.

These data show that: (i) provision in the poorer and rural areas is much less than in urban ones, with Bishkek city having 96 institutions compared with *e.g.* Batken and Talas with only 18 each; (ii) the present system is at or above-capacity, in terms of pre-school places; and (iii) pre-schools in some *oblasts* (Issyk-Kul, Osh city and *Oblast*) are seriously overcrowded, with Osh city being more than 20% over-subscribed.

Figure 4.1. Pre-school enrolment 2003/07, percentage of 3-6 cohort



Source: National Statistical Committee, Annex 1, 2009.

Table 4.4 shows that, of those children lucky enough to be in pre-school education, the large majority are between 3 and 5 years old, and that by the age of 6 or 7 most of them have left pre-school. It should be noted, however, that about 88% of all children under 7 are not in pre-schools of any kind, and that, according to discussions with teachers and school directors, the “school readiness” of those children is of great concern.

Table 4.3. **Pre-school^a provision and uptake in Kyrgyzstan, 2007**

	Number of institutions	Number of children	Number of educators	Number of places	Number of children per 100 places
Kyrgyz Republic	468	62 823	2 520	61 903	101
Batken Oblast	18	2 971	130	2 890	103
Jalal-Abad Oblast	132	12 087	494	13 048	93
Issyk-Kul Oblast	37	4 695	164	4 233	111
Naryn Oblast	25	2 013	94	2 215	91
Osh Oblast	56	5 587	237	4 985	112
Talas Oblast	18	2 307	87	2 220	99
Chui Oblast	61	6 995	270	7 037	99
Bishkek city	91	20 329	801	20 375	100
Osh city	30	5 939	243	4 900	121

Note: a. A “pre-school institution” is defined as a general educational organisation that offers the basic curriculum of pre-school learning for not less than 10 months per year. They are classified into day nurseries, day nursery/kindergartens, kindergartens, and school/kindergartens. (National Statistical Committee, 2008, p. 37). In 2007 there were also six private pre-schools, all of them in Bishkek, hosting a total of 582 children.

Source: National Statistical Committee, Annex 1, 2009.

Table 4.4. **Number of children in pre-schools by age and location, 2006^a**

	Total	Girls	Rural	Girls	Urban	Girls
	59 156	29 606	16 216	8 320	42 940	21 286
Under 3	8 632	4 329	2 586	1 268	6 046	3 061
3-5 years	36 994	18 611	10 224	5 276	26 770	13 335
6 years	11 115	5 541	2 754	1 445	8 361	4 096
7 years	2 415	1 125	652	331	1 763	794

Note: a. Latest data available to the review team. The 2009 NSC Annex does not show 2007 data.

Source: National Statistical Committee, 2008, p. 42.

The following Table 4.5 shows that urban, Russian-speaking children are far better provided for than those living in rural, Kyrgyz-speaking areas:

Table 4.5. Number of children by language and location, 2006

	Total	Russian	Kyrgyz	Uzbek
Kyrgyz Republic				
59 156	43 975	13 749	1 432	
Rural				
16 216	7 076	7 848	1 292	
Urban				
42 940	36 899	5 901	140	

Source: National Statistical Committee, 2008, p. 42.

Teachers and professional staff in pre-school institutions

According to the most recent data available to the review team (NSC, 2008), at the end of 2006 there were a total of 3 745 professional staff working in pre-schools in the Kyrgyz Republic. Of these, 52% had a university degree; nearly 33% had secondary professional education; 8% had incomplete university education; and 6% had general secondary education. Thus, a high proportion (85%) of teaching and other professional staff in pre-schools were well qualified, although perhaps not well prepared for new approaches to competence-based teaching and learning. Nearly all pre-school personnel are female (93.6%).

Table 4.6. Teachers and teaching staff in state pre-school institutions, 2006

	Total	Female	Urban	Rural
Number of teaching staff	3 745	3 607	2 653	1 092
<i>Of whom:</i>				
Directors	461	456	259	202
Specialists in teaching methods	124	121	107	17
Pre-school teachers	2 462	2 435	1 768	694
Music teachers	393	300	258	135
Specialists in special educational needs	30	29	25	5
Speech therapists	66	65	57	9
Psychologists	5	5	4	1
Other teachers, specialists and supervisors	204	196	175	29

Source: National Statistical Committee, 2008.

It is clear that rural pre-schools have fewer specialists *e.g.* for children with special needs, speech therapists, and educational psychologists. It is therefore not surprising that, in 2006 in the Republic as a whole, only 1 684 children “with limited capabilities” were in pre-school education; 1 127 (67%) of these had speech problems. Nationally, only 152 children with “delayed mental development” were attending pre-schools (NSC, 2008), and in rural areas they would be unlikely to receive specialist help. Inclusive pre-school education is still a long way off.

Pre-service (initial) training of pre-school teachers

Teacher training and the teaching career are addressed in detail in Chapter 9. University-level initial training for pre-school teachers is offered by the Kyrgyz State University. Graduates are called “methodologists in pre-school education”. The review team heard that the curriculum is based on a revised Soviet-era pedagogic handbook; additional textbooks and materials are mostly imported from Russia. International organisations working in co-operation with the University (UNICEF, Step by Step, etc.) also provide materials; however, the pre-service curriculum for pre-school teachers remains heavily theoretical with little emphasis on teaching methods that reflect modern insights into child development. The new, competence-based *State Standards for Pre-School Education* (2007) need to be reflected in a revised university curriculum. Note, however, that the present (MOES/KAE) pre-school curriculum is not, itself, in line with competence-based teaching and learning (see section on curriculum in this chapter); therefore caution is advised in using the current model for teacher training.

Because of a lack of demand, few faculties of education at regional universities and colleges offer courses for pre-school teachers. Nearly all non-university trained teachers for pre-schools come from the secondary vocational sector, where students may enter after successfully completing grade 9 or 11 in general education. Most secondary vocational schools are located in *oblast* centres, and concentrate on preparing teachers for primary schools. They take a more practical approach than the university, and offer more opportunities for student-teachers to work in schools.

In-service professional development of pre-school teachers

Courses for working pre-school teachers are offered by the Kyrgyz Academy of Education (once every three years). Officially, three categories of pre-school teachers are trained separately: teachers, directors of pre-school institutions, and methodologists. However, in reality this does not happen, and because of problems with transport and other financial constraints, pre-school

staff in remote locations are often not able to participate. Moreover, the materials and methods used by the KAE remain largely theoretical and not in line with up-to-date thinking about ECEC. For example, the refresher courses place very little emphasis on the kind of individualised teaching that is implicit in the new State Standard.

At the regional level, Institutes of Teachers' Qualification (Karakol in Issyk-Kul *Oblast* and Osh city in Osh *Oblast*) are responsible for professional development of pre-school teachers in the northern and southern regions. *Rayon* education departments are responsible for monitoring pre-school teachers' professional development, but this is mainly confined to annual data collection and there do not appear to be clear guidelines for *rayon*-level monitoring of teacher quality.

International and donor organisations also offer in-service teacher training. For example, the Step by Step Foundation has set up 11 training centres based in “model” State pre-schools in *oblast* centres staffed by local Step by Step trainers. Trainees pay for this training. UNICEF, ADB and the Aga Khan Development Network conduct in-service training for community-based pre-schools; these programmes, like Step by Step, offer practical, child-centred approaches to pre-school teaching and learning, and are usually well provided with up-to-date books and materials.

Curriculum for pre-schools

The State Standard and *Basic Curriculum for Pre-School Education* reflect the goals and objectives of ECEC in Kyrgyzstan, as set out in the 2005 *Concept of Pre-school Education*. The new State Standard contains a structured curriculum for different age groups, as well as for children with special needs. It is, in the view of the review team, very demanding considering the age group for which it is designed. It covers eleven compulsory areas of learning, each with a specified number of lessons per week: environmental education, language development, Kyrgyz language/Russian language, literature (stories), reading and writing, numeracy, music, drawing, design, crafts, and physical education.¹²

By contrast to this traditional and “quantitative” approach to early learning, the State Standard also introduces the concept of a child-centred individualised “portfolio”. It is, however, difficult to see how these two approaches can be reconciled in overcrowded classrooms by teachers who are not familiar with individual, competence-based teaching and learning, and who also have to deliver a compulsory, content-laden curriculum in limited time.

By taking an essentially content-based approach, the State Standard adheres to a view of “school-readiness” that is concerned only with children’s

cognitive and language development, ignoring the development of their emotional maturity, curiosity, social awareness, listening and exploring skills. “Readiness for school” is a much narrower concept than “readiness to learn”, and since many children do not have access to a rich variety of early-learning experiences in their families or communities, the review team believes that the way of thinking that underlies the current pre-school curriculum is an opportunity missed.

Child health and nutrition

While all children are born with the capacity to learn, not all arrive in primary school ready for learning as the previous paragraphs show. Low pre-school enrolments also mean that few children have access to school meals, health checks and immunisations during the critical early years of their development. The nutritional status of children is related not only to their physical health but to their cognitive development, and thus to their longer-term learning achievement once they enter school. From a child-welfare point of view, expansion of access to ECEC – especially for children from low-income households – is therefore vital to the improvement of their health, nutrition, and social and mental development as well as to their early learning.

In some of the poorer *rayons* in Kyrgyzstan, there are concerns about stunting (chronic malnutrition), poor-quality nutrition, lack of access to safe drinking water, and high incidence of childhood illness. Health and nutrition are the major challenges for children under eight years old. According to UNICEF-Kyrgyzstan, of the approximately 307 children born in Kyrgyzstan each day:

- Half are at risk of disrupted brain development because of iron deficiency;
- More than 100 will have poor immunity as a result of vitamin deficiency, leading to frequent ill health, poor growth and even death;
- Around 55 will suffer from intellectual impairment caused by iodine deficiency;
- Around 18 will not live to see their first birthday. Three more will die before they are five years old;
- Only 60 (mainly from urban areas) will receive any form of pre-school education. (UNICEF-Kyrgyzstan data April 2009).

Some families are too poor to pay for birth registration – their children may be deprived of primary health care and education, because they do not have the required documentation for access. However, in 2003 Kyrgyzstan introduced the State Guaranteed Benefit Package (SGBP) – a state healthcare standard that sets the minimum amount of health services the population can

receive free or at reduced costs – and starting from 2006 free medical services cover children up to 5 years of age. This should now make a difference, especially for children in poor families – provided the services are available, parents are aware of their entitlement and no bureaucratic barriers (*e.g.* excessive insistence on documents required) get in the way.

On the positive side, most children in Kyrgyzstan are born in hospitals or clinics, and receive the required “package” of immunisation free of charge. Once newborns are at home, however, there is little if any follow-up, and their parents often do not have the right information; and in Kyrgyzstan, two-thirds of the population live in remote mountainous areas with poor health services. Moreover, the lack of early screening of infants means that temporary and treatable health problems can turn into life-long disabilities.

Bringing change to teaching and learning

Generally speaking, by far the most innovative and influential changes in teaching and learning have been in ECEC, largely because of intensive involvement by international donors and NGOs through programmes such as (Inter)-Active Learning (UNICEF) and Step by Step (Open Society Institute and Soros Foundation Network). These have had a profound effect on the way child development is understood, the way teachers and children interact, and the way classrooms are organised.

Because in Kyrgyzstan pre-school education is (still) non-compulsory,¹³ Ministry involvement in curriculum and teaching methodology at this level has traditionally been limited. There are now State Standards and a basic curriculum for pre-school, but again they take a heavily cognitive view of what early childhood learning is about, despite reform influences from international organisations (*e.g.* UNICEF) and NGOs. It is regrettable that these influences were not, apparently, taken into account by MOES/KAE in formulating the new curriculum.

Step by Step Programme

Possibly the best known and most influential in the Central and Eastern Europe/CIS region is the Step by Step initiative, introduced in 1994 by the Open Society Institute and Soros Foundation Network via its national foundations in nearly all countries in the region. Originally, it was designed as a child development and “school readiness” programme catering for children age 3 to 6, but more recently it has expanded into an innovative, child-friendly and comprehensive five-year programme, which in Kyrgyz Republic provides much-needed continuity from pre-school into early primary grades.

The programme promotes the right of all children to a quality education and provides materials and training to ensure equal access for children of minority families, children with disabilities, refugees, and families living in poverty. It trains teachers and administrators at model schools, as well as university faculty, and co-operates with the Ministries of Education and Health to promote child-friendly policies. The programme also helps parents, teachers, and faculty to set up national associations to advocate for early childhood education reform, and an international forum to promote democratic and child-friendly values in education.

Following training, all teachers receive mentoring through classroom observations, one-on-one evaluation and advanced workshops. Each Step by Step teacher works toward certification under the standards established by the International Step by Step Association (ISSA) and approved by the Ministry of Education and Science.

In Kyrgyzstan, Open Society Institute and Soros Foundation Network investment has been considerable. The national Step by Step Foundation started in 1995 with seven pre-school establishments; at the time of the review team visit (2009) it had 11 training centres and covered 68 pre-schools, 57 primary schools, and four teacher training institutions throughout the country.

UNICEF, Aga Khan, Asian Development Bank and Save the Children

These organisations also actively support influential ECEC initiatives in the Kyrgyz Republic. Globally, UNICEF's work with young children is co-ordinated through its Early Childhood Development Task Force, which aims to put ECEC at the top of governments' agendas. In the Kyrgyz Republic, UNICEF assists the government to fulfil its obligations under the Convention on the Rights of the Child (CRC, ratified by the Kyrgyz Republic in 1996). In 2006, with UNICEF's support, the "Code of the Kyrgyz Republic on Children" was developed and adopted by Parliament. The Code (the first of its kind in Central Asia) incorporates into *national law* the norms and standards found in UN instruments, especially the CRC. Based on this "Children's Code", a Department of Child Protection has been set up, reporting to the government of Kyrgyzstan.

In terms of ECEC, UNICEF's goal is to ensure that at least 50% of pre-school-age children and their parents – especially from disadvantaged groups – take part in community-driven early learning, health, nutrition and social activities before the end of 2010 (UNICEF, 2008). In the poorer and more remote *oblasts* of Naryn and Batken, for example, UNICEF through its project "Community Management of Education" helped set up education village groups headed by local leaders. Parents as well as children themselves participate, and a number of community-based pre-schools have been established. These must be registered as legal entities, and be housed in buildings owned

by the *aiyl-okmotu*, so that utility costs such as heating and electricity are paid from the local budget. UNICEF provides materials and books, but teacher salaries are paid by the government in accordance with the government pay scale.

One important aspect of these community-based pre-schools is that – unlike most in Kyrgyzstan – they operate on a half-day schedule (morning and afternoon shifts), and they do not, therefore, offer “day care” and have no sleeping facilities. In this way, a deliberate distinction is made between “care” and “education”, more floor space is available for active learning, and more children can be accommodated.

Recently, the Aga Khan Development Network (AKDN) has financed the renovation of 65 pre-schools in remote mountain areas. Modern teaching and learning methods are being introduced in these schools; 25 titles of teachers’ guides have been published, and 11 village libraries were opened with AKDN support.

Save the Children has launched a global campaign aimed at achieving the Millennium Development Goal of universal primary education by 2015, but works also with younger children and their families to ensure school-readiness. Save the Children-UK and Save the Children-Netherlands are active in Kyrgyzstan. The Asian Development Bank (ADB) has been actively supporting community-based initiatives and encouraging lower-cost models of pre-school provision with its USD 12 million. Community-based Early Childhood Development Project which closed in March 2010.

Issues in early childhood education and care in Kyrgyzstan

Priority issues emerging from discussions with many people involved in ECEC reform in Kyrgyzstan are, in order of urgency: (i) ensuring that all children get “an equal start” by improving access, inclusivity, and quality; (ii) taking a unified approach to young children’s development, care, health and rehabilitation to ensure their rights and well being throughout childhood; and (iii) providing continuity between pre-school and primary education.

- *Jurisdiction.* Several ministries and agencies are responsible for parts of the pre-school system, and they do not always work together to optimise provision for children. There should be one “lead” agency to oversee the entire structure; this could be the Department for Child Protection, or the Ministry of Education and Science. The key point is to ensure that children’s rights and well being are fully protected, and that all available resources are used effectively.
- *Legal framework.* With the approval of the new Law on Pre-School Education (2009) and the State Standard (2007), the legal foundations have been laid. However, there is still more emphasis on “formalising”

the ECEC system than on implementing it, and some of the requirements laid down in the Law and the Standard are not supported by sufficient – and sustainable – resources.

- *Finance and fees.* A sustainable pre-school education system depends on reliable and equitable financing. At present the system relies too heavily on parental contributions, and thus favours urban and more affluent areas. Equal access for *all* children should be ensured by setting funding norms. The new Law does not specify how or at what level these fees should be set, or whether these fees are for care (e.g. nutrition) or education (e.g. books, learning materials).
- *Donor funding.* In 2006, the Kyrgyz Republic received USD 15 million from the Fast Track Initiative to achieve Education for All goals; 18% of this (USD 2.7 million) was allocated to ECEC. The review team was not clear to what extent this money was spent on improving access and equity for children in deprived areas. With only about 10% of Kyrgyz children benefiting from pre-school education in about 460 schools nationwide, there should be clear evidence of improvement in conditions, but school visits made by the review team did not produce such evidence. Donor and international organisations are continuing to do their best to fill the gaps, but they cannot be counted upon to do so indefinitely. There is a certain complacency at Government level that international support will somehow continue to materialise; it would be prudent not to make such assumptions, and to take on greater financial responsibility for the system.
- *Supply.* In all *oblasts*, and especially in the cities, there is no more spare capacity in state pre-schools, and many are over-crowded. A survey conducted by the ADB indicates that two-thirds of all parents (68%) would like their children to be able to attend, but only about 10-12% can be accommodated (ADB, 2007). The Education Development Strategies of the MOES (2008-2010, and the draft for 2011-2020) quite rightly aim to expand the system, but in current conditions even a modest ambition to have 15% of 3-5 year-olds in pre-school by 2015 seems unrealistic. For children of pre-primary age (6-7), the goal is to have 80% covered by 2015 – 40% of them in the “100 hours” programme and 40% in the 240-hour programme still to be introduced. There is an expectation that by 2015 there will be the same number of state-funded schools as in 2008 (about 460), but that community-driven schools will rise from 250 in 2008 to 500; this would mean an increase of about 35-40 community schools per year. Inevitably, poor and rural communities, where the need is greatest, will not have the capacity to finance these; the gap between urban and rural provision will widen.

- *Staffing.* There is a serious shortage of qualified pre-school teachers and other qualified specialists, especially in rural areas, and turnover is high because of low salaries and poor working conditions (large class sizes, dilapidated facilities, lack of heating, sanitation and safe drinking water). If the ECEC system is to be expanded rapidly as foreseen by the MOES's education development strategy, there is now an urgent need to start attracting and training more professional personnel, including specialists such as child psychologists and special-needs teachers. In addition, the ratio of pedagogical to non-pedagogical support staff (e.g. cooks, care-takers) needs to be reviewed in order to make sure that available resources are spent on education rather than "day care" (except in nurseries for 0-2 year olds where good basic child care is essential).
- *Teacher training.* Neither the pre-service nor the in-service training of pre-school teachers is in line with internationally accepted understandings of high-quality ECEC. Even the new State Standard still retains a heavily content-based and cognitive approach to early learning; the expertise gained by community-based and donor-financed initiatives, as well as their textbooks and materials, have not been used in bringing the formal teacher training programmes (both pre- and in-service) up to date. Moreover, there are now very few in-service professional development opportunities at local level, so that rural teachers and those in remote locations miss out.
- *Staff working in community-based or family-based pre-schools* often have no professional qualifications, and unless their school is supported by external donor funding, they have little or no access to information about modern approaches to early childhood care and development. There is now a need for a special curriculum and training programme for them, especially since the expectation is that community-based provision will expand rapidly in the next decade.
- *Rayon-level monitoring of teaching quality* is weak and lacks clear direction. Staff turnover among pre-school teachers is high, so that there is always a need for quality control and professional development of new staff but because of the shortage of qualified teachers, *rayon* and local authorities do not look too closely at staff quality.
- *Curriculum for pre-schools.* The new curriculum contained in the State Standard is far too prescriptive and content-laden for young children. It focuses heavily on cognitive aspects of child development, and neglects their affective, emotional, and creative development needs. It is also in conflict with other aims of the State Standard, such as child-centred and individualised teaching and learning.

- *Infrastructure.* Many pre-schools are in a poor state of repair and unable to provide an environment suited to active learning and creative play for young children. Class sizes are often large; heating is insufficient or absent in winter; sanitary facilities have been described as “catastrophic” (ADB, 2007); and (except in some better-off urban schools) there are very few books, materials and toys. Playgrounds are small, and in some cases not as safe or clean as they should be. The review team admires the hard work of pre-school teachers and staff as they struggle to provide a welcoming atmosphere for children, but the odds against them are enormous. Before expanding the system, it is imperative that the existing schools are brought up to standard.

Key recommendations for ECEC

- As a matter of urgency, designate *one* “lead” ministry or agency to oversee and co-ordinate the currently fragmented services for children. This could be the Department for Child Protection, which already is responsible for ensuring the implementation of the Convention on the Rights of the Child and Kyrgyz’s own “Children’s Code”.
- Consider the introduction of a properly planned and financed “Zero Year” for all children of pre-primary age. The present “100 hours” initiative and the planned “240 hours” programme can only be stop-gaps, and unless there is training, money, space, and teacher material, they will not help children make the crucial transition into primary school.
- Ensure that financing of pre-schools keeps pace with the planned expansion, and optimise the financial efficiency of pre-school budgets, for example by reviewing the ratio between professional and non-pedagogical support staff. Bring buildings and facilities for pre-school children up to a standard that is safe, warm and sanitary, and accessible to all.
- Improve inclusiveness, equity, access and quality for all children so that those in remote, poor or rural areas and those with special needs are not left behind. Most importantly, ensure that fees charged to parents under the new Law are affordable, fair and equitable, and that special arrangements are made for poor families and those with several children of pre-school age.
- Revisit the pre-school curriculum set up under the State Standard, and make it more flexible for individualised teaching and learning; it also should take into account all developmental needs of children – not just their cognitive development. Use the expertise and experience of international organisations and NGOs to formulate this new curriculum.

- Strengthen and modernise pre- and in-service training for pre-school teachers, and design special short courses delivered at local level for un-qualified workers in community-based schools. Strengthen the capacity at *rayon* level to monitor and improve teaching quality.

Notes

1. Other acronyms are used in other organisations: for example Early Childhood Care and Education (ECCE) is used by UNESCO and Education for All; Early Childhood Care for Survival, Growth and Development (EC-SGD) is used by UNICEF; and ECD (Early Childhood Development) is used by the World Bank.
2. Defined as all European Union (EU) countries prior to the accession of the 10 candidate countries on 1 May 2004, plus the four eastern European member countries of the OECD, namely Czech Republic, Hungary, Poland, and the Slovak Republic.
3. Enrolment rates for early childhood education range from less than 25% in Korea and Turkey to over 90% in other OECD countries including Belgium, Denmark, France, Germany, New Zealand, Spain and the United Kingdom.
4. Most countries in northern Europe have enacted a guarantee of day care for all children from the age of 1; parents may pay an income-related fee, which is waived or reduced for low-income families or families with more than one child in day care. See Jensen, 2009, pp. 7-21.
5. EFA Declaration Article 5, 1990. Jomtien, Thailand. The Education for All Global Monitoring Report 2007, which focussed on ECEC, used indicators such as under-5 years of age mortality; indicators related to child health and nutrition; access to water and sanitation, etc. Quality-related indicators are, *e.g.* class size; pupil: teacher ratio; existence/use of child development standards, including cognitive development; existence of a national ECEC policy; percentage of GDP spent on ECEC; ratio of private investment to total public sector investment in ECEC.
6. Final version of 29 June 2009 contains some important revisions *e.g.* with regard to the replacement of “affordable” high-quality services by “accessible” high-quality services, and the right of pre-school institutions to generate their own funds (now deleted). While these may appear to be minor changes, they affect children as well as institutions.

7. Currently (2010) parents only cover 50% of the costs for meals in state and municipal pre-schools.
8. Kyrgyzstan recently re-introduced a three-level budget system. Community-based alternative pre-schools remain under the responsibility of the local authorities and are funded from the local budgets.
9. The MTBF provides a more detailed breakdown of forecasts, but not for ECEC separately.
10. [The certificate] is issued by the kindergarten, at the end of the (compulsory) “zero” year before primary school. It states whether the child is physically and mentally prepared for school. If there are concerns, the kindergarten refers the child to an expert committee which includes a medical doctor and a psychologist, and a decision is made whether the child needs specialised placement or simply needs more time in kindergarten before entering school.
11. [Mahallas] are “community committees”. They have existed for centuries especially in Uzbek and Tajik cultures, and are based around a group of elders who seek to resolve social problems. Some now have a new role in ensuring that children are cared for and that the elderly and socially disadvantaged people receive targeted social assistance. They are not religious organisations, but they appear to promote traditional (Islamic) ideas on social behaviour and are thus more prominent in Uzbek and Tajik areas.
12. It appears to the review team that the curriculum design is “sequential” – *i.e.* that it assumes that children will follow it from age 3 to 6. In fact many children attend at different stages during this period, and a large number only enter pre-school at the pre-primary stage (age 5-6). To what extent the curriculum is sufficiently flexible to allow for multiple entrance and exit ages is not clear.
13. There are strategic plans to make the “100 hours” and its intended successor the “240 hours” programme part of the compulsory schooling cycle for children in their pre-primary year by 2020.

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Chapter 5

Curriculum, textbooks and learning materials

This chapter discusses the State Educational Standards (SES), the teaching plans and the syllabuses as main elements of education content (curriculum) in Kyrgyzstan. It also examines the supply, financing, adequacy and development procedures for textbooks and learning materials. The reviewers identify a number of issues related to the structure, conceptual basis and content of the curriculum which seriously impede student achievement and the quality of teaching and learning. The chapter outlines a set of problems related also to textbooks and learning materials which are inadequate to support the curriculum, are in short supply and, where available, are often out of date. The chapter suggests ways to make the curriculum more flexible and coherent, and recommends improvements in the supply mechanisms of learning materials.

The curriculum

The general education system grades 1-11

Table 5.1 shows the basic system statistics for the Kyrgyz Republic, as well as recent (2008) data by *oblast*, school location, teaching force and student population.

- Of the 2 168 schools (grades 1-11) in the Kyrgyz Republic, 1 751 are rural (80%)
- Of the 1 080 061 students (grades 1-11) 753 474 are in rural schools (70%)

Terminology

In the Kyrgyz education system, the term “curriculum” is not generally used. There are three separate documents that together define the content of education: the State Educational Standards (SES, current version 2005) which set out the conceptual framework; the specific subject curricula or syllabuses for each grade level; and the timetable or “teaching plan”. In this review, the term “curriculum” refers in most cases to the latter two (syllabuses and timetables), while the SES are considered separately because they are relatively constant over time, and less subject to minor changes and adjustments.

Table 5.1. **Schools, teacher and students in the Kyrgyz Republic, 2007/8**

Kyrgyz Republic	Schools 1-11 Total 2 168		Teachers	Students	Students	
	urban	rural	total	total	urban	rural
	417	1 751	72 097	1 080 061	326 687	753 474
<i>Oblast</i>	Schools		Teachers	Students	Students	
	Urban	Rural	total	total	urban	rural
Batken	44	181	6 777	98 693	24 263	74 430
Jalal-Abad	73	397	14 610	227 999	48 926	179 073
Issyk-Kul	29	167	6 905	92 108	23 182	68 926
Naryn	14	122	5 697	61 934	9 642	52 292
Osh	23	498	16 971	240 248	22 491	217 757
Talas	13	103	3 714	49 775	8 054	41 721
Chui	52	273	8 372	145 355	31 618	113 737
Bishkek city	123	0	6 116	110 260	110 260	0
Osh city	46	10	2 935	53 689	48 151	5 538

Source: National Statistical Committee, 2008.

Current status

The content of (state school) education in the Kyrgyz Republic essentially preserves the pre-1990 model, although a number of attempts have been made at bringing it up to date. The conceptual basis and the structure of the curriculum, however, remain those inherited from Soviet times, as are the ways in which it is taught and assessed.

The curriculum process

Standards

Article 5 of the Law on Education (2003) requires the MOES to develop State Educational Standards (SES) for all levels of education, including pre-school, secondary, vocational and technical, and higher education. According to Article 5, these standards define the “minimum content” of the basic education programmes, the maximum number of hours for students, requirements for learner achievement, and the certification of completion of programmes (diplomas, degrees, etc.) In 2005, 25 SES were formally approved by the KAE and the MOES.

At the time, the purpose of the 25 new Standards approved in 2005 was two-fold: (i) to align Kyrgyz education with international practice; and (ii) to re-draw curriculum sequences and content in preparation for the 12-year school (not on the immediate MOES agenda at the time of the review team visit). Indeed the format of the SES is in line with international practice in that they set out subject aims and objectives, content by grade level, hours on the timetable by grade and level of education (grades 1-4, 5-9 and 10-11), and standards for assessment of learner achievement.

However, since few school directors and teachers have (printed) copies of the SES, and classroom materials and assessment tasks are not explicitly related to them, they have little effect on the way teachers teach and students learn. Their only direct effect is in dictating the required number of hours for each subject and grade level, and in serving as a basis for the development of textbooks. In addition, the SES are strongly academic, and aimed at the more academically able students rather than being differentiated to suit all levels of ability.

Considerations of “time on task” and “opportunity to learn” for students also give rise to concern. In the case of mathematics, which does have a reasonable number of hours on the timetable, it seems just about possible to cover the curriculum content set out in the SES, but in other subjects – many of them with no more than one or two hours per week – the content to be covered seems overly ambitious especially given the prevailing conditions in many schools (shifts, frequent winter closures, teacher absenteeism, lack of books and materials).

Box 5.1. Example of a State Educational Standard (SES)

The Educational Standard for mathematics is the document defining the educational (minimum) knowledge level in the subject in all schools of the Kyrgyz Republic. The basic subject content of mathematics is a list of the compulsory content and structure of the subject, and knowledge necessary for further study of mathematics at other levels of education.

Basic objectives of mathematics learning

- formation of mathematical knowledge, abilities, and skills of junior students necessary and sufficient for further learning in subsequent stages of secondary schooling;
- development of personal qualities (such as humanity, accuracy, exactness, diligence) of students through the study of elementary mathematics;
- development of mathematical thinking, speech, intellectual and emotional features of the student; and
- fulfilment of overall training and preparation of the basic stage of school, and application of mathematical skills in real life.

Contents of mathematics

The new content of mathematics education is basically oriented at formation of culture and independent thinking of junior grade students, and their learning activity through mathematical concepts and methods.

Elementary mathematics is an integrated subject which includes arithmetical, algebraic and geometrical materials. Inclusion of algebraic propaedeutics helps to increase the level of forming generalisations, and provides the development of abstract thinking in students. Geometrical material not only develops spatial notions but forms practical skills, and also serves as a means to interpret arithmetical fact.

Learning of elementary mathematics must create a firm basis for further learning in the subject. Mathematics teaching in elementary schools should be based on fundamental mathematical concepts; this principle is essential to the transition from elementary to secondary school.

Mathematics textbooks are the main means of subject education, and they must reflect all three educational functions: (teaching, bringing-up, and development) and be based on the following principles:

- Scientific safety;
- Orientation at creating national feelings in a student, and their best expression and perception of human values;
- Consideration of age and national peculiarities of students; and
- Provision of available mathematical learning materials.

Box 5.1. Example of a State Educational Standard (SES) *(continued)*

Types of syllabi on the subject of mathematics

- Educational main programme; and
- Educational additional programme (including individual work plan or programme) which is developed and approved locally by the school pedagogical council.

Requirements of compulsory (minimum) level of knowledge of students at the primary school stage:

1. Numbers and calculations.¹

To know:

- Sequence of natural numbers up to one million;
- Properties of summation and multiplication;
- Signs and terms connected with arithmetical operations;
- Multiplication and summation table of one-digit numbers;
- Names of dimensions and units of measurement and correlations between them; and
- Arithmetical operations in numerical expressions with brackets and without brackets.

To be able to do:

- Read and write numbers (up to one million) in the decimal system;
- Compare numbers and dimensions;
- Imagine numbers in different summands [=number, quantity to be added in a sum]
- Orally do subtraction and division using multiplication and division tables;
- Orally calculate with numbers up to 100 and multi-digital operation numbers up to 100;
- Do written addition (subtraction) with multi-digital numbers to one-digital and two-digital numbers, including division with remainders;
- Find the value of numerical expressions with and without brackets containing 2-4 operations;
- Realise transfers from one value measure to another;
- Find different number shares (half, one-third, one-quarter, one-fifth, one-tenth.);
- Solve simple tasks with four arithmetical operations; and
- Solve task components in 2-4 operations, including content notions of “more (less) than”, “more (less) than X times”, also dimensions (cost, price, time, speed, mass, distance).

Box 5.1. Example of a State Educational Standard (SES) *(continued)*

Assessment of achieved compulsory (minimal) knowledge of students

Student's knowledge is assessed by oral questioning, and by thematic, written tests. Written tasks for continuous assessment are recommended to be held not less than once per week, in the form of independent work or mathematical dictation. Thematic assessments are aimed at checking the general level of student's knowledge and skills on the major sections of the programme for each grade, and are held after learning the whole theme.

The aim of final assessments is to check the implementation of the programme requirements, the level of knowledge achieved by students, and of the methods and content of mathematics for each quarter and half-year. It is recommended to conduct final examinations containing similar assignments, in order to clearly assess student's knowledge. Tests are considered to be more tools of diagnostics than assessment, as they give an opportunity to identify and remediate gaps in knowledge. Tests may also be a learning tool.

Assessment of implementation of standard requirements must be done at the end of initiative learning stage. Standards set the minimum that should be achieved by learners. Results may be marked "achieved" or "not achieved". Student's knowledge within the framework of basic education content in continuous classroom learning is assessed on a scale of 1-5, with 5 = highest. Final marks are put in the student's final report for the year.

1. Similar requirements are given for Algebra and Geometry.

Source: Ministry of Education and Science and Kyrgyz Academy of Education, 2005.

Strategic changes in relation to State Educational Standards (SES)

The January 2009 draft version of the *Education Development Strategy 2011-2020* acknowledges that the coherence and relevance of the current teaching plans need to be improved, and that the KAE/MOES role should be limited to establishing "minimum" standards in order to leave room for teachers and schools to add school-specific elements as appropriate. The first step, according to the draft Strategy, is to "develop and adopt (new) minimum educational standards (SES) for various subject areas."

Curriculum

In the same vein, the 2008 draft Strategy sees three main principles for "optimising" teaching plans: grouping and integration of subjects into broader disciplines; reducing the number of hours for the middle grades in basic education,¹ and shifting the emphasis from content-based to competence-based teaching and learning. These strategic directions are in line with

international practice, and with previous – largely unsuccessful – attempts at grouping subjects and shifting to competence-based learning.

As already noted, there is, as yet, no “curriculum” in the internationally accepted sense of a coherent framework based on a clear view of what “education” at each key stage in a student’s development is expected to be about. This semantic problem presents an important barrier to discussions about notions like “curriculum development” as a continuous, coherent process, rather than disjointed incrementalism characterised by minor and *ad hoc* additions or changes (rarely reductions!) as is the case at present. The MOES, supported by the Open Society Institute, the Soros Foundation Network (OSI/SFN) and the ADB, prepared a draft National Curriculum Framework (NCF). At the time of the review team’s visit, the NCF had not been approved by the MOES yet. It would seem important now to go ahead quickly, so that other reforms can be based on such a Framework.

Syllabuses

The nearest Kyrgyz equivalent to “curriculum” in the modern sense is what could be called subject programmes or syllabuses. Essentially the same subject Working Groups – with sometimes one or two additional experts – that created the SES then develop the syllabuses (“Programmes”) for each grade level. As far as could be discovered, there is little or no co-ordination among Working Groups; on the contrary, each subject group competes with the others for hours on the timetable, within the prescribed maximum number of hours per grade per week.

Primary school

Between 1994 and 2002, there were at least six alternative curricula (“variants”) for basic school (grades 1-9) to suit particular types of schools. In 2002 these were replaced by a single “Plan” for basic school, although it differentiates between plans for primary (grades 1-4) and lower secondary (grades 5-9). The primary school curriculum consists of nine subjects, all mandatory from grade 1 onwards.

For many students, the heavy load of language lessons starting from grade 1 (up to 12 hours per week in three languages) will be hard to cope with. Some 90% of children enter grade 1 without any pre-school experience, and they will need time to adjust to the routine of school life. Given also the conditions prevailing in many schools (two or more shifts, lack of suitable books and materials, poorly prepared teachers especially in foreign languages), students’ “opportunity to learn” is severely constrained. This is borne out by the unsatisfactory performance of most grade 4 children in basic skills such as reading and numeracy (see further discussion in Chapter 6).

Table 5.2. **Primary Teaching Plan for grades 1-4, Kyrgyz language of instruction**^a

No.	Subjects	Grades and hours per week			
		Grade 1	Grade 2	Grade 3	Grade 4
1	Kyrgyz language	7	7	8	8
2	Russian language	3	4	4	4
3	Foreign language	0/2 ^b	2	2	2
4	Mathematics	4	5	5	6
5	Motherland/nature studies	1	2	2	2
6	Drawing (fine arts)	1	1	1	1
7	Ethics	1	1	1	1
8	Music	1	1	1	1
9	Physical education	2	2	2	2
Total number of hours per week		20/22	25	26	27

Notes: a. The Plan for Russian language of instruction is the same, except that the number of lessons for Russian language is 7 and for Kyrgyz language is 3. For Uzbek and Tajik language of instruction, there are 7 hours per week for mother tongue and 2 or 3 hours for Kyrgyz language. Ethics is not taught in the Plan for Tajik language of instruction.

b. Foreign language (*e.g.* English or German) is not taught in the first of the four terms.

Source: KAE/Ministry of Education and Science 2007/8.

Lower secondary school

From grade 5 onwards, more subjects are added. Table 5.3 shows that, by the time a student reaches grade 9, he or she may study 19 subjects and have up to 36 lessons per week, depending on the language of instruction. In grades 5-8, there are also between 10 and 16 days of “practical” work. Although this is meant to be an introduction to the labour market, in practice it tends to be used for farm work, herding or domestic work by students and their families, particularly in rural areas where other types of job experience are scarce.

Clearly, the curriculum at this stage is extremely fragmented, with many subjects having only one (45 minute) lesson per week. Especially in the case of foreign languages, this is in essence a waste of time; moreover, the heavy emphasis on language subjects (16 out of 31 hours in grade 5) creates a serious lack of balance. Given that the majority of students leave grade 4 with very poor skills in reading, being confronted with texts in different alphabets and grammatical structures will be confusing and discouraging for them.

Table 5.3. Main Teaching Plan for grades 5-9, Kyrgyz language of instruction, 2006-07^a

No.	Subjects	Grades and hours per week				
		Grade 5	Grade 6	Grade 7	Grade 8	Grade 9
1	Kyrgyz language	5	4	3	3/2	2
2	Kyrgyz literature	3	3	3	2/3	3
3	Russian language	2	2	2	1	1
4	Russian literature	2	2	2	2	2
5	Foreign language	4	3	2	2	2
6	World history	-	1	1	1	1
7	Kyrgyz (Motherland) history	2	1	1	1	1
8	Man and society	-	-	-	-	1
9	Mathematics	6	6	6	6	6
10	ICT (Information and Communications Technology)	-	-	1	2	2
11	Physics	-	-	2	2	3
12	Biology	-	2	2	2	2
13	Chemistry	-	-	-	3	2
14	Environmental science	1	-	-	-	-
15	Geography	-	2	3	2	2
16	Man and society	1	1	1	-	-
17	Music	1	1	1	-	-
18	Technical drawing	-	-	-	1	1
19	Ethics	1	1	1	1	1
20	Technology (labour)	1	1	1	1	1
21	Physical education	2	2	2	2	2
22	Introduction to economics	-	-	-	-	1
Number of lessons per week		31 (32)	32 (34)	34 (34)	34 (33)	36 (35)
Number of days of practical work ^b		10	10	10	16	0
Number of subjects each year		14	16	18	17	19

Notes: a. As in grades 1-4, there are minor adjustments in Uzbek and Tajik Plans to allow for mother tongue instruction.

b. From grade 5 through grade 8, students are also expected to spend between 10 and 16 days per school year doing some form of practical work (roughly similar to “work experience”). This can rise to about 20 days per year for students in grade 10. Grades 9 and 11 are exempt from this requirement, presumably because of exam preparation.

Source: KAE/Ministry of Education and Science.

Upper Secondary school (grades 10-11)

In upper secondary (grades 10-11) there is one general Teaching Plan, plus a number of modified Teaching Plans for schools with a particular “profile”,

Table 5.4. General Teaching Plan for grades 10-11 (Kyrgyz language of instruction) 2007

No.	Subjects	Grades and hours per week	
		Grade 10	Grade 11
1	Kyrgyz language (stylistics)	2	2
2	Kyrgyz literature	3	3
3	Russian language	2	2
4	Russian literature	2	2
5	Foreign language	2	2
6	World history	1	1
7	Kyrgyz history	1	1
8	Man and society	1	1
9	Mathematics	3/4	5
10	Information and Communications Technology (ICT)	-	-
11	Physics	4	3
12	Biology	1	1
13	Astronomy	-	1
14	Chemistry	2	2
15	Geography	2/1	1
16	Physical education	2	2
17	Introduction to economics	1	1
18	Ethics	1	1
19	Military preparation	2	2
Number of lessons per week		32 (31)	33 (31)
Number of days of practical work ^a		20	-
Number of subjects each year		17	18

Note: a. From grade 5 through grade 8, students are also expected to spend between 10 and 16 days per school year doing some form of practical work (roughly similar to “work experience”). This can rise to about 20 days per year for students in grade 10. Grades 9 and 11 are exempt from this requirement, presumably because of exam preparation.

Source: KAE/Ministry of Education and Science.

e.g. humanities, natural sciences, or languages. The general Teaching Plan allows for 33 lessons per week, in 16 to 17 subjects; the “profiled” Plan also has 33 lessons per week in 16 subjects, with emphasis on the specific “profile” of the school.

“Profiles” in upper secondary grades 10-11

According to the draft *Education Development Strategy 2011-2020*, by 2020 all students entering grade 10 will be able to choose a “profile”, and all upper secondary schools will offer “profiled” education. At present, however, the so-called “variants” for specific profiles do not differ significantly from the basic Plan for lower grades set out in Table 5.3. Schools or classes with a mathematics profile, for example, have all the same subjects, but with one hour less of Kyrgyz literature and one or two hours more of mathematics. For schools or classes with a languages profile, again the range of subjects is the same but there is one extra hour in foreign language and one extra hour of Kyrgyz literature.

Remarkably, even the languages profile Plan has the same number of lessons in physics (four in grade 10 and three in grade 11) and the same number of lessons in chemistry (two in each grade) as the basic Plan. Therefore, it appears that *“profiling” makes very little difference in practice*. The curriculum remains fragmented among too many different subjects taught for too few lessons per week. It seems likely that changing a school’s “profile” is more a cosmetic than a substantial exercise; it does not require any real change in the teaching staff, because the same range of subjects is offered across “variants” with only very minor adjustments to the number of lessons.

Issues in the curriculum

A recent study done as part of the Asian Development Bank’s Second Education Project (ADB, 2008c)² highlighted several aspects of Kyrgyzstan’s current curriculum: (i) large number of subjects; (ii) insufficient time for practical, creative, or integrated learning; (iii) lack of choice; (iv) narrowly subject-based and academically oriented conceptual framework; and (v) lack of balance, with a heavy load of languages (e.g. 53% of the total Plan for primary grades 1-4). Most of these have already been mentioned earlier, but it is useful to consider them in more detail.

Quality of the “inherited curriculum”

The former Soviet subject-based and academic outlook persists, although some curriculum reviews took place in the 1990s (in particular in 1996) and again in 2003 and, more recently, with support from OSI/SFN (National

Curriculum Framework) and the Asian Development Bank (a revised curriculum for primary grades 1-4 and near-final version of a new curriculum for grades 5-9. However, at the time of the OECD/WB team visit (April 2009) none of these had been approved by the MOES.³

The earlier reviews undertaken by the KAE at the request of the Ministry were, and are, relatively superficial. They mostly address such aspects as: (i) slightly changing the weekly number of lessons per subject; (ii) introducing a few new subjects (ICT) or strengthening the national component of some others (Kyrgyz language and literature, Kyrgyz history etc.); and (iii) some minor changes in subject content, for example eliminating some ideological topics related to the previous regime. But in essence, these reviews did not affect the general curriculum outlook, or the educational philosophy/mentality underlying the system. In fact, it appeared to the review team that the Soviet model is still regarded as the basic template for Kyrgyz education in State secondary schools grades 1-11.

No horizontal co-ordination among subjects

The subject-based “Programmes of Study” now in use in schools appear fragmented and old-fashioned. They constitute a collection of discrete subject-based programmes, rather than a *coherent system* that could be called a “National Curriculum” framework in line with current international standards.

What is lacking is a coherent view of what each stage of education should achieve, in terms of overall student development and learning. Curriculum development, such as it is, is done by expert groups on a subject-by-subject basis, and curriculum sequences are designed “vertically” from one grade level to the next. There seems to be little interest in looking at the curriculum *horizontally, across* subjects at each grade level, to see whether what is expected of – say – a typical 12-year-old of average ability is reasonable, coherent, and in line with educational objectives. Each curriculum subject expert group seems preoccupied with maintaining or increasing that subject’s share of the weekly timetable, rather than taking a cold, hard look at ways to weed out outdated and repetitive content, and focus on essentials such as reading with understanding and functional numeracy.

The review team hopes that, following the approval of the National Curriculum Framework (developed by OSI/SFN) and the curriculum for the grades 1-4, the MOES leadership will clarify the status of the newly proposed curriculum for grades 5-9 as well; all these documents were developed with extensive consultation among teachers and subject specialists as well as other stakeholders, and while they may not be perfect they do deserve to be considered seriously.

In particular, it would be useful if the KAE would establish a *cross-subject* committee to investigate “horizontal” as well as vertical coherence at each grade level. The poor performance of Kyrgyzstan’s learners at grades 4 and 8 and in sample-based surveys such as the Monitoring of Learning Achievement (MLA) studies and Programme for International Student Assessment (PISA) strongly suggests that even the most basic curriculum objectives are not being achieved, and that in fact they may be inappropriate for the learners’ age groups and the conditions prevailing in schools.

Lack of time

Instructional time is another serious issue. Because most schools operate on a two- or three-shift system, each shift has only about five or six instructional periods (45 minutes) per day. Instructional hours per week start at about 20 class periods for grade 1 and gradually increase to about 27 or even 35 class periods, but the number of subjects studied in the higher grades is large so that some subjects are only taught for a single period per week. Clearly teachers and students have little time to cover prescribed content, and even less time to acquire or consolidate higher-level thinking skills, do independent work, or read outside the textbook.⁴ In the examination classes (grades 9 and 11) much time is spent on practising model answers to expected examination questions, further narrowing the scope for innovative teaching and learning.

Lack of balance

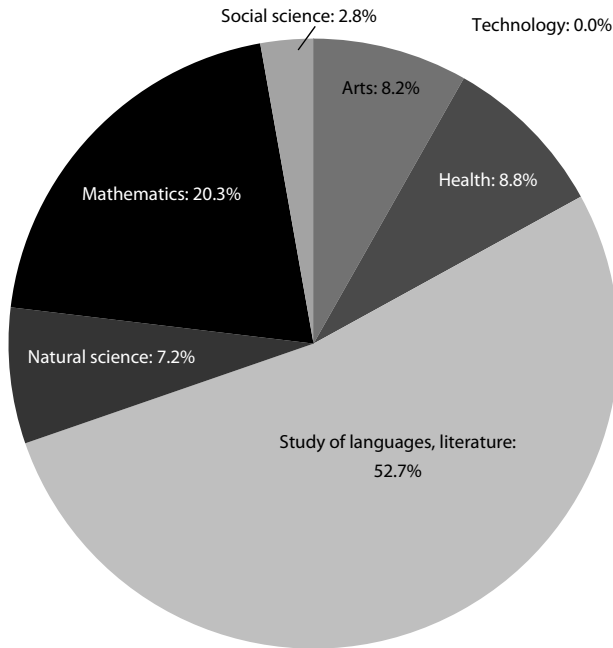
An exceptionally large amount of time is spent on the learning of languages, especially in primary grades 1-4 where they occupy more than half (52.7%) of instructional time.

This is out of proportion to the practice in OECD countries; for example, Finland – with several spoken languages and two national languages – spends less than 35% of primary school time on language studies but achieves a far higher level of functional literacy. In Kyrgyzstan, the lack of balance also means that, for example, only 10% of the time in primary grades is spent on social and natural sciences and about 8% on music and visual arts such as drawing, which are important for the balanced development of young students.

Lack of individual choice

There is a “basic variant” of the curriculum with a large number of core subjects, as well as in upper secondary grades some additional authorised “variants” for profiles, and *schools* can choose which “variant” is most

Figure 5.1. Language studies as a percentage of instructional time, grades 1-4



Source: Asian Development Bank (2008b), p. 27.

suitable for them. Although this introduces a certain element of *school* choice, it does not necessarily serve the students in that school, especially if they have to move to another school using a different “variant” or have different abilities or interests. Also, within each “variant”, the syllabuses and timetables remain strictly prescribed so that real choice is still limited.

The intention of KAE/MOES to move towards “inclusive” education in basic school (grades 1-9) will require a much more systematic use of individualised approach to teaching and learning, in order to accommodate the needs of children with various learning modes and abilities. However, teachers are not, at this time, able to develop individual education plans (IEPs) for their students, nor do they have experience in evaluating each individual child’s progress in terms of his or her expected development. Moreover, from grade 5 onwards students are taught by a large number of subject teachers, so that it will be difficult to ensure that all teachers follow a consistent IEP for each student across subjects. Materials that can be adapted for children of different abilities are also lacking, so that a “one-size-fits-all” approach remains the norm.

Scarcity of up-to-date documents in schools

Printed copies of subject standards (SES) and subject curricula are scarce, even in the MOES and KAE, and practically non-existent in schools and classrooms. Likewise, the current Strategy up to 2010, the Education for All Programme, and other concept papers appear to be unavailable in *rayon* offices and schools. It is difficult to see how these key documents can serve any real function in the day-to-day life of schools and classroom teachers. By default, “the textbook” becomes the *de facto* curriculum, and because supplementary or reference materials are rare, “the textbook” – by necessity – needs to be dense, academic, and encyclopaedic to cover the prescribed subject content.

More will be said in the section devoted to textbooks in this chapter. School visits by the review team confirmed that the learning and teaching materials available in schools are, in many cases, too difficult and un-interesting for learners, and too crammed with prescribed, factual information for teachers to add their own creativity to the daily lessons. Also, since not all learners have all the textbooks (especially in rural areas and in ethnic-minority schools), much time is spent on copying content from the blackboard or taking down the teacher’s dictation.

The team also observed that many schools are using books imported from Russia or elsewhere; it is unlikely that these will be in line with Kyrgyzstan’s Standards and Teaching Plans, further eroding the capacity of the MOES to be in command of what is, in fact, taught and learned in the country’s classrooms.

Recommendations related to curriculum

Policy level

- If a 12-year cycle is considered necessary, it would be more beneficial for a larger number of children to add a *compulsory* “Zero” year of *pre-school* (6 year olds). At present, the majority⁵ of children arrive in primary school at age 7 or 8 without any preparation. Moreover, a “Zero” year would be less costly to introduce than an additional year after grade 11, and it would benefit the entire age cohort rather than the relatively small proportion of youngsters still in school after grade 11.
- As is in fact foreseen by the draft version (November, 2008) of the Education Development Strategy (EDS), the large number of authorised “variants” of the basic curriculum should be replaced by a structure setting out a “minimum” national core curriculum that is compulsory for all, and a school-based curriculum that is determined by the school within certain guidelines. In many countries, the core curriculum occupies (for example) 80% of the instructional time, and the school

can use the remaining 20% to suit the specific strengths and interests of the school and its community. This way, the advantages of having authorised curriculum “variants” would be preserved (that is, schools could freely use part of the available time to offer their own curricula based on their own strengths and interests), while there would also be a common, non-variable core to ensure that every child in a Kyrgyz school obtains a solid level of achievement in literacy, numeracy, scientific understanding, communication skills (including language and information technology), and Kyrgyz history and geography.⁶

Implementation level

- The standards and syllabus development procedures remain strongly centralised, “closed” to wider scrutiny, criticism or public debate, and too little connected with current international thinking about child development and learning. In essence, the 2005 curricula and standards differ only superficially from those in use in 1996 or 1991. It would be helpful to pause and consider international practice before proceeding further with developing new “minimum” standards, as has been proposed.
- An approach (as suggested above) to divide the curriculum into “core” and optional components would also provide an opportunity to slim down the compulsory curriculum. The Asian Development Bank study includes international comparative data on how other countries arrange their curricula (ADB, 2008a). For Kyrgyzstan, it would be useful to explore how *fewer (but key)* subjects might be taught in greater depth, while still maintaining the educational objectives for the relevant level of schooling. It will also be important to align (new) standards and indicators with international standards, for example those developed by the OECD and/or those developed by the European Commission (European Benchmarks, http://ec.europa.eu/dgs/education_culture).

Textbooks and learning materials

Terminology

Because there are practically no teaching and learning support materials in primary and secondary schools, this section will focus largely on **textbooks**. This, in itself, is an issue (especially since school libraries are so sparsely supplied), but because Kyrgyzstan struggles to provide even the textbooks students need for the mandatory curriculum, supplementary materials are available only where parents are able to buy them.

Teaching and learning support materials from the Russian Federation and Kazakhstan are available in bookshops; these do have exercises to develop application and competence-based skills. However, they are expensive, available only in the larger cities, and not necessarily in line with the Kyrgyz curriculum.

Current status

Article 7 of the Law on Education (2003), states that the government is responsible for “publication of textbooks, training and methodological manuals and distribution of the above to State and municipal educational institutions”. The current policy of the MOES is to provide free textbooks for all grades of secondary education (grades 1-11). In reality, there is not enough money for full provision, and shortages are acute especially in grades 6, 7 and 8 and in Kyrgyz-language schools (see Table 5.5). The majority of textbooks are written by staff members of the KAE or by KAE-approved authors; the KAE also reviews manuscripts and makes recommendations for their approval. As a result, the KAE has a virtual monopoly on textbook provision in Kyrgyzstan (see discussion below).

A small “Unit for Textbook Preparation and Publication” has been set up for a short while (2009). The Unit was housed in the MOES and the intention was to open textbook authorship by holding competitions for authors and subjecting their manuscripts to an evaluation by unbiased expert councils. The Unit was dissolved before it could fully start with its work, for reasons that are not clear to the review team.

Nor was it clear what the relationships would be among the KAE, the NSMC, and (at the time of review visits) the new Unit, and where the ultimate authority lies with regard to textbook quality and approval for use in schools. According to information received during interviews with members of the Project Implementation Unit of the Rural Education Project (REP), there were no formal connections between the Unit and the KAE, but the Unit was set up to take over the KAE’s role in approving textbooks. The aim was to confine the KAE’s role to planning and developing standards and curriculum, and to approving only those textbooks that are not part of the MOES’s competitive bidding process (which was supposed to be the responsibility of the Unit). It is unlikely that the KAE has accepted this change during the short period of existence of the Unit.

Textbook policy

After independence in 1991, free distribution of textbooks continued for some time until the severe economic downturn made this impossible. From about 1994, parents were expected to buy books for their children; but few families could afford to do this. Eventually, as the pre-1991 (Soviet) books wore out, most schools had an acute shortage of books. In 1996 new legislation then permitted schools to raise funds for books and materials, and donors (ADB, Danida and others) provided some support; but by this time the shortfall was severe.

In response, the Ministry of Education and Science – with assistance from the ADB – started a Textbook Rental Scheme (TRS) in 1999, coupled with a Textbook Revolving Fund (TRF) into which parents' rental fees were deposited so that in due course the rental scheme would be self-sustaining and money would be available to replace books when they wore out (after four years). Parents could “rent” a set of books for 25% of their cost, and return them at the end of the school year ready for the next group of students. The fees were held in the textbook revolving fund (TRF) for *replacement* books. The State textbook budget was to cover the development and provision of *new* textbooks.

From the start, however, there were problems with both TRS and TRF. The fees did not cover the cost of replacing lost or damaged books; and no allowance was made for inflation by the time the books would have to be replaced. Most seriously, the TRF money was used by the MOES to develop and buy *new* books, so that the Fund never accumulated enough money to buy replacements after the first four-year cycle ended.

In May 2006, the textbook rental scheme was abolished and the MOES returned to the previous policy of providing free textbooks for grades 1-11. The money in the TRF (KGS 81 million) was simply added to the State textbook budget, together with a single payment of USD 250 000 from the (1998) Poverty Alleviation Fund supported by the World Bank. Even so, it is estimated (Ushurova, 2007) that only 55% of textbook costs for 2006-7 were covered.

Supply

Simply stated, there are not enough books in schools, and those that are there, are often old, in poor repair, or no longer in line with the curriculum. Nearly all schools visited by the review team (with the exception of one or two well-provided urban gymnasia) reported a shortage of **usable** books for students.

According to the latest school survey (2007) conducted for the National Statistical Committee, only 8% of schools reported that they had enough books and learning materials. In some *rayons* (Batken, Naryn and Chui), provision was unsatisfactory in 20% of the schools, and in these *rayons* more than two-thirds of the books had not been renewed for more than five years. In Osh *Oblast* in rural areas 90% of schools have materials more than five years old, and in Naryn urban areas it was 85.7%. Across Kyrgyzstan 69.7% of schools report their materials are more than five years old (NSC, 2008).

Nevertheless, 73.6% of the schools surveyed in 2007 reported that their book supply was “satisfactory”. On the face of it, this seems adequate; but according to a study conducted by the ADB in 2008 the data on provision are obtained in different ways. The Ministry provides documented data on textbooks that have been *distributed* to schools; while the schools submit data on the books they actually *use* (ADB, 2008 b). The issue of “usable” books was investigated by a Step by Step Foundation study (Sultanalieva, 2006) covering all *rayons* and cities of the Kyrgyz Republic, and it revealed that the figures for textbook provision are much lower especially in Kyrgyz-medium classes.

Table 5.5. **Percentage of usable textbooks in schools, 2006**

	Kyrgyz	Russian	Uzbek ^a	
1	50.47	59.34	42.22	50.67
2	52.82	30.59	69.31	50.90
3	58.99	52.61	46.46	52.68
4	36.47	38.96	69.49	48.30
5	51.28	41.32	80.40	57.66
6	19.69	34.27	50.73	34.89
7	30.87	46.06	58.15	45.02
8	28.68	53.47	78.23	53.46
9	24.01	61.12	56.88	47.33
10	46.18	79.53	141.45*	89.05
11	37.04	80.32	123.63*	80.33

Note: a. Textbook supply in Uzbek language schools seems high because parents buy the textbooks themselves, especially in upper secondary grades 10-11.

Source: Sultanalieva, G (2006), Strategic Study of Textbook Provision in the Kyrgyz Republic Bishkek: Public Foundation Step by Step for the World Bank Rural Education Project #1-3.

Table 5.5 shows that in Kyrgyz-medium classes:

- in grades 1, 2, 3 and 5, schools have slightly more than 50% of the textbooks required;
- in grade 6, schools have less than 20% of the textbooks required; and
- in grade 7 and 8, schools have about 30% of the textbooks required.

Poor provision at this level affects the quality of learning: in grades 7 and 8, for example, three students sharing a book makes textbook-based homework impossible. Table 5.5 also shows that average textbook supply in *all* schools in the Kyrgyz Republic is 50% or less in six key grades (1, 2, 4, 6, 7 and 9).

Financing textbooks

The State textbook budget is officially set at KGS 100 million per year (about USD 2.5 million) for school years 2007/8 and 2008/9. On average, actual annual disbursement is between KGS 2 million and KGS 100 million. This is not nearly enough. According to studies by the Step by Step Foundation (2006) and the ADB (2008), the total availability of *current and usable* books is 44% of the overall requirement. Indeed, it is likely that the percentage has reduced even further, since the numbers of new and reprinted books are not keeping pace with the numbers of books that are rapidly becoming un-usable. The review team observed that students in some schools are making do with old Russian books (dated pre-1991) with torn or missing pages, and that not all students in a classroom may be using the same book because there are not enough usable copies of any single title to go around.

Since 1994, the Government has relied heavily on contributions from parents and on donor-funded projects, especially by the ADB and the World Bank. Data supplied by the KAE show that, during the period 2000-2006, the majority of books provided to Kyrgyz schools were donor-funded: about 4.7 million copies financed by donors, compared with about 1.2 million copies by MOES (Ushurova, 2007 and ADB, 2008b).

The total cost of renewing *all* textbooks has been calculated as approximately KGS 800 million (USD 20 million). If the current coverage is 44%, then renewing the remaining 56% would cost approximately KGS 450 million; so that, even if the full allocation of KGS 100 million per year is indeed available, it would take up to five years to make up the shortfall – but meanwhile the existing 44% would have shrunk further (MOES Project Implementation Unit, Consultant Report, 2008).

Given that the Kyrgyz's curriculum is under revision, all existing books would need to be replaced with new ones based on the new SES and curricula, which – as noted – would cost at least KGS 800 million. Unless the

textbook budget is massively increased, this would take eight years – without any allowance for inflation, or for replacing books as they wear out during the eight-year cycle.

The ADB Second Education Project, which is funding the development of the new curricula for grades 1-11, will also fund the development, production and distribution of new books for grade 1. Thereafter, the MOES will need to pay for new books for the remaining grades. The current annual allocation might be sufficient to supply new-curriculum books for *one* grade each year; but the present plan is that *two* grades should have new curricula – and thus new books – each year. This is clearly not feasible unless the Ministry of Finance doubles the State textbook budget, or unless donor financing can be found. Neither scenario is very likely.

Meanwhile, there will still be a substantial need for reprints of books for those grades that are “waiting to benefit from the new curriculum, but who will have to use the existing books while they wait” (World Bank consultant report, November 2008).

It is clear that drastic action needs to be taken to address this problem, before the situation gets even worse. Given the mounting evidence that Kyrgyz students are not achieving even the most basic levels of reading and mathematical literacy, and that they are graduating from grades 9 and 11 (and even higher education) with insufficient skills to participate productively in a modern economy, the MOES and the Ministry of Finance can no longer rely on international donors to fulfil its responsibilities under Article 7 of the Education Law.

In the opinion of ADB and WB experts asked by the review team, the only longer-term option is to revive the textbook rental scheme (TRS), as (re-) developed under the Government of the Kyrgyz Republic/World Bank’s Rural Education Project. Parents would pay (modest) rental fees only for new-curriculum books, and provision would be made to ensure that books would still be available to students whose families cannot pay. All existing (“old”-curriculum) books would be loaned to students free of charge until new ones are available. If properly managed, the funds generated by the TRS would in due course make textbook provision in Kyrgyzstan self-financing.

In the immediate term, however, the MOES and the Ministry of Finance will still need to find the money to halt further decline in textbook provision, and bring the new-generation of textbooks on-stream as rapidly as possible.

Learning materials development, publishing and distribution

A Ministry Order dated 5 July 2001 (No. 314/1) sets out the regulations for textbook preparation and publication. The regulations cover writing, quality, review and approval, and procurement of books and materials for use in

schools. According to this order, the Department of Pre-school, School and Out-of-School Education (DP SOE) of the Ministry and the KAE are responsible for textbook procurement and distribution. Textbooks are published by decision of the MOES, and distributed centrally. Publishers are allowed to sell part of each edition in the free market.

Textbook development and approval procedures

As noted earlier, the majority of books are written by KAE staff or by KAE-approved authors; books written by other authors must still be evaluated and approved by KAE staff. And because authors are paid every time their book is updated or reprinted, there are strong incentives for the KAE to keep textbook writing “in-house” and not open it up to outsiders; more seriously, authors have a vested interest in not changing or modernising subject curricula, because this might make their books obsolete. The review team believes that these practices go a long way toward explaining the KAE’s notorious reluctance to change and are unacceptable barriers to improving the quality of curriculum and learning in the Kyrgyz Republic.

Briefly, the procedures are as follows (ADB, 2008, Chapter 1):

- A competition for writing a specific textbook is announced by the MOES.
- Working groups for textbook writing are created under an MOES order. If a subject remains without authors, the KAE sets up a group of authors to write the manuscript.
- When drafts are ready, they are passed to an Expert Council where they are discussed and reviewed by KAE subject experts.
- The draft is then submitted to KAE Academic Council for discussion, together with two or more reviews as well as the subject department’s recommendation for approval of the book for use in schools. If a manuscript is rejected, it is returned to the author(s) with the reasons for rejection.
- If the KAE Academic Council approves the manuscript, it is sent to the MOES with a summary of the minutes of the Academic Council meeting. The Collegium of the MOES reviews the draft again, and if it is approved the KAE works with the author(s) on editing the manuscript before publication.
- A tender is announced for publishers/printers. It is the review team’s understanding that announcing tenders and issuing contracts for printing and publishing are now to be the responsibility of the new Unit for Preparation and Publication of Textbooks in the MOES.

- The publisher prints 400 “pilot” copies that are disseminated to schools for piloting for one year. If the feedback from teachers is positive, and after making any further corrections to the text, the MOES places an order for printing and places the book on the list of approved textbooks.
- Every year in August, the newspaper *Kut Bilim* issues a list of Kyrgyz Republic-produced books and materials. This list is supplemented by books from the Russian Federation that are recommended for use in schools. Imported Russian books are not submitted to the same scrutiny by the KAE and the Ministry: the explanation given to the review team was that “these books have already been approved in Russia, so they must be good books.”

Textbook ordering and distribution

Because the procedures for textbook preparation and approval are so complex and time-consuming, the review team was told that it can take between six and 18 months for a manuscript to be formally approved. Also, schools submit lists of the books they need to *rayons* each year at the end of the summer – but the books are not delivered until the start of the *following* school year, adding another year to the time it takes for a new book to arrive in schools. Such long delays are another reason why it is so difficult to keep coherent reform efforts on track, and improve the quality of teaching and learning in Kyrgyzstan’s classrooms.

The *rayons* send the lists to the Ministry by November-December and, depending on the amount of money in the budget, the Ministry makes decisions about priority titles and the number of copies to be printed, and a call for tenders is issued (see above).

The winning publisher/printer then prints the books, and is responsible for their distribution directly to the *rayon* centres, and the price of the book includes delivery. This is a recent procedure proposed by the Rural Education Project’s textbook component, and should go some way towards ensuring that schools get the right books in the right quantities and in the right languages.

Issues in textbooks and materials

Quality

- In terms of content, observers have commented that most books contain too much material, are dull, too “academic”, and aimed at high-ability learners (Sultanalieva, 2006; Ushurova, 2007; ADB, 2008). To a large extent this is because books are written by the same academics who write the Standards and subject curricula: writing

books that are suitable for students across the ability range requires an understanding of children's cognitive development, as well as a flair for engaging their interest and curiosity.

- In the past few years, the MOES has issued some new regulations aimed at improving textbook quality. The first, already discussed in this chapter, was a regulation (2005) stating that all books must be “piloted” for one year at the publishers’ expense before it is endorsed for use in schools. This adds a year to the already lengthy and cumbersome book development and publication process. A second regulation (2006) states that textbooks must be in line with the State Educational Standards (SES) and be appropriate for the age of the students. This regulation also provides some guidance for authors, but no practical examples of activities for students.
- In a study conducted for the ADB Second Education Project (FEIS, 2007a), the views of local authorities, teachers and parents were sought through a series of focus group meetings across Kyrgyzstan. The main concerns expressed were:
 - Mismatch among the SES, the Teaching Plan, and subject syllabuses.
 - Textbooks are out-of-date and do not keep pace with curriculum amendments.
 - Textbooks used in Russian-medium schools are either old (Soviet) books or modern (Russian Federation) books. In either case they are not in line with the Kyrgyzstan national curriculum.
 - The level of difficulty is set too high, and because no alternative books are available, all students must use the same book regardless of their interest or ability.
 - The language used in textbooks is too academic and hard for students to understand, and teachers do not have time to explain concepts or go over the material again if students have not mastered it in the (short) time available on the timetable.
- In terms of physical quality of the books, the review team observed that many are old, in poor repair, and often not in the appropriate language; for example, most older books are in Russian but still used widely in Kyrgyz-medium or Uzbek-medium classes. Moreover, these older books are densely printed on poor-quality paper and have few if any illustrations, so that young learners with limited reading literacy skills find them daunting and dull. Some of the more recent, locally-produced books are not robust and deteriorate quickly; this would make them unsuitable for use in a textbook rental scheme (TRS) where each book is expected to last for at least four years.

Supply

- The fundamental problem here is that there is no systematic, long-term plan with a multi-year timetable and costings. Instead, the MOES responds to *annual* requests from schools and tries to fit them into its *annual* – and inadequate – state textbook budget. Inevitably this means that priorities have to be set, and that schools are unlikely to receive all the books they need in the right quantity and the right language(s) of instruction.
- If the MOES goes ahead with introducing new curricula (see section related to *Curriculum* in this chapter), the government will need to pay for new books. The present plan is that each year two grades should have new curricula – and thus new books. As already noted, this is clearly not feasible if the present lengthy and cumbersome development, piloting and approval procedures remain in place; it is also not feasible unless the Ministry of Finance doubles the annual textbook budget, or unless massive donor financing can be found. Neither of these is likely, in the current financial climate.
- Publishers are not always able to deliver all the books in time for the new school year (in fact, the year *following* the one when the original order was sent to the Ministry!). Late, un-coordinated and partial deliveries disrupt teaching and learning, especially in subjects with few hours on the timetable where every lesson counts.
- Schools sometimes order replacements of a particular book that has already been superseded by a new title. Because teachers do not want to work with half the class using the new book and half using the old one, the school refuses the new title and the new books stay unclaimed at the *rayon* centre (ADB, 2008, Chapter 1).
- In addition, there is a great deal of wastage because by the time a new book becomes available, it may already be partly out-of date, or schools have already ordered or imported another book – *e.g.* from Russia – and do not want to change again. Sometimes there is over-supply of books in one language of instruction, and under-supply in another language.

Recommendations related to textbooks and learning materials

- *Agree a feasible multi-year plan for textbook renewal.* The shortage of **usable** books in schools is far greater than official figures suggest; in Kyrgyz, only 40% of books are available, 52.5% in Russian, and about 70% in Uzbek (Rural Education Project Strategic Study on the Availability of Textbooks 2006). (The review team has no figures for Tajik-language books, but the requirements are not large, and some titles

are imported from Tajikistan; so there may not be serious shortages.) Such a plan should include a timetable, forecasts of available financing, and take into consideration the capacity of the MOES/KAE as well as Kyrgyzstan's publishing industry to deliver the books on schedule.

- Clarify the relationships and respective roles of the MOES, the KAE, the NSMC and re-establish the Unit for Textbook Preparation and Publication. In particular, it should be clear which of these has responsibility for each stage in textbook and learning materials development, and the authority for approval and procurement. The overall objective must be to **simplify and speed up** the entire process; to break the KAE's unhealthy monopoly; and to work towards an open, competitive system that will raise quality.
- *Revive the Textbook Rental Scheme (TRS)*. An essential element of the Rural Education Project's original design was to restructure the then-existing but unsatisfactory TRS and Textbook Revolving Fund (TRF). Unfortunately, in 2006 the Fund was closed and the remaining money – about KGS 81 million – added to the State textbook budget along with a one-time contribution from the Poverty Alleviation Fund. This allowed the MOES to print nearly 1.5 million books in 27 titles in 2006-07, but completely depleted the TRF. The review team supports proposals made by various donors (ADB Second Education Project, World Bank Rural Education Project, Fast-Track Initiative/Catalytic Fund) and commentators (Ushurova, 2007) to introduce an improved Textbook Rental Scheme and Fund.
- The planning for a renewed TRF has already been done as part of the Government of the Kyrgyz Republic/World Bank Rural Education Project, and all the necessary documentation is available. Thus setting up a new TRF should be relatively straightforward. However, to avoid some of the problems encountered by the previous TRS/TRF, it will be essential to use the TRF only for *new* titles that meet the needs of the *new* curriculum and are of substantially *higher quality* – in terms of both content and presentation – than the existing books.
- Reprints of existing books must not be financed from the TRF; and existing (“old”) textbooks should be loaned to students free of charge. Rental fees should apply only to the new books for the new curriculum. There is provision in the plan for students from poorer families to be exempt from paying rental fees for new books.
- *Invest in school libraries*. Most schools have libraries but they tend to contain only copies of the prescribed textbooks. If, as is planned under the new curriculum, the emphasis will shift to competence and self-directed learning, school libraries will need to be “resource centres”,

and therefore they will need good dictionaries, encyclopaedias, atlases, and reference books. In addition, there are now no (or few) books for children to read for pleasure, which affects their view of reading as an enjoyable thing to do. The review team recommends that a basic “library package” could be prepared for all schools, on the basis of suggestions made by teachers at all levels as well as by experienced librarians with an informed view of what is available nationally and internationally.

- *For pre-school and the early primary grades*, it would be advisable to provide simple story-books and picture books to encourage young children to learn and enjoy reading independently. UNICEF has recently developed a series of story-books that have proved very popular with children; this experience should be built upon.

Notes

1. The document does not specify, but this likely refers to grades 5-7.
2. The four ADB Policy Studies (2008) are a useful source of detailed information and analysis, and offer comparative overviews of practice in other countries. Policy options and recommendations are also provided. See References for bibliographic details.
3. The National Curriculum Framework was approved in December 2009. During the final months of preparation of this report the review team was informed that the MOES approved the curriculum for grades 1-4 too.
4. The review team observed that school libraries – if they existed at all – had very few resources other than textbooks, and almost nothing for children to read for enjoyment, such as story books or illustrated books about animals or the natural environment. These would help improve learners’ reading skills as well as their interest in learning independently.
5. Statistics show that in 2007/08 school year 60% of all grade 1 entrants were 7 year olds, another 35% of entrants were 6 year olds, while only 4.2% were 8 year olds. Thus, two-thirds (= a majority) of new entrants were older than 6 years.
6. In OECD countries, “core” subjects (reading and writing in the mother tongue, mathematics, and science) occupy on average 39% of available instructional time. In most countries the curriculum (in primary and basic schools 1-8 or 1-9) is divided into a compulsory part and a non-compulsory part, except in Mexico, Italy, the United Kingdom, Austria, Greece, Portugal, Japan, Norway and Finland, where the entire curriculum up to age 14 is compulsory. In other countries 20% or more of available time is allotted to non-compulsory subjects.

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Chapter 6

Assessment and examinations

This chapter outlines the current assessment instruments applied in the Kyrgyz Republic and the roles of the Kyrgyz Academy of Education and National Testing Centre. It offers recommendations on how to better align the assessment process to include formative assessment and university entrance exams. It also looks at Kyrgyzstan's participation in international, comparative sample based surveys such as PISA, PIRLS and TIMSS.

Current status

Article 5 of the Education Law of 2003 requires the Ministry of Education and Science (MOES) to set State Educational Standards (SES) for basic education, and to evaluate the system. The MOES Department for Regulations and Standards, together with the Kyrgyz Academy of Education (KAE), develops curricula and examinations based on SES.

Continuous assessment

There is no formal mechanism to track an individual student's progress from grade 1 through to school leaving. Informal continuous assessment is done by teachers; it is not explicitly linked to SES, but focused on textbook content. Teachers generally “check” the knowledge that students have acquired during a lesson or a group of lessons by assessing the students orally or by asking them to make blackboard presentations. Teachers give immediate feedback to their students, and this can achieve significant learning gains although slower learners may find it difficult to “perform” in front of their peers.

The main aim of classroom assessment in Kyrgyzstan is the giving of grades (marks), usually according to the number of errors the students make; it often happens that teachers anticipate how a student will perform, so that some students continually get low grades without much encouragement or advice on how to improve. Moreover, the grade band (5 to 1; 5 = highest and 2 = fail) is extremely narrow. The lowest mark (“1”) is never given, and a “2” only rarely, so that essentially there are only three grades: 3, 4 and 5. Such a narrow scale provides very little specific information about actual achievement, and very little room for showing progress. For example, if a student performs poorly but the teacher is reluctant to give a “2” (fail), a “3” might be given, while a student performing very well but not quite well enough to receive a “4”, might also receive a “3”. Clearly these two marks reflect entirely different levels of achievement, yet they appear identical on paper.

Teachers keep a daily record of marks given in class as well as marks on weekly tests and other assessments; all these marks are aggregated (by subject) for each quarter and reported to the school director and to the parents. However, for reasons noted earlier, these aggregated marks reflect very little specific information about a student's progress.

Intensive training of teachers in formative assessment in two pilot *oblasts* (Issyk-Kul and Talas) has yielded good results.¹ More details on teachers and the teaching career are provided in Chapter 9. It is hoped that this initiative can be extended across the country, especially since the model also uses badly needed incentives for teachers, so that both students and teachers benefit.

National end-of-cycle examinations

There is no formal examination at the end of primary school (grade 4). Grade 9 and 11 summative (exit) exams are set by MOES in collaboration with the KAE, but administered in schools and scored by teachers. There is an Assessment Unit which was previously housed in the MOES and at the time of review team visits was integrated in the KAE. The Unit sets and runs the promotion exams at the end of grades 5, 6, 7, 8, and 10 and the school leaving (certification) exams at the end of grades 9 and 11 described below.

Promotion exams

There are no promotion exams in primary school grades 1-4. Repetition rates in grades 1 and 2 of primary school are low overall (only 94 children in grade 1 in 2006/7 for the Kyrgyz Republic), but 80 of these were in Chui *Oblast*. At grade 2, 116 children in Kyrgyzstan had to repeat the grade, with again a high proportion (51) in Chui and in Osh *Oblast* (38). Other *oblasts* had no or only a few repeaters. No information was made available to the review team to explain these differences. It may be that teachers in Chui and Osh *Oblast*s are given different guidelines by their *rayon* departments; for example, it seems unlikely that grade 1 children in Chui are performing significantly worse than their peers elsewhere.

Far more boys than girls – and more rural than urban students – have to repeat an early primary grade. Nevertheless, the very low numbers of repeaters indicates that nearly all children progress to the next grade with their age group. (NSC, 2007, Tables 2.33 et seq.)

From grade 5 onwards there are end-of-year exams that are used for promotion of students to the next grade. These examinations and their requirements are set by the Ministry but administered and marked (scored) by schools according to guidelines set by the Ministry. The same range of marks (1-5) is used as for continuous assessment, although again there is no consistent “marking scheme” to guide teachers in assigning marks to students’ work. Exam sessions are held twice each year – one main examination in June plus one re-take session in August for students with unsatisfactory marks. Students with an unsatisfactory mark (less than 3) in one subject are allowed to re-take the exam in that subject. Students with more than one unsatisfactory mark must repeat the year.

Each year, four subjects for promotion exams are determined by the MOES; two of the subjects are mandatory for all students. The subjects change each year, apparently to ensure curriculum coverage. The actual assessment tasks are developed by the subject teacher and approved by the methodological council of the school. The exams are marked by the school. There is

no mechanism to ensure that standards are the same in all schools. There are no standard assignments or any standardised marking criteria. The mandatory subjects are examined by written tests; for non-Russian speakers there is also an oral examination in Russian. Additional subjects can be included, depending on the year; for example, in grades 6 and 7 foreign languages are added, but where there are no teachers a school can choose another subject. At grade 8, there is an oral exam in Russian or a written exam in Kyrgyz language.

It should be noted that not all students take promotion exams; those with an average year mark of 4 or 5 are exempt, so that only students with an average mark of 3 need to take them. (Students with an average mark of 2 must repeat the year.) Because not all students take these exams, and because they are not comparable across classes, schools or *rayons*, it is not clear to the review team what purpose they serve. The examined content is the same as the content covered during the year; since it cannot be assumed that much additional learning has taken place between the end of a school year and the date of the exam, the results cannot be significantly different from those already available from continuous assessments. The burden on students, teachers and schools of these promotion exams is disproportionate to any benefits they may yield.

Assessment for school leaving certificates (“Attestation”) at end of grades 9 and 11

The purpose of these final exams is to determine whether the required level of achievement has been reached, so that successful students can be awarded a school-leaving certificate. In theory, these exit exams should be based upon the relevant State Education Standards for each subject, although in practice there is often no clear link to the SES requirements.

Grade 9: four mandatory subjects:

1. Mathematics (written tasks);
2. Mother tongue (essay);
3. History (oral);
4. Russian language for Kyrgyz-language schools, Kyrgyz language for Russian/Uzbek/Tajik-language schools (oral).

New-type “profiled” schools (*e.g. gymnasia* and *lycées*) may have an additional exam related to their profile; for example, foreign-language profile students may have an exam in English or German while a science-profile student may have a physics exam.

Grade 11: five subjects, of which four are mandatory:

1. Algebra and elements of analysis (written);
2. Mother tongue (essay);
3. History (oral);
4. Russian language for Kyrgyz-language schools, Kyrgyz language for Russian/Uzbek/Tajik-language schools (written, dictation);
5. Chosen subject (usually chosen by the school, for all grade 11 students).

Guidelines for the final attestation exams in mandatory subjects are developed by KAE in accordance with the SES. The actual tasks (questions) are developed by the subject teacher, and approved by the methodological council of the school. In each school, a special “Attestation Committee” is set up, consisting of subject teachers; the school director/deputy director chairs the Committee. Exams are marked by the school. There is no mechanism to ensure that standards in marking students’ responses are the same in all schools. Because these exams are very low-stakes, and because in most cases each student has drawn a different set of (previously known!) questions to answer (see Box 6.3), there are few incentives or opportunities to “cheat”.

Alternative National Testing Centre tests

In parallel to these national grade 9 and grade 11 examinations, there is a self-financing National Testing Centre (NTC) housed within the building of the MOES (and to some extent under the MOES’s policy direction) but otherwise independent of the Ministry structure. This NTC was set up in 1995, with the help of United Nations Development Programme (UNDP) funding for equipment and a minimal amount of staff training. In 1999, the NTC became self-financing, employing its own staff (eight professional staff and a number of technical support staff) and generating its own finances by offering fee-paid² objective tests in 14 subjects (both in Russian and in Kyrgyz) to students at the end of grades 9 and 11.

These voluntary NTC tests are said to be “objective”, in that the items (questions) are drawn from a large item bank containing nearly 30 000 items in 20 subjects for the 9/11 attestation exams and 1 800 for higher education.³

These items have undergone classical item analysis and there are item characteristics data (*e.g.* percentage of correct answers) available for each item, so that results can be analysed electronically, giving a more objective picture of student performance. There is a 100-point scale, and there are set grade boundaries; for example, a student scoring between 60 and 71 points receives a “3”, between 72 and 89 a “4”, and between 90 and 100 a “5”. However, these cut-off points are fixed over the years even though the set of items included in

the tests changes every year. Without an appropriate item analysis using item response theory to compute item difficulty level and calibrate tests across the years based on the common items, there is no comparability and no consistency across the years in terms of what students at each grade can do.

In 2008, about 23 000 students opted to take part in NTC tests, a rise from about 9 000 in 2002, so that, in effect, more students take the tests but a higher percentage of them fail.

It was therefore not clear to the review team why students would voluntarily pay for these tests or what benefit they derive from them, especially since, according to the NTC's own data, more than 80% of candidates at grades 9 and 11 fail (*i.e.* have scores below 60). The NTC's data for the years 2000-08 show some decline in performance in most subjects tested. Indeed, it appears that the trend is downward: in grade 11 history, for example, 44.6% failed in 2000 and 67.5% failed in 2008, while the percentage receiving the highest marks declined from nearly 30% in 2000 to less than 16% in 2008. A similar decline is evident in grade 11 geometry where in 2008 66% of candidates failed (compared with 47% in 2000) and only 15% received the highest mark (36% in 2000). Since these tests are designed to be more "objective" than the national examinations, such poor and deteriorating results raise serious concerns about the quality of learning in secondary education in Kyrgyzstan.

National sample-based assessments

A similar decline is shown by national sample-based surveys, which have been done since 2000, first under the Monitoring of Learning Achievement (MLA) initiative of UNICEF/UNESCO. Two studies – one for primary 1-4, and one for grade 8 in secondary – were conducted in 2000 and 2002 respectively (see references, and discussion below). In 2005, a further MLA for Kyrgyzstan was carried out (grade 4 students). This survey showed that, far from improving, school performance among children in Kyrgyzstan had actually deteriorated since 2001: only 58.8% of grade 4 students passed a standard mathematics test, down from 81.4% in 2001; and just 44.2% passed a literacy test, down from 59.1% in 2001. This decline may to some extent be attributable to a change in the *types* of questions on the 2005 tests, or to their level of difficulty *vis-à-vis* the previous ones; but it is also a reflection of the worsening conditions in classrooms and the pressures faced by teachers and families.

Using a mixture of tests and questionnaires, the 2005 MLA study once again reveals a decline in the quality of primary education in Kyrgyzstan: "In general, the literacy levels in primary schools in 2005 showed sharp falls in all aspects, pupils of primary schools lacked the basic verbal, grammar, spelling, and punctuation skills to successfully continue the next phase of their education" (MLA, 2005, p. 25).

This downward trend is shown even more strongly by a subsequent National Sample-Based Assessment (NSBA) carried out in 2007, as part of the Government of Kyrgyzstan/World Bank Rural Education Project (REP). The 2007 NSBAs at grades 4 and 8 were based on Kyrgyzstan's own 2005 State standards as well as the curricula at that level. The review team was told that the NSBAs are not directly comparable to the MLA tests because they look for different competences and skills – for example the application of concepts in different contexts, or logical reasoning. The NSBAs are also influenced by the types of items on PISA 2006.

The 2007 NSBA results were shocking. No fewer than 64.4% of grade 4 students scored “below basic level” in reading comprehension, and 62.0% scored “below basic level” in mathematics. According to the definition given by the Centre for Education Assessment and Teaching Methods (CEATM), “below basic” means that “*students do not demonstrate sufficient knowledge and skills for successful further learning*”. At grade 8 the results in 2007 were even worse: fully 84.3% scored “below basic” in mathematics, and 73.5% scored “below basic” in reading comprehension. The review team was told that the disastrous results at grade 8 were, to some extent, due to the fact that “no remedial action had been taken” after the earlier MLAs, and that no additional effort had been made to raise the levels of student learning in basic skills such as numeracy and reading with understanding.

As discussed below and in Chapter 7 of this report, the NSBA 2007 as well as the PISA 2006 results show consistently that students in schools with Russian as the main language of instruction perform better than those in schools where students are taught mainly in Kyrgyz, Uzbek or other languages. Where parents have a choice, they therefore prefer to send their children to Russian-language schools; indeed more than 60% of students in these schools come from Kyrgyz-speaking families. Clearly it is the quality of education in Russian-language schools that make a difference, rather than the ethnicity or mother-tongue language of the students. This reflects a serious imbalance in the quality of educational provision in Kyrgyz Republic, and ought to be the subject of serious debate.

University entrance

Starting from 2002, a National [Scholarship] Test (*Obsherespublikanskoe Testirovanie* or “Republic wide testing”, abbreviated to ORT – a SAT-type multiple choice test) has been conducted annually by the Centre for Education Assessment and Teaching Methods (CEATM), a non-governmental professional assessment and testing organisation, originally established by the American Councils for International Education (ACCELS)⁴ with support from United States Agency for International Development (USAID). Students who do not qualify for scholarships but are admitted to university faculties (through

a combination of their grade 11 graduation exam and faculty-set entrance examinations) are so-called “contract” students who pay fees. In-depth discussion is found in Chapter 10 on Higher Education.

The ORT is being extended to all candidates for university entrance, in order to reduce current levels of corruption and bribery related to the allocation of university places. In this sense, the Russian term (ORT) is more appropriate than the “Scholarship” test, because it no longer pertains only to candidates wishing to qualify for scholarships.

Olympiads

These are strong and highly regarded. The review team was told, however, that the MOES had abolished the previous right of Olympiad and Gold Medal winners to enter (some) faculties without entrance examinations, so that now all candidates aspiring to university entrance in one of the “budget” places must participate in the ORT mentioned above, although their school records are also taken into account so that high achievers will still be recognised for their school performance.

International comparative sample-based surveys

Kyrgyzstan took part in OECD-PISA 2006 as one of 57 countries around the world. The results were extremely disappointing, in that Kyrgyzstan’s 15-year-olds were ranked last (57th place out of 57) in overall performance in reading literacy, science literacy, and mathematics literacy.

PISA reports students’ performance in two different ways: performance scales and proficiency levels. Performance scales were constructed for each of the three subject domains – science, mathematics and reading – to have a mean score among OECD countries of 500 points, with about two-thirds of students across OECD countries scoring between 400 and 600 points (*e.g.* one standard deviation is 100). Proficiency levels are defined for the purpose of describing what competencies students performing at each level demonstrate. Proficiency levels were defined for each of the three subject domains. Student scores in science and mathematics were grouped into six proficiency levels, with Level 6 representing the highest scores (and hence the most difficult tasks) and Level 1 the lowest scores (and hence the easiest tasks). Table 6.1 presents the descriptions of the six proficiency levels on the science scale.

Regarding a country’s mean score, students in the Kyrgyz Republic achieved a mean score of 322 points in science, 311 points in mathematics, and 285 points in reading. These are the lowest scores among the participating countries and economies. Table 6.2 presents mean scores in science, mathematics and reading for all

Table 6.1. Summary descriptions of the six proficiency levels in science

Level	Lower score limit	Percentage of students able to perform tasks at each level (OECD average)	What students can typically do at each level
6	707.9	1.3% of students across the OECD can perform tasks at Level 6 on the science scale	At Level 6, students can consistently identify, explain and apply scientific knowledge and knowledge about science in a variety of complex life situations. They can link different information sources and explanations and use evidence from those sources to justify decisions. They clearly and consistently demonstrate advanced scientific thinking and reasoning, and they are willing to use their scientific understanding in support of solutions to unfamiliar scientific and technological situations. Students at this level can use scientific knowledge and develop arguments in support of recommendations and decisions that centre on personal, social, or global situations.
5	633.3	7.7% of students across the OECD can perform tasks at Level 6 on the science scale	At Level 5, students can identify the scientific components of many complex life situations, apply both scientific concepts and knowledge about science to these situations, and can compare, select and evaluate appropriate scientific evidence for responding to life situations. Students at this level can use well-developed inquiry abilities, link knowledge appropriately and bring critical insights to these situations. They can construct evidence-based explanations and arguments based on their critical analysis.
4	558.7	20.3% of students across the OECD can perform tasks at Level 6 on the science scale	At Level 4, students can work effectively with situations and issues that may involve explicit phenomena requiring them to make inferences about the role of science or technology. They can select and integrate explanations from different disciplines of science or technology and link those explanations directly to aspects of life situations. Students at this level can reflect on their actions and they can communicate decisions using scientific knowledge and evidence.
3	484.1	27.4% of students across the OECD can perform tasks at Level 6 on the science scale	At Level 3, students can identify clearly described scientific issues in a range of contexts. They can select facts and knowledge to explain phenomena and apply simple models or inquiry strategies. Students at this level can interpret and use scientific concepts from different disciplines and can apply them directly. They can develop short communications using facts and make decisions based on scientific knowledge.
2	409.5	24.1% of students across the OECD can perform tasks at Level 6 on the science scale	At Level 2, students have adequate scientific knowledge to provide possible explanations in familiar contexts or draw conclusions based on simple investigations. They are capable of direct reasoning and making literal interpretations of the results of scientific inquiry or technological problem solving.
1	334.9	14% of students across the OECD can perform tasks at Level 6 on the science scale	At Level 1, students have such a limited scientific knowledge that it can only be applied to a few, familiar situations. They can present scientific explanations that are obvious and follow concretely from given evidence.

countries and economies that participated in PISA 2006, as well as the OECD average scores. Among the participating countries and economies, Finland performed highest in science; Chinese Taipei, Finland, Hong Kong-China, and Korea performed highest in mathematics; and Korea performed highest in reading.

Establishing proficiency levels makes it possible not only to rank students' performance but also to describe what students can do. Figure 6.1 presents the proportion of students at each proficiency level. The Kyrgyz Republic has a comparatively small proportion of top performers: no Kyrgyz 15-year-olds in the sample reached Level 6 on the science scale (OECD average 1.3%). Students at Level 6 should demonstrate that they can consistently identify, explain and apply scientific knowledge, and knowledge about science, in a

Table 6.2. Mean score and range of rank of the countries/economies in science

	Mean score	Standard Error	Range of rank			
			OECD countries		All countries/economies	
			Upper Rank	Lower Rank	Upper Rank	Lower Rank
Finland	563	(2.0)	1	1	1	1
Hong Kong-China	542	(2.5)			2	2
Canada	534	(2.0)	2	3	3	6
Chinese Taipei	532	(3.6)			3	8
Estonia	531	(2.5)			3	8
Japan	531	(3.4)	2	5	3	9
New Zealand	530	(2.7)	2	5	3	9
Australia	527	(2.3)	4	7	5	10
Netherlands	525	(2.7)	4	7	6	11
Liechtenstein	522	(4.1)			6	14
Korea	522	(3.4)	5	9	7	13
Slovenia	519	(1.1)			10	13
Germany	516	(3.8)	7	13	10	19
United Kingdom	515	(2.3)	8	12	12	18
Czech Republic	513	(3.5)	8	14	12	20
Switzerland	512	(3.2)	8	14	13	20
Macao-China	511	(1.1)			15	20
Austria	511	(3.9)	8	15	12	21
Belgium	510	(2.5)	9	14	14	20
Ireland	508	(3.2)	10	16	15	22
Hungary	504	(2.7)	13	17	19	23
Sweden	503	(2.4)	14	17	20	23
Poland	498	(2.3)	16	19	22	26
Denmark	496	(3.1)	16	21	22	28

Table 6.2. Mean score and range of rank of the countries/economies in science (cont.)

	Mean score	Standard Error	Range of rank			
			OECD countries		All countries/economies	
			Upper Rank	Lower Rank	Upper Rank	Lower Rank
France	495	(3.4)	16	21	22	29
Croatia	493	(2.4)			23	30
Iceland	491	(1.6)	19	23	25	31
Latvia	490	(3.0)			25	34
United States	489	(4.2)	18	25	24	35
Slovak Republic	488	(2.6)	20	25	26	34
Spain	488	(2.6)	20	25	26	34
Lithuania	488	(2.8)			26	34
Norway	487	(3.1)	20	25	27	35
Luxembourg	486	(1.1)	22	25	30	34
Russian Federation	479	(3.7)			33	38
Italy	475	(2.0)	26	28	35	38
Portugal	474	(3.0)	26	28	35	38
Greece	473	(3.2)	26	28	35	38
Israel	454	(3.7)			39	39
Chile	438	(4.3)			40	42
Serbia	436	(3.0)			40	42
Bulgaria	434	(6.1)			40	44
Uruguay	428	(2.7)			42	45
Turkey	424	(3.8)	29	29	43	47
Jordan	422	(2.8)			43	47
Thailand	421	(2.1)			44	47
Romania	418	(4.2)			44	48
Montenegro	412	(1.1)			47	49
Mexico	410	(2.7)	30	30	48	49
Indonesia	393	(5.7)			50	54
Argentina	391	(6.1)			50	55
Brazil	390	(2.8)			50	54
Colombia	388	(3.4)			50	55
Tunisia	386	(3.0)			52	55
Azerbaijan	382	(2.8)			53	55
Qatar	349	(0.9)			56	56
Kyrgyzstan	322	(2.9)			57	57

Statistically significantly above the OECD average
 Not statistically significantly different from the OECD average

Statistically significantly below the OECD average

Source: OECD PISA database 2006.

Box 6.1. Interpreting differences in PISA scores (1): how large a gap?

The Programme for International Student Assessment (PISA) is a triennial survey of the knowledge and skills of 15-year-olds. It is the product of collaboration between participating countries and economies through the Organisation for Economic Co-operation and Development (OECD), and draws on leading international expertise to develop valid comparisons across countries and cultures. More than 400 000 students from 57 countries making up close to 90% of the world economy took part in PISA 2006. The focus was on science but the assessment also included reading and mathematics and collected data on student, family and institutional factors that could help to explain differences in performance.

PISA assesses the extent to which students near the end of compulsory education have acquired some of the knowledge and skills that are essential for full participation in society, focusing on student competencies in the key subject areas of reading, mathematics and science. PISA seeks to assess not merely whether students can reproduce what they have learned, but also to examine how well they can extrapolate from what they have learned and apply their knowledge in novel settings, ones related to school and non-school contexts.

The focus of the PISA 2006 assessment was on science. The analyses of this paper mainly examine students' performance in science, but the performance scales in science, mathematics and reading are highly correlated: the correlation coefficient between the science performance scale and the mathematics performance scale is 0.72 and it is 0.69 between the science and reading performance scales in the Kyrgyz Republic.

The Kyrgyz Republic participated in PISA 2006 for the first time. In the Kyrgyz Republic, 5 904 students from 201 schools participated in PISA 2006. The national desired target population (15-year-olds in school at grade 7 or above) was approximately 92 000 students, which accounts for 72% of the total population of 15-year-olds in the Kyrgyz Republic.

variety of complex life situations. They can link different information sources and explanations and use evidence from those sources to justify decisions. They clearly and consistently demonstrate advanced scientific thinking and reasoning, and they demonstrate use of their scientific understanding in support of solutions to unfamiliar scientific and technological situations.

In the Kyrgyz Republic, 86% of 15-year-olds do not reach Level 2, the baseline level of achievement on the PISA scale at which students begin to demonstrate the science competencies that will enable them to participate actively in life situations related to science and technology (Figure 6.1). Level 2 requires competencies such as identifying key features of a scientific investigation, recalling single scientific concepts and information relating to a situation, and using results of a scientific experiment represented in a data table as they support a personal decision. By comparison, students at Level 1 often confuse key features of an investigation, apply incorrect scientific information, and mix personal beliefs with scientific facts in support of a decision.

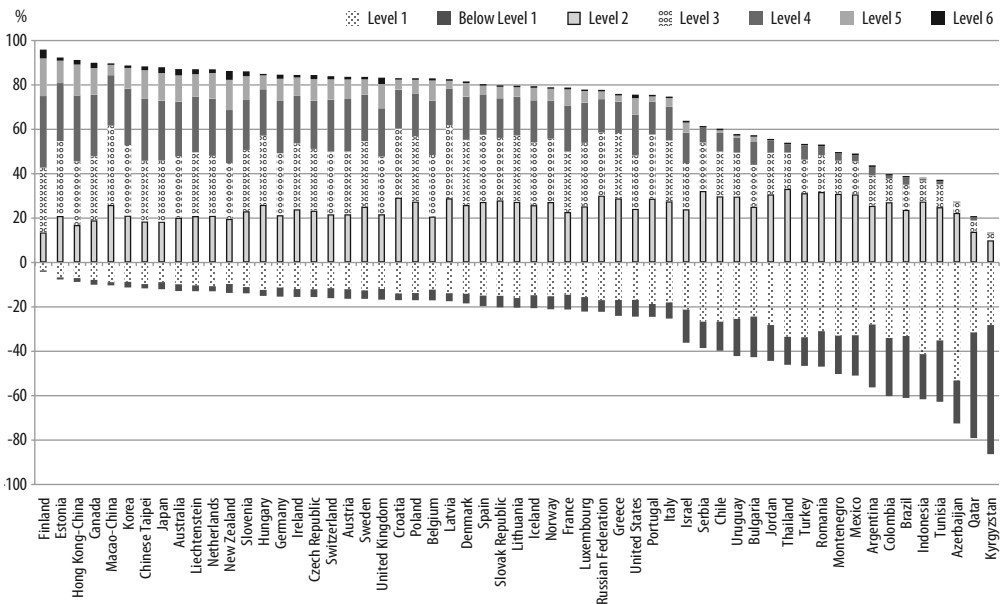
Box 6.2. Interpreting differences in PISA scores (2): how large a gap?

What is meant by a difference of, say, 50 points between the scores of two different groups of students? The following comparisons can help to judge the magnitude of score differences. A difference of 74.7 score points represents one proficiency level on the PISA science scale. This can be considered a comparatively large difference in student performance in substantive terms. For example, with regard to the skills that were described above in the section on the PISA 2006 assessment framework, Level 3 requires students to select facts and knowledge to explain phenomena and apply simple models or inquiry strategies, whereas at Level 2 they are only required to engage in direct reasoning and make literal interpretations.

Another benchmark is that the difference in performance on the science scale between the countries with the highest and lowest mean performance is 241 score points, and the performance gap between the countries with the fifth highest and the fifth lowest mean performance is 143 score points.

Finally, for the 28 OECD countries in which a sizeable number of 15-year-olds in the PISA samples were enrolled in at least two different grades, the difference between students in the two grades implies that one school year corresponds to an average of 38 score points on the PISA science scale.

Figure 6.1. Percentage of students at each proficiency level in science



Note: Countries are ranked in descending order of percentage of 15-year-olds at Levels 2, 3, 4, 5 and 6.

Source: OECD PISA database 2006, Table 2.1a.

Similarly, in mathematics, almost 0% of Kyrgyz 15-year-olds reach at least Level 5 on the mathematics scale (OECD average 13%); 11% reach the baseline Level 2 of mathematics performance; and 89% perform below Level 2. In reading, almost 0% of Kyrgyz 15-year-olds reach at the highest reading level, Level 5 (OECD average 8.6%); while 12% are capable of basic reading tasks at Level 2 – locating straightforward information, making low-level inferences of various types, working out what a well-defined part of a text means and using some outside knowledge to understand it.

PISA 2006 has identified that, in the Kyrgyz Republic, approximately 40% of variation in 15-year-old students' performance in science are attributable to the differences between schools, while 60% are attributable to the range of student performance within schools. A substantial proportion of performance variation between schools can be explained by the differences in the schools' average socio-economic background of students. Schools with socio-economically less advantaged students tend to perform lower (OECD, 2007 [PISA 2006 initial report]).

In examining the level of school resources – human resources, material resources, and learning time, PISA 2006 has shown that schools in the Kyrgyz Republic have a very low level of school resources, in terms of adequate

Table 6.3. **Relationship between school resources and performance in science**

	Model 1		Model 2		Model 3		Model 4		Model 5	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
School resources										
• Human resources (0 = all science teaching positions filled; 1 = one or more vacant science teaching positions)	-6.9	(9.0)					-1.8	(8.7)	9.9	(5.8)
• Material resources (Index of the quality of schools' educational resources)			9.2	(3.9)			8.9	(3.8)	-5.1	(2.7)
• Learning time in regular classes in science at school (hours per week)					7.0	(0.5)	7.0	(0.5)	6.8	(0.5)
Socio-economic background										
• Socio-economic background of students									3.6	(1.2)
• Socio-economic background of schools									81.4	(5.6)
Within-school variance explained (%)	0.0		0.0		4.7		4.7		4.9	
Between-school variance explained (%)	0.3		3.3		5.6		8.8		63.9	

Source: OECD PISA database, 2000.

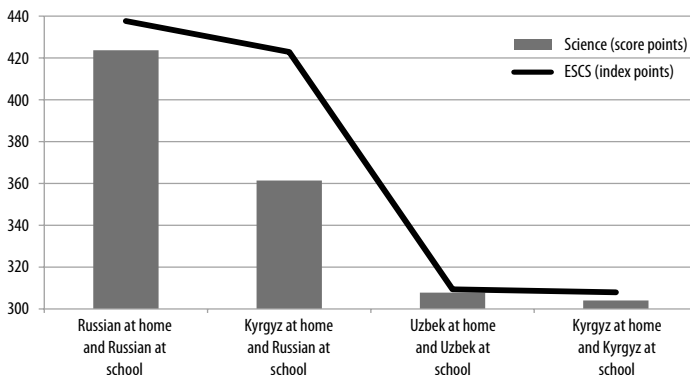
number of teachers, quality of school resources and students' learning time at school, compared with other OECD countries (OECD, 2007). In regard to the relationship between school resources within the country, Table 6.3 shows that there is no significant difference in performance between the schools with no vacant science teaching position and the schools with one or more vacant science teaching positions – *i.e.* the proxy of human resources – (Model 1), while there are significant relationships between material resources and performance as well as between students' learning time and performance (Models 2 and 3).

Often schools with more advantaged socio-economic students tend also to have better school resources. The relationships between school resources and performance, therefore, were examined, taking into account the socio-economic background of students and schools. The results in Model 5 show that there is no significant relationship between school material resources and performance, when the socio-economic background of students and schools are taken into account. However, the relationship between *students' learning time* and performance is significant, even accounting for the socio-economic background of students and schools. Students who spend more time in regular science lessons at school tend to perform better, beyond the impact of socio-economic background.

With the PISA 2006 data, it is also possible to examine student performance by various population subgroups such as gender, language groups, and school location. The results show that females slightly outperformed males in science, and outperformed by a great deal in reading, but there is no gender difference in mathematics performance (OECD, 2007).

In terms of language groups, Figure 6.2 shows that students speaking Russian at home and attending schools where Russian is the language of instruction

Figure 6.2. Students' performance in science by language groups



Note: ESCS stands for the PISA Index of Economic, Social and Cultural Status.

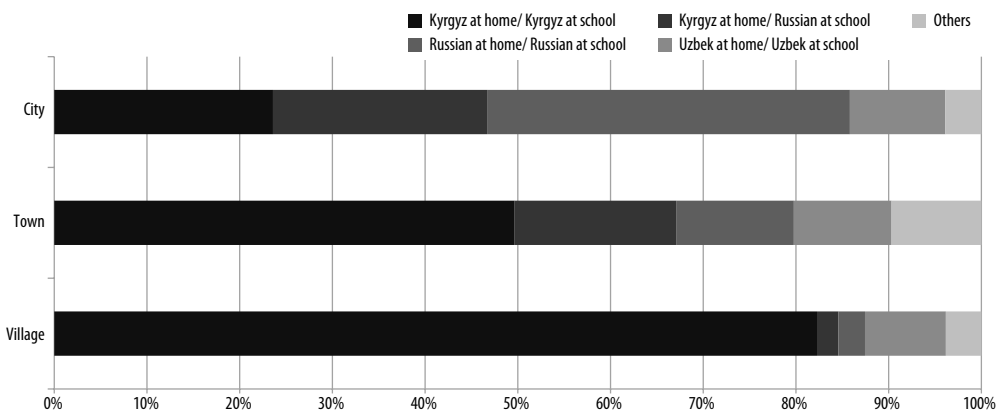
Source: OECD PISA database, 2006.

(*Russian at home and Russian at school*) perform highest, followed by student speaking Kyrgyz at home and attending school where Russian is the language of instruction (*Kyrgyz at home and Russian at school*). Students speaking Uzbek at home and attending schools where Uzbek is the language of instruction (*Uzbek at home and Uzbek at school*) and students speaking Kyrgyz at home and attending schools where Kyrgyz is the language of instruction (*Kyrgyz at home and Kyrgyz at school*) perform the lowest.

According to the school location, the performance level differs greatly. Students in schools in cities tend to perform the highest (393 score points in science), which is followed by students in schools in towns (331 score points), and students in schools in villages perform the lowest (301 score points). The language subgroups and school locations are somewhat interrelated: students who use *Russian at home and Russian at school* and students who use *Kyrgyz at home and Russian at school* are more likely to be found in cities, while students who use *Kyrgyz at home and Kyrgyz at school* tend to be in villages (see Figure 6.3). PISA 2006 has also shown that there are significant differences in the levels of socio-economic background, school material resources, and students' learning time across the language subgroups as well as across school location.

In summary, educational policies targeting socio-economically disadvantaged schools will be effective for improving the overall performance level as well as enhancing equality in learning opportunities. These educational policies could be a provision of educational materials such as textbooks and teaching materials to the schools and a subsidization of teachers' salary which enables schools to provide longer hours of teaching in main subjects. Schools which needs these interventions in urgent tend to be schools which provide instruction in Kyrgyz and Uzbek. Schools which provide instruction in Kyrgyz tend to be located in villages.

Figure 6.3. Language groups by school location



Source: OECD PISA database, 2006.

Issues in learning and assessment of student achievement

Approach to learning

In general, teaching and learning methods used in classrooms remain traditional: teacher-centred and “directive”. Students are expected to give cued responses and, because instructional time is limited and most schools work on a two- or even three-shift system, with curriculum content which tends to be heavy, there is little time for students to develop and express their own ideas. The review team saw very little evidence of problem solving, classroom interaction, group work, “productive learning”, or co-operative or other forms of active learning. If used at all, they are used only in connection with international, pilot or NGO projects such as the Open Society Institute and Soros Foundation Network’s Step by Step or UNICEF’s work in community-based pre-school. When asked, teachers say that their job is to “cover the textbook content in the available number of hours on the timetable”: in other words, they focus on *teaching* as if it were an end in itself.

Naturally, the consequence is that classroom assessment is based on how well a student is able to memorise and repeat exactly what the teacher or the textbook says, rather than on how well he/she is able to apply, analyse, or discuss a new piece of knowledge, or how well he/she can in other ways show that something has been *understood*. The grade (mark) a student receives is based on the ability to reproduce learned material without omissions or language mistakes. One mark is deducted for 1-3 mistakes; two for more, etc. According to the Standards, to get the top mark pupils should be able to give examples from their own experience and give reasons for their opinion. In practice, “a 5 is awarded for remembering everything in the textbook, and opinions are not required, except perhaps in literature classes” (ADB, 2008, Chapter 1).

In addition, much of the teachers’ attention is given to high-ability students. As in many other Former Soviet Union (FSU) countries, the mythology of the “Olympiads” persists: the fact that some gifted students do well in such competitions is cited as evidence that the overall quality of learning in the school is high. In reality, these Olympiad winners and Gold Medal winners⁵ are a tiny minority – perhaps the top 2% of the ability range; they are identified early in their school careers, and often intensively coached for Olympiad competitions by the best teachers. The remaining 98% of students, ranging from the very able to the average to the low-achievers, receive far less attention. In fact, *the curriculum does not sufficiently differentiate between various levels of ability*, so that average and below-average learners struggle to cope with a “one-size-fits-all” curriculum.

This does not mean that children should be grouped or “tracked” by (perceived) ability: only that neither the curriculum nor the time-table allows teachers to create room for each student to learn at his/her own pace, concentrating

on basic competences and skills rather than being forced to keep up with demands that are achievable by only a few.

Students' attitude to learning

Students' academic self-concept is an important outcome of education, and a trait that correlates strongly with student success. Self-concept measures the general level of belief that students have in their own academic abilities. PISA shows to what extent do the assessed 15-year-old students believe in their own science competencies. The results of 2006 indicate that students in the Kyrgyz Republic have higher self-concept than the OECD average, in every question measuring students' self-concept: 84% of students reported that they could usually give good answers in science tests (the OECD average is 65%), A large proportion of students – between 76 and 80% respectively – said they were confident in learning science, reporting that they agreed that they learned school science topics quickly, or understood concepts or new ideas very well (the OECD averages are between 55 and 59%). Furthermore, 85% agreed that school science topics were easy and 78% agreed that learning advanced science would be easy (the OECD average is 47% for both questions) (OECD, 2007).

However, an important finding is that, within the Kyrgyz Republic, the index of self-concept in science is negatively correlated with students' performance. This means that students who have a higher level of self-confidence in science tend to perform *worse* in science than a student who has a lower level of self-confidence in science. Thus, in the Kyrgyz Republic students' self-concept is not underpinned by their actual level of performance. By contrast, in all OECD countries the relationship is positive: students who have a higher level of self-confidence in science also tend to perform better in science (OECD, 2007). The Kyrgyz Republic is one of only two countries where the relationship is negative (the other country is Indonesia).

One possible explanation for this discrepancy between students' self-concept and performance could be that educational goals are set lower for low-performing students: teachers teach only basic topics and give less demanding tasks to low-performing students, while they teach more advanced topics and give more demanding tests to high-performing students. In order to improve the overall achievement level for the country, it is crucial for Kyrgyz Republic to establish standardised educational goals, a standardised assessment system, and to provide additional support so that students who are not meeting the established standards are enabled to reach them, rather than lowering educational goals and let less able students believe they are doing well in science. To maintain students' self-confidence, however, it would also be important to provide constant support, guidance and daily feedback in the classroom, through formative assessment.

Examination practices

The national examinations at grades 9 and 11 are “low stakes”, first because nearly everyone passes (upwards of 95%), and second because in most cases the exam questions are known and published in advance. For grade 11 mathematics, for example, the MOES/KAE publishes a booklet of 300 numbered questions – this booklet is available for about KGS 18 (USD 0.40), and remains in force for up to three years. Teachers and students spend considerable time preparing for these published questions, although they will not know until the actual day of the exam which questions they will have to answer. Similarly, essay questions and

Box 6.3. Organisation of examinations

On the day of the examinations, *rayon* departments or sometimes the schools themselves use a complex system of allocating a different set of questions (“variant”) to each candidate, so that no two students in the room have the exact same exam paper. Using again the mathematics example, this is done by choosing up to 30 different sets of five questions from the booklet, by number, and writing the relevant five numbers on a strip of paper, *e.g.*

Maths	Question 1	Question 2	Question 3	Question 4	Question 5
Variant 1	Booklet no. 9	28	13	16	14
Variant 2	5	2	8	11	13
Variant 3	6	23	16	18	27
Variant 4	13	9	11	15	10
Variant 5	2	20	19	29	3

...etc. (up to the number of students in the class).

The methodologists at the *rayon* level, or sometimes the school staff, cut the grid into horizontal strips – for example Variant 3 would be:

6	23	16	18	27
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Each strip is then folded up, and all are placed in a sealed envelope; on the exam day the envelope is opened and each student picks a strip out of the envelope, consults his maths booklet, and answers (in the case above) booklet questions number 6, 23, 16, 18, and 27.

Essay questions (for example in literature) are set on texts studied by the candidates during the year. Students are extensively “coached” in writing and memorising model answers. **Oral examinations** are conducted in each school by its “Examination Commissions” which normally consist of the chairperson of the Commission, the student’s own teacher, and one or two other teachers or “assistants”. Again, the “tickets” (*biljete*, *i.e.* strips of paper containing three questions each) are placed in an envelope. Each candidate selects his/her “ticket”, and is then given 15 or 20 minutes to prepare before being called before the Commission.

the questions to be asked in oral examinations (so-called “tickets” or *biljete*) are published in the newspapers about 2-3 months before the exams. Thus – although the use of advance-notice questions and booklets guarantees that textbook content is well rehearsed! – *students are never faced with an exam question they have not seen before, or with a task that requires them to apply their knowledge in a different way*, which is probably why 15-year-olds in Kyrgyz Republic perform so poorly in studies like PISA and the national sample-based assessments.

While on a certain level this is efficient, cheap, and “impartial”, the most obvious problem is that strip 2 may be more difficult (or easier) than strip 9, and that without reliable item statistics⁶ it is obviously impossible to create multiple variants that are of equal difficulty, or that test the same range of skills required by the subject standards. More seriously from an educational point of view, this kind of cued-response “drilling” on previously known questions lays a heavy, constricting hand on teaching and learning.

The practice of pre-publishing examination questions months or even years in advance should be abandoned at once. This would allow teachers and learners to concentrate on what the SES and subject curricula require, rather than on endlessly rehearsing “stock” answers to a narrow range of previously known, and heavily memory-based, questions. No doubt such a move will be controversial, but it is essential in the interest of “competence-based” learning, which the MOES supports according to the (draft) *Education Development Strategy 2011-2020*.

International and European indicators and benchmarks

Although education systems and their standards reflect the values and aspirations of the nations they serve, and are therefore based on *national* views of quality in education, there is also a growing recognition that many of these values and aspirations are *common across national boundaries*, and that it is possible – and desirable – to identify common ground.

International indicators

To a considerable extent, international surveys such as OECD’s PISA reflect an international view of what students in a high-quality education system should be able to achieve by the end of basic education (usually about 9 years of schooling). Similarly, the Progress in International Reading Literacy Study (PIRLS) sets a benchmark for reading literacy for 9-10 year olds in a large number of countries worldwide, while the Trends in International Mathematics and Science Study (TIMSS) does the same for mathematics and science at grades 4 and 8.

Kyrgyzstan has participated in PISA 2006 (see discussion above), and although the 2006 results were disappointing, Kyrgyz Republic also took

part in the PISA 2009 survey in the hope that it will show an upward trend in achievement. The review team observed that within these few years the Kyrgyz Republic was able to disseminate widely the new concept of students' learning outcome, which focuses the students' ability *to apply knowledge in a real-life context* rather than merely memorising facts. Enhancing people's awareness is an important first step. This, however, has to be supported by effective interventions in order to improve students' performance. The review team was not informed of any of state-wide interventions such as increasing time spent on learning basic subjects, providing more appropriate teaching materials, and providing appropriate teacher training between 2006 and 2009. It is important to give a caution, therefore, that the PISA 2009 results might not yet show the full potential that Kyrgyz Republic students have. It usually *takes time* to see changes in educational outcome after a new approach has been introduced. A long-term perspective is essential to plan educational policy reforms and interventions.

Given Kyrgyz students' disastrously poor National Sample-Based Assessment (NSBA) results in reading literacy at grades 4 and 8 in 2007, the review team would also recommend a renewed emphasis on "reading with understanding", possibly with a view to taking part in the next Progress in International Reading Literacy Study (PIRLS) survey in 2011. As with PISA, such participation might lead to improved teaching and learning of basic, functional literacy in primary schools.

European benchmarks

In 2003 the Education Council of the European Commission adopted five "reference levels of European average performance" or European benchmarks. The two most relevant to Kyrgyzstan are that:

1. By 2010, at least 85% of 22 year olds in the European Union should have completed upper secondary education.
2. By 2010, the percentage of low-achieving 15 years old in reading literacy in the European Union should have decreased by at least 20% compared to the year 2000.

These benchmarks are set too high for Kyrgyzstan at this moment, but because of the steady increase in migration and labour mobility in Central Asia and neighbouring countries, international and European consensus on what "educational quality" means is likely to become a common reference point for countries around the world, and therefore it would be in Kyrgyz Republic's interest to pay attention to them in formulating its own education development strategy for the next decade.

Table 6.4. Status of assessment and examination system reforms in various CEE-CIS countries, 2009

Status is reported on a general, 5-point scale as shown below.

0 – not planned/not started **1** – early planning/discussion stage **2** – development and experimentation [= small-scale trials] **3** – piloting [= larger-scale trials] and implementation **4** – operational **n.i.** – no information

	Establishment of new assessment authority	Reform of Matura/Baccalaureate examination	Introduction of other school exams or assessments e.g. basic school	Standardisation of university entrance examinations	Introduction of sample-based national assessment	Participation in international assessments (PISA, TIMSS, PIRLS) ^c
Armenia	4	4	3	4	0	4
Azerbaijan	4	1	1	4	1	4
Belarus	4	4	n.i.	4	n.i.	0
Bulgaria	1	1	0	0	0	4
Czech Republic	4	3	2	0	0	4
Estonia	4	4	4	4	4	4
Georgia	4	4	4	4	4	4
Hungary	4	4	0	4	4	4
Kazakhstan	4	1	1	4	1	4
Kyrgyzstan	4	1	1	4 ^a	1	4
Lithuania	4	4	4	4	4	4
Macedonia	4	4	1	2	4	4
Moldova	2	2	1	3	4	4
Montenegro	4	2	2	1	3	4
Poland	4	4	4	3	n.i.	4
Romania	4	4	4	4	4	4
Russian Federation	4	4	3	4	2 ^b	4
Serbia	4	0	4	0	4	4
Tajikistan	2	2	0	2	4?	0
Ukraine	4	4	2	4	2	4
Uzbekistan	4	0	0	4	4	1

Notes: a. Kyrgyzstan has a non-compulsory test of verbal and mathematical reasoning, originally intended to select university entrants who qualify for government support; but it is increasingly being used also by candidates who pay their own university fees.

b. Some regions (Samara, Vologda) are conducting some sample-based assessments at primary level, e.g. in mathematics and Russian language, but there are none at Federal level.

c. PISA – Programme for International Student Assessment; TIMSS – Trends in International Mathematics and Science Study; PIRLS – Progress in International Reading Literacy Study.

Source: G. S. Bethell and J.V. Crighton *et al.* (2006), and personal communications. UNICEF, 2007: *CEE and CIS Regional Study on Education: Education for some more than others?*, Geneva: UNICEF. Updated in May 2009.

Recommendations related to assessment and examinations

Policy level

- Most countries in Central and Eastern Europe and the Commonwealth of Independent States have introduced new forms of assessment that are designed to be valid, reliable, fair, and “clean”. Table 6.4 shows the current status of assessment reform in a number of countries that have similarities to Kyrgyz Republic, *e.g.* in terms of transition status, or previous education system structures. It also shows that Kyrgyz Republic can draw on a wealth of regional experience when it plans to reform its own assessment system, as intended in the (draft) *Education Development Strategy 2011-2020*.
- *The grading (marking) scale*, which now has only three useful levels (3-4-5) does not give enough information about the actual level and quality of student’s learning, or about his/her progress in relation to previous performance. In addition, since there are no agreed criteria for what a “3” or a “5” means in terms of competence or achievement, the marks given by teachers are non-comparable across classrooms, schools and *rayons*. At the very least, there should be clear descriptors setting out what *e.g.* a “3” in mathematics at grade 6 stands for, in terms of achieving the subject standards for that level.
- *No failing marks (“2”)* should be given in the early years of primary school. In fact, it would be better if parents received a narrative progress report for their child, rather than marks. With formative assessment (see below) there should also be no need for any child to repeat grade 1 or grade 2, because learning problems would be spotted early and remedial help would be given immediately.
- *The promotion examinations at the end of grades 5, 6, 7, and 8 should be abolished.* They apply only to some students, and they do not yield any significant information in addition to that already available through continuous assessment. The burden on the system, as well as on students who may already be under stress, is disproportionate to the information gained.
- *The exit examinations at grades 9 and 11 should be fundamentally changed.* The current practice of pre-publishing examination questions – in booklets, in newspapers, or otherwise – must be abandoned immediately, so that students are free to concentrate on building competence in applying what they know to previously un-seen questions. This will, at first, be controversial because the pass rates (now 95% or above) are likely to be lower, and careful thought must be given to what remedial work will be made available to students who do not pass these new-style exams. However, in the long run, the quality of learning will improve and reach internationally acceptable levels.

- *Kyrgyzstan should continue to take part in international comparative studies such as PISA*, in addition to its own national sample-based assessments (NSBAs). Given also students' disastrous performance in reading literacy (according to every national or international study so far), it may be useful for Kyrgyzstan to participate in the 2011 PIRLS study so that more attention will be paid to reading with understanding rather than reading "at speed", which is now the practice in most classrooms.
- *More emphasis should be placed on the systematic use of assessment results* to inform education policies and practices that lead to improved quality of education, and thus to better learning outcomes. There is little point in gathering data, unless they are carefully analysed to pinpoint the reasons why Kyrgyzstan students can (or cannot) show the competences that may be expected of them; and unless these insights are relayed to policy makers, *rayons*, schools and teachers so that positive action can be taken.

Implementation level

- *All teachers and trainee teachers should be trained in the use of formative classroom assessment*, so that students receive prompt and informative feedback on their work and how to improve it. This way, any difficulties can be spotted and remediated right away, before the student falls behind and becomes discouraged. The work on formative assessment done in Issyk-Kul (part of the Government of Kyrgyz Republic/World Bank Rural Education Project – REP) for example, should be considered for nationwide expansion, especially since it is linked to teacher performance evaluation and incentives, and to improved school management. According to project evaluations, it was very difficult for the teachers to accept and implement formative assessment at first, but after they saw opportunities to be rewarded with incentives, the implementation process became faster and easier, and student learning improved. Training materials have been developed, so that it would be relatively easy to extend the training to both pre- and in-service programmes.

Notes

1. Part of the Government of Kyrgyz Republic /World Bank REP project.
2. The fees are low – about KGS 50 to 100 for both pre-tests and tests. The NTC does not pay rent to the MOES for its offices, but they may offer expertise to the Department for Testing and/or the KAE.
3. This is for the first level of higher education (in six subjects). There is also a data base for secondary professional education (four subjects).
4. An international not-for-profit organisation working to advance education and research. In Kyrgyzstan, the ORT (*Obsherespublikanskoe Testirovanie*) tests are frequently referred to by their initial name, as the “ACCELS” tests.
5. Apparently the practice of allowing Gold Medalists to enter university faculties without further examination has been abandoned.
6. Although it is possible to see the MOES/KAE maths booklet as an “item bank” – and previous test results as a form of “pre-testing” of items – there is no systematic gathering of information about item parameters (for example, level of difficulty) and therefore there is no way to “calibrate” each item (question) and then to “calibrate” each resulting variant of the test (question paper or “strip”) against a common standard. This is a technical issue but an important one in terms of fairness and reliability.

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World Bank and the International Association for the Evaluation of Educational Achievement (IAEA) Web site <http://www.worldbank1.org/education/exams>.

Chapter 7

Access and equity, including provision for children with special education needs

This chapter looks at access and equity issues: the urban/rural divide; general secondary and vocational education tracks; and the risk of dropping out. It also covers the provision of education for children at risk and those with disabilities and discusses integrated and inclusive learning. Finally, the chapter recapitulates the open issues and recommends policy measures for addressing them.

Access and equity in primary and secondary education

By any standard, quantitative access to primary and basic education in Kyrgyzstan is very good. According to official statistics (NSC, 2008, p. 33), gross enrolment¹ of children aged 7-15 in the 2006/07 school year reached 96% for both boys and girls. There is considerable regional variation; for example, in 2006/07 the rate varied between 88.5% in Osh *Oblast*, 93.3% in Naryn *Oblast* and 109.5% in Chui *Oblast*.² Gender balance is roughly even throughout the system, with girls having a very slight advantage in some regions, and boys being more at risk of dropping out in grades 9, 10 and 11. While the number of schools has risen from 2 052 in 2002/03 to 2 168 in 2007/08, the number of students has dropped from 1 167 245 in 2002/03 to 1 080 061 in 2007/08. There is, therefore, no *prima facie* shortage of school places.

In terms of quality, however, there are grave concerns about the low (and deteriorating) levels of learner achievement, as is set out in Chapter 6 (Assessment). Without quality, it cannot be said that children in Kyrgyzstan have *meaningful* access to education. This is a serious problem throughout the education system – it applies almost equally to rural and urban schools, schools in poor and less-poor regions, and basic and upper-secondary schools. In that sense (with a few exceptions of schools that are excellent and schools that are extremely poor), all students are equally disadvantaged when it comes to good quality education. Of Kyrgyzstan's total of 2 168 daytime general education schools grades 1-11, only 55 are private, 32 of them in upper secondary. This means that there are few choices even for better-off parents.

Further to the overall low level of education quality, according to PISA 2006 student achievement varies substantially *between* schools according to language of instruction and school location, as will be discussed below. Yet 60.6% of the variance in student performance in Kyrgyzstan is due to disparities in student achievement *within* the schools, of which only 0.2% can be explained by the economic, social and cultural background of the students and their schools. Due to the lack of reliable data on actual school attendance and survival rates, and deficits in assessment it is difficult to name a reason for this. The overall impression of the review team though is that schools in Kyrgyzstan are ill-equipped and not motivated to take care of their low-achievers. In many of the over 150 interviews carried out in preparation of this report, the perception of education professionals (teachers and school leaders) seemed to be that quality of education is a matter only of excellence, not of equity.

A good illustration in this respect is the well established tradition from Former Soviet Union (FSU) times to each year send the best students to participate in Olympiads – prestigious national competitions in different subjects. Designed as demanding knowledge match between individual students which requires extensive prior preparation, Olympiads seem to be broadly

perceived as the ultimate indicator of the quality of schools and teachers who trained Olympiad winners. Excellent Olympiad performance means highest reputation and status with salary benefits for the teacher, prestige and additional revenues for the school from parents willing to send their children to a school of “proven” quality, and for the student – possibly admission to higher education (and waiver of military service for the boys). Successful Olympiad participation is, therefore, a very strong incentive for all “players” involved, but in terms of equity it is not unproblematic – teachers and schools tend to focus rather on detecting and preparing potential winners than on less gifted students. Furthermore, the broadly shared perception that these competitions are reliable indicators of school quality is contradictory to the measure of quality used in international surveys like PISA. The indicator of quality there is the *average* achievement of *all* students in a representative national sample, not the exceptional performance of the best ones among them.

Box 7.1. Olympiads

The Russian gymnasium in Jalal-Abad City is believed to be one of the best schools in the region. Before the beginning of every school year it holds a custom admission test since the number of candidates is much bigger than the available places. At present the capacity of the school is overloaded with 50%. According to its Director among the main reasons for not being able to accommodate all potential students are serious shortages of staff, textbooks (48% coverage), financial resources and space as in preceding years, during the winter of 2007/2008, the school was closed for almost two months due to the lack of money for heating.

Yet, when asked what is the highest priority for the gymnasium, the Director told the review team that it is undoubtedly the winning of Olympiads. He underlined that for him and his school this is the most important – more important than funding, infrastructure or additional teachers.

The urban/rural divide

Even in rural and remote areas, nearly all children do have a primary school close to their homes for the first four years, but thereafter they may need to travel some distance to a school offering grade 5-9 or grade 5-11 education. Statistics show, however, that practically all children make the transition from grade 4 to grade 5. The review team was impressed with most rural parents’ determination to keep their children in school, in spite of practical hardships and concerns about the doubtful quality and relevance of the education their children receive, and in spite of family poverty and the need for children to work or help at home.

In cities and towns, access is easier in practical terms, especially after grade 9 when more options are available to urban students. In terms of quality (as reflected in learning outcomes) both rural and urban children face many problems, although urban children are more likely to have teachers who are qualified to teach in a wide range of curriculum subjects, more likely to have schools with adequate heating, lighting and sanitary facilities, and more likely to be exposed to a variety of social and cultural experiences than their peers in rural areas. This is, of course, true in many countries; but the life chances of children in poor and remote areas of the Kyrgyz Republic are severely limited.

The language issue

The Kyrgyz education system has schools that teach in Kyrgyz, Uzbek, Russian, Tajik, Turkish, German and other languages, and in all of these schools, the state language (Kyrgyz) and official language (Russian) are taught as compulsory subjects (see Chapter 5, Curriculum.) In terms of quantity of provision, schools with Kyrgyz language of instruction are in the majority (1 384, with Russian-language schools second (166), Uzbek (128) third, and Tajik-language (3 schools) fourth. There are also schools with more than one language of instruction: mainly Kyrgyz-Russian (318 with 266 593 students), but also Kyrgyz-Uzbek-Russian (17 schools).

However, many Kyrgyz-speaking parents and parents of children of other ethnic backgrounds do whatever they can to send their children to a school (or a separate class) with Russian as language of instruction. There are two main reasons for this. First, in Kyrgyzstan, a good command of Russian is crucial in order to have access to information, jobs, higher education, and possible employment opportunities abroad. Second, Russian-language schools are perceived as being of better quality. Because they tend to be in urban areas, have better-qualified teachers, and better resources (textbooks from Russia, for example), they do get significantly better results in terms of learner achievement.

Two areas where the relative disadvantage of Kyrgyz-language schools is particularly clear are: (i) textbook supply; and (ii) learner achievement (see Chapters 5 and 6).

Books and materials

Russian-language schools have far more “usable” textbooks, especially from grade 6 onwards:

Kyrgyz was essentially an oral language without an agreed orthography until the 1920s; then literacy levels rose sharply (now said to be near 100%, although given students’ poor results in reading on national tests, this seems

optimistic). Apart from the great epic *Manas*³ the range of original (non-translated) reading material in Kyrgyz is still limited, especially for children and young people. In rural areas where Kyrgyz is the dominant language, bookshops are rare and most households have few books in their own language. The absence of appropriate reading materials for children in Kyrgyz-speaking households contributes to their difficulties in acquiring reading literacy once they reach primary school.

Table 7.1. “Usable” textbooks as % of need, 2006

Grade	Kyrgyz (%)	Russian (%)
6	19.69	34.27
7	30.87	46.06
8	28.68	53.47
9	24.01	61.12
10	46.18	79.53
11	37.04	80.32

Source: Sultanalieva, G (2006), *Strategic Study of Textbook Provision in the Kyrgyz Republic*, Bishkek: Public Foundation Step by Step for the World Bank Rural Education Project #1-3.

Learner achievement

The 2005 Monitoring of Learning Achievement (MLA) as well as the 2007 National Sample-Based Assessment show that students in Russian-language schools consistently perform better than those in Kyrgyz- or Uzbek-language schools, in reading literacy, life skills, and mathematics. PISA 2006 results show that 15-year-old students in Russian-language schools perform higher than those in Kyrgyz- or Uzbek-language schools in science, reading and mathematics (see Tables 7.2 and 7.3).

Table 7.2. Students’ performance in science, reading and mathematics, by language of instruction

	Kyrgyz-language school		Russian-language school		Uzbek-language school	
	Mean	S.E.	Mean	S.E.	Mean	S.E.
Science	301.7	3.3	386.7	8.4	306.8	6.0
Reading	260.6	3.4	366.8	9.7	253.2	12.2
Mathematics	287.4	3.6	383.4	9.8	295.6	6.7

Source: PISA 2006.

The same pattern clearly holds across schools in different locations (village, town, city) as well, as shown in the 2007 National Sample-Based Assessment (NSBA) for grade 4 (CEATM, 2007).

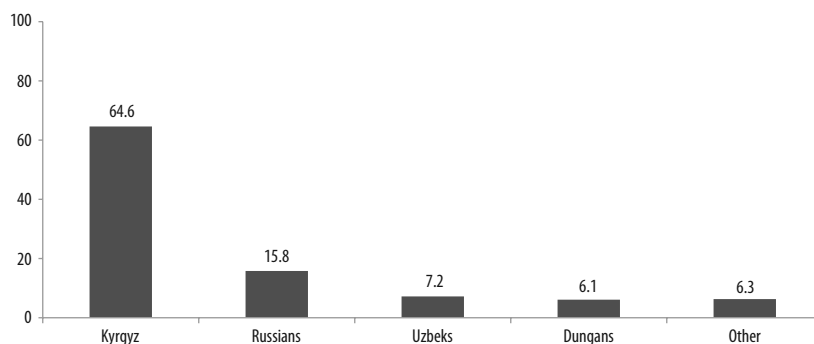
Table 7.3. **Students' performance in mathematics, by language of instruction and school location**

	Kyrgyz-language schools		Russian-language schools		Uzbek-language schools	
	Mean	S.E.	Mean	S.E.	Mean	S.E.
Village	474.5	4.1	507	6.3	479	10.3
Town	493.4	5.6	509	7.4	487.6	9.4
City	510.7	10.6	593.5	7.4	-	-

Source: CEATM, 2007.

That this is more a result of higher *quality of education* rather than strictly a matter of ethnicity or mother-tongue language, is borne out by the fact that Kyrgyz-speaking students make up an increasing part of students in Russian-language schools, as shown in Figure 7.1.

Figure 7.1. **Ethnic background of 4th-grade students in schools teaching in Russian (%), 2005**

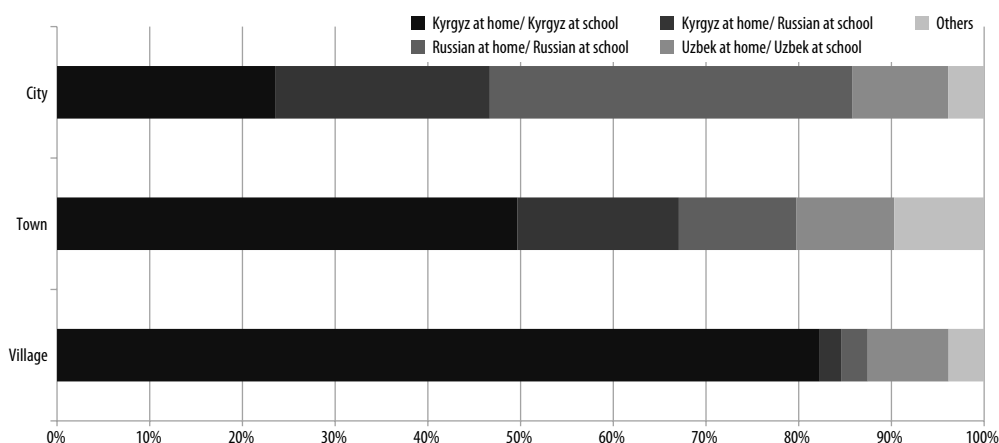


Source: *Monitoring Learning Achievements (4th grade)*. 2005. Nationwide Study of the Quality of Education in Primary Schools. Bishkek: UNICEF and El Pikir.

Between the two most recent MLA studies (2001 and 2005), the student composition in schools teaching in Russian changed considerably: the proportion of Kyrgyz-speaking children increased by 22.6%, while the number of Russian children fell by 15.2%. To some extent this is due to ethnic Russians emigrating, but also to the rising popularity of schools with Russian language of instruction, especially among urban families. There are 166 Russian-only

schools (compared with 1 384 Kyrgyz-only schools), and although many other schools teach in more than one language of instruction (NSC, 2008, pp. 61-63), it is clear that for parents in rural areas the choices are limited.

Figure 7.2. Language groups by school location



Source: PISA 2006 database.

Improving the quality of all schools would seem to be the only way to avoid creating a two-tier education system, with a small group of (often selective and well resourced) Russian-language schools in more affluent areas, and a far greater number of under-resourced Kyrgyz or Uzbek-language schools for the majority of children.

Transition rates and “survival” in education

The MOES annually tracks only the number of students who started school before 5 September. School-year-end statistics are not collected. Analysis of information presented by school principals on the changes in student numbers shows that attendance tends to drop during and by the end of the school year. If the number of students at the start of the school year is taken as 100%, by the end of the first quarter the number of attending students falls to 72% and by the end of the fourth quarter to 70% (UNICEF, 2008, p. 19).

As has been noted in Chapter 1, the lack of accurate data means that student flows are not easy to track. The review team’s own calculations, based on grade cohort progression over 10 years (NSC data 1998/99 to 2007/08) appear to indicate that, while nearly all students continue from grade 4 into grade 5, at the grade 9/grade 10 interface a significant number of 15-year olds

do not continue in school. The review team calculates that about 59% of the entering grade-1 cohort in 1998/99 completed grade 10 in 2007/08 (9 years later), which compares well internationally.

Several caveats are, however, in order. First, these calculations do not take into account internal migration flows, which are considerable and make students appear and disappear, before and after the annual school census. Second, since no grade-by-grade numbers of students are available from NSC data, the assumption had to be that student numbers *within* cycles (primary, basic, upper secondary) remain steady over the years, which is not, of course the case. Third, from grade 8 onwards some students go into initial VET, which will affect the transition rate at the grade 9/10 interface. Finally, there are important problems with the collection of reliable data from schools and *rayons*, which have strong incentives to inflate numbers and ignore the obvious difference between formal enrolment and actual *attendance* by students.

Non-attendance and drop-out

Because definitions vary, it is difficult to arrive at an accurate view of the problem in an international context. The OECD defines a “drop-out” as a student who leaves a specific level of education system without achieving first qualification. According to UNESCO, “dropping out” or “early school leaving” is understood as leaving school education without completing the started cycle or programme. Among the most well-known and useful definitions is the one given by Morrow (1987):

A drop-out is any student previously enrolled in a school, who is no longer actively enrolled as indicated by 15 days of consecutive unexcused absences, who has not satisfied local standards for graduation, and for whom no formal request has been received signifying enrolment in another state-licensed educational institution.

A recent in-depth study of drop-out and non-attendance in Kyrgyzstan (ADB, 2008, Chapter 3) uses “non-attendance” as its criterion, and includes:

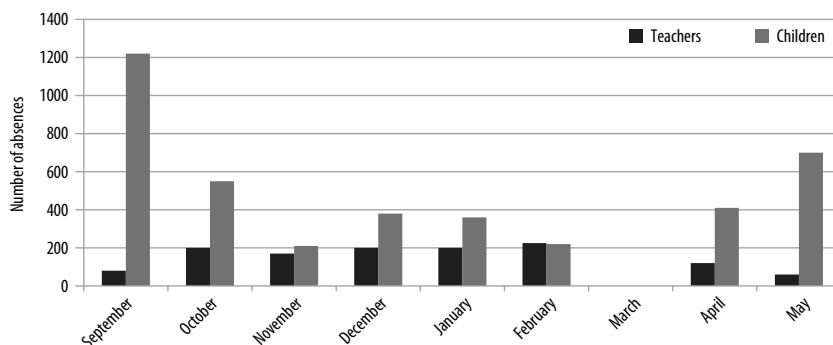
- children who never enrolled, or enrolled but never attended;
- children who enrolled at a school and attend, but who have missed 40 days or more in the last academic year; and
- drop-outs – children who are enrolled in a school but who have been absent for more than a quarter or who have stopped attending completely before completing grade 9.

In an experiment reported in the ADB study (ADB, 2008, Chapter 3, p. 16), students themselves were asked to keep daily attendance records alongside the classroom registers kept by their teachers. They monitored attendance

in grades 5-11 for one academic year. At the end of the year, the two sets of records were compared. In some cases, the number of absences as recorded by the students exceeded the number as recorded by teachers by as much as 14 times. This happened mostly when non-attendance was particularly high, for example in periods of seasonal agricultural work.

Information on attendance and non-attendance in schools is also available from other studies. The 2008 UNICEF study *Out-of-School Children in the Kyrgyz Republic*, which drew on data from the Multiple Indicator Cluster

Figure 7.3. Number of absences – differences between records of teachers and children (based on data collected from grades 5-11 in 2004-2005)



Note: No data available for March.

Source: Children's own monitoring and teachers' records (Participation, Education and Knowledge Strengthening Project Electronic Database).

Survey (MICS) household survey as well as a study of street children, estimated that the number of children not attending school at all or not attending regularly as approximately 4% of school-age children, or 30 000-40 000.

This is confirmed by NSC calculations showing that, at the beginning of the 2007/08 school year, 38 273 children between the ages of 7-15 were not in schools or other educational institutions in the Kyrgyz Republic (NSC, 2008).

Access to the labour market and VET

The review team is concerned that each year a large number (estimated at 30 000 by the State VET Agency) of young people in Kyrgyzstan leave school completely after basic school. Many of them do not have the skills they need to be successful in the labour market. As both international and national assessments have shown, the majority of grade 8 students have poor levels of functional literacy and numeracy; low achievers are also more likely to have poor attendance records, and less likely to seek further education once they

leave school. In particular, low achievers who leave school at the age of 14 or 15 are at serious risk of unemployment, chronic under-employment, and poverty with its consequences of poor housing, poor health, and social exclusion.

Apart from improving the general quality of education in all primary and secondary schools, attention must be paid to improving the life chances of these youngsters. One route that helps many of them acquire employable skills is the Vocational Education and Training (VET) system, which in Kyrgyzstan consists of initial (VET I), secondary (VET II) and higher professional education (see Chapter 8). Although objective evidence of quality is sketchy, students in secondary VET who participated in the PISA 2006 survey did not perform worse than those in general secondary schools (see Chapter 6).

Available data show that of the approximately 100 000 students who graduate each year from basic school (grade 9), about 6 000 students enter VET I. Most of them follow the three-year integrated programme described in Chapter 8 of this report. The rest of the approximately 12 000 annual intake into VET I are adults and students entering VET I after upper secondary education; the former study for a few months, the latter for up to one year.

In terms of access to the labour market for basic-school leavers, the review team has three main concerns.

- *First*, the institutions intended to prepare young people for entry-level jobs are not evenly spread across regions; Bishkek city alone has 18; Chui *Oblast* and Jalal-Abad *Oblast* have 23 and 21 respectively; while poorer regions are less well served (Talas has 6; Naryn and Issyk-Kul have 9 each). Many families are not able or willing to send their 15-16 year olds to a distant school, even if boarding were available and affordable.
- *Second*, two-thirds of VET I schools have between 100 and 250 students, and there is considerable spare capacity in the system as a whole, and parents do express interest to enrol their children. But schools are reluctant to take more students who often enter with low basic skills and will require a great deal of extra teaching, and may reduce the overall success rate of the school. “Many of them cannot really read or write”, the team was told by one school director. In the absence of intensive remedial tutoring, these already low-performing and often disadvantaged students will not be able to compete in Kyrgyzstan’s limited labour market, even if they are lucky enough to find a VET I place in a school of reasonable quality.
- *Third*, estimates (see Chapter 8 on VET) indicate that the initial VET system absorbs only about 20% of students who drop out before grade 9 or who leave basic school with poor results. The system does not, therefore, perform well in terms of offering “a second chance” to already vulnerable youngsters who, in a tight labour market,

will at best face a life-time of low-level jobs; or at worst long-term unemployment. To some extent, the system recognises this. In 2007-2008, 17 VET I schools had special centres for students from very disadvantaged backgrounds; these are the so-called “rehabilitation groups”, and they may include street children, children without parental care, and children in trouble with the law. In addition, more than 400 orphans studied in VET I schools in the same period.

This at least shows an awareness that VET I has a special social responsibility towards those who have been badly served by the basic school system and by their own socio-economic or family circumstances. But given the regional disparities in provision, as well as the questionable relevance and quality of some training schemes, it is unlikely that Kyrgyzstan’s VET I system in its present form can provide the kind of “second chance” for low achievers that is so badly needed.

Children at risk and those with special educational needs or disabilities

Terminology

It is important to distinguish among “children at risk”, “children with disabilities” and those with “special needs”. “At risk” is the broadest category and can include children living in severe poverty, children without parental care, children at risk of being abused, abandoned or trafficked, children in the street, children in prison and children living with HIV/AIDS. In any country, “children with disabilities” (physical, sensory, intellectual) constitute on average about 2.5% of all children, according to European Academy of Childhood Disability (EACD) estimates. They are a sub-set of “children with special needs”, estimated to include 10% of all children in any country. The actual number depends on definitions used in each country.

Table 7.4. Cross-national categories of children with special needs

Category	Definitions
A. Disabilities	Students with disabilities or impairments viewed in medical terms as organic disorders attributable to organic pathologies (e.g. in relation to sensory, motor or neurological defects). The <i>educational need</i> arises primarily from problems attributable to these disorders.
B. Difficulties	Students with behavioural or emotional disorders, or specific difficulties in learning. The <i>educational need</i> arises primarily from problems in the interaction between the student and the educational context.
C. Disadvantages	Students with disadvantages arising primarily from socio-economic, cultural and/or linguistic factors. The <i>educational need</i> is to compensate for the disadvantages attributable to these factors.

Source: OECD (2005), p.14.

In *education systems*, generally about 10% have special *educational* needs (SEN) – about 2 or 3% learners with disabilities, and about 8% learners with other “special needs”. In practice, it is the 8% that present the definition difficulties. The OECD categories (A, B, and C) were developed to make cross-country comparisons more meaningful (see Table 7.4).

Countries differ in how they assign children to categories, depending on whether or not they rely on medical categorisation to determine SEN status. In former Soviet countries, medical categorisation (mainly A) is generally used, but children are “counted” by where they are *placed* (e.g. in residential institutions, special schools), not by diagnosis, which complicates data collection.

Table 7.5. Number of children with limited capacities in pre-school educational constitutions

	2002	2003	2004	2005	2006
Hearing disabilities	1 0.06%	43 2.6%	20 1.2%	186 11.3%	37 2.2%
Deaf and mute	151 9.9%	150 9.1%	140 8.2%	111 6.7%	111 6.6%
Severe speech disability	1 022 66.7%	1 151 70.1%	1 224 71.6%	992 60.1%	1 127 66.9%
Vision difficulties	118 7.7%	94 5.7%	96 5.6%	103 6.2%	114 6.8%
Delayed mental development	151 9.9%	114 6.9%	124 7.3%	167 10.1%	152 9.0%
Skeleto-muscular disability	89 5.8%	88 5.4%	98 5.7%	92 5.6%	86 5.1%
Other		1 0.06%	7 0.4%		57 3.4%
Total	1 532 100%	1 641 100%	1 709 100%	1 651 100%	1 684 100%

Source: National Statistical Committee of the Kyrgyz Republic (2008). *Education and Science in the Kyrgyz Republic*, MOES, Bishkek.

Integration or inclusion?

In Kyrgyzstan, concepts of integration and inclusion are not clearly distinguished from each other. “Integration” [placing special educational needs/children with disabilities (SEN/CWD) in regular classes] and “inclusion” (making changes in the way the entire school works, in order to include *all*

children) are often used interchangeably. The 2008 MOES/NSC statistical report, for example, states confidently that “so-called inclusive education of children...long ago has been successfully introduced in our republic” (NSC, 2008, p. 70). This refers to the small number of students (433 in 2005, latest data available) enrolled in separate special classes within mainstream schools. At best, this can be called “partial integration” – not inclusion.

At policy-making level in Kyrgyzstan, however, the review team found a growing understanding that: (i) *all children have a right to education* under international and national law; (ii) *all children are capable* of being educated; and (iii) it is a *government* responsibility to provide educational settings that respect these rights and capabilities. In practice, inclusive education is not a priority, in terms of government funding. There is still an expectation that NGOs and international donors will take the lead. So far two small projects – ADB’s “Improving Access to Quality Basic Education for Children with Special Needs (USD 1 million, 2007-2010) Save the Children’s “Inclusive Education Project” (USD 220 000, 1999-2007) have provided funding (MOES, 2008, *Donor Involvement*, p. 11). Another USD 424 400 provided by the Japan Fund for Poverty Reduction (USD 362 000), UNICEF (USD 22 116), and through a Fast Track Initiative (FTI) grant (USD 40 284) have been earmarked for activities within the Education Strategy 2008-2011, partly targeting both mainstream and special needs education.

Current status⁴

Several ministries are involved in services for children with disabilities and special needs, including the Ministry of Health, the Ministry of Education and Science, and the Ministry of Labour and Social Protection. On the quality side, the “defectology” approach still forms the basis of special needs provision, but within a vision of a broader inclusive system which assumes a two-pronged approach: both including children in regular schools as appropriate, *and* supporting specialised institutions. The “defectology” approach, however, continues to restrict and separate services under different Ministries, and still reflects the view that children with disabilities are defined by their medical diagnosis, rather than by their potential as individual – and educable – human beings with rights.

MOES policy towards education of children with disabilities or those with special needs indicates a formal intention to work towards “inclusive” education, at least in pre-school and primary schools, by 2020 (*Draft Education Development Strategy 2011-2020*). The 2007-2010 *National Education Strategy*, while it does not include inclusion or even integration as a mainstream policy with funding from the state budget, does include the goal to “renovate and update the infrastructure” for institutions for children with special needs. The updated version of the Strategy for the period 2008-2011

plans for adding inclusive education methods to the in-service training for teachers, preparing materials for awareness raising campaigns, and reiterates the goal of updating school (sports) infrastructure. The April 2009 version of the draft *Education Development Strategy 2011-2020* envisages that, by 2020, “Every child, youth, and adult in the Kyrgyz Republic irrespective of age, gender, ethnicity, faith, place of residence, *mental and physical development*, or socio-economic status of the parents, has free access to high-quality basic education” (p. 5), and the forecast structure of the Kyrgyz education system implies that there will be “inclusive” education at pre-school, elementary, and general basic education although special schools will still exist in parallel.

Pre-school

Table 7.5 shows that between 2002 and 2006 the number of young children enrolled in special pre-school educational settings rose by about 10%, from 1 532 in 2002 to 1 684 in 2006. Most (66.9%) of the children enrolled in 2006 had a severe speech disability. At the time of the review visits, Bishkek had eight kindergartens for children with special needs, of which six were designed for children with speech impediments, two for children with mental disabilities, and one for children with cerebral palsy and motor difficulties. Provision in rural areas is negligible.

Children can attend special pre-schools until the age of eight, except those with orthopaedic problems who must leave pre-school at the age of seven. Those having no parental care stay in orphanages of the Ministry of Health, and are then moved to boarding schools (UNICEF, 2007).

Basic schooling grades 1-8 or 1-9

As elsewhere in the Former Soviet Union (FSU), disabled children, orphans and “social orphans” (children from dysfunctional families) tend to be cared for in institutions or special schools. However, in Kyrgyzstan the numbers appear to be very small, covering only about 1% of the 7-17 age cohort whereas internationally about 2.5 to 3% of children have disabilities or special needs. Research by the OECD and the ADB into provision for SEN/CWD children in Kyrgyzstan (OECD, 2010; ADB, 2008, Chapter 4) shows: (i) a severe shortage of suitable places for these children, in particular in poorer regions; and (ii) the practical impossibility of implementing “inclusive” education in a system where most school buildings are in very poor repair, all have steps and stairs that would be difficult for disabled children, and many have no proper sanitation or even access to drinking water or other basic requirements such as furniture, materials, or equipment, even for non-disabled children.

State-funded provision

In 2007 there were 14 special schools for children with mental retardation, two schools for children with vision difficulties, two special schools for deaf and blind students, three special schools for children with hearing impairments and one special school for children with severe speech disabilities. Together, these schools had 3 088 students, the majority of whom (1 781) were categorised as being “mentally disabled” (NSC, 2008, p. 71). No data were given for the number of teachers or other professional staff in these schools, or their qualifications.

In addition, there were a small number of children in special classes within mainstream general secondary schools (433 in school year 2004/05, latest data available, NSC, 2008). There are also nine “children’s homes” – five of these looking after a total of 200 special-needs children – and 70 general-education boarding schools, with more than 20 000 children. Three of these boarding schools were specifically for “children at risk”, such as orphans and children without parental care: one in Osh *Oblast* and two in Chui *Oblast*; and 21 were “specialised” boarding schools with a total of 3 226 students.

Statistics

Accurate data are difficult to find. One proxy indicator comes from the Ministry of Labour and Social Protection, according to which in August 2007 there were 20 800 registered disabled children receiving social benefits. This is approximately 1% of the total child population under 18 years of age. About 9 400 of these children came from the poorest families, and most disabled children live in rural areas (about 62%) (ADB, 2007). With only 1% of the under-18 population registered disabled (compared to the 2-3% international norm), it is clear that many children are not, at present, being served or even identified by the education system. It must also be noted that data is available only on children categorised as “disabled” (*i.e.* mainly category A), but not on children with other types of special educational needs such as learning difficulties or socio-economic disadvantages.

The number of registered disabled children has gone up each year in all *oblasts*, but most sharply in the poorer parts of the country such as Osh and Issyk-Kul where poor health care and poor nutrition can lead to stunting and delayed child development. According to UNICEF (2007 data), 4% of under-fives in Kyrgyzstan suffer from moderate and severe wasting, and 14% suffer from moderate to severe stunting (UNICEF statistics for Kyrgyzstan retrieved at www.unicef.org).

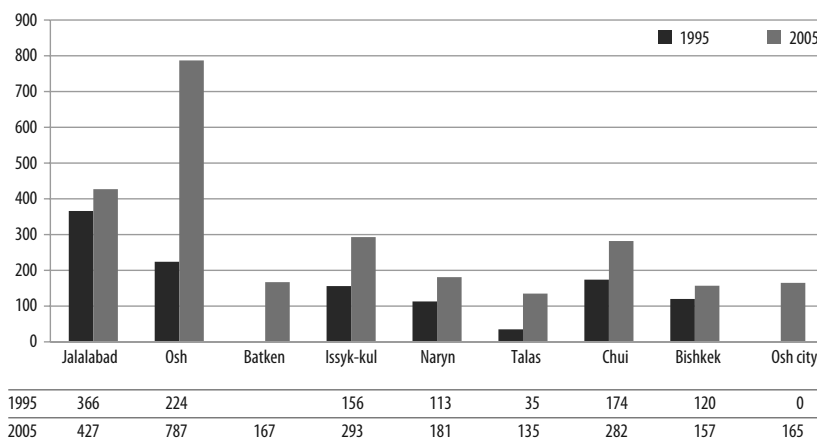
Moreover, early identification and early intervention are hampered by the drastic reduction in the number of pre-schools, and by the absence of systematic diagnostic programmes for newborns and young children especially in rural areas (ADB, 2008, p. 13).

Access and equity

A survey conducted by the ADB attempted to calculate the shortfall in special-school places, broken down by region (ADB, 2008, pp. 19-20). This calculation is based on the number of disabled children first registered in 2005 (see Figure 7.4), and cannot be accurate because there are no reliable data on the number of children who require special education but are not formally registered. Nevertheless, the shortfall in suitable places is estimated at more than 20 000 with Osh, Jalal-Abad, Issyk-Kul and Naryn being particularly badly served.

From these figures, and the ones supplied by the National Statistical Committee (NSC, 2008, pp. 70-71), it is clear that only a small fraction of Kyrgyzstan's disabled and special-needs children are provided with appropriate education within the state system. The OECD study (2010) lists the main barriers to inclusion as: lack of money at local and school level; lack of reliable data; lack of clarity in law; the persistence of the “defectology” approach to disability; overcrowded classes and shift arrangements; inadequate training of teachers to work in inclusive settings; inappropriate buildings and facilities; and above all, negative public attitudes (OECD, 2010).

Figure 7.4. **First registration of disabled children 1995-2005, by region**



Note: In 1995 numbers for Osh city were included in Osh Oblast.

Source: Chinara Djumagulova, Save the Children, Bishkek

Table 7.6. Comparison of possible number of SEN/CWD children requiring specialised education, and school capacity by oblast and city

	Jalal-Abad region	Osh region	Batken region	Issyk-Kul region	Naryn region	Talas region	Chui region	Bishkek city	Osh city
1 st reg. 2005	427	787	167	293	181	135	282	157	165
× 9 years	3 843	7 083	1 503	2 637	1 629	1 215	2 538	1 1413	1 485
Total capacity across 9 grades	143	224	229	0	0	120	1 047	1 157	306
Deficit (total 20 120)	3 700	6 859	1 274	2 637	1 629	1 095	1 491	256	1 179

Notes: **Row 1** shows the number of disabled children registered for the first time in 2005.

Row 2 shows this number multiplied by 9, to give a very rough guide to the total number of children who might require specialised education in grades 1-9, although this number represents only 1% of the relevant population and the real percentage of SEN/CWD children in the population is probably 2 to 3%.

Row 3 shows the actual number of places available in special schools under the MOES for all 9 grades in the 2006/7 school year.

Row 4 shows the shortfall in special school places by *oblast*. The calculation does not take into account that special-school places of different types would be needed.

Source: ADB, 2008, pp. 19-20.

Integration and inclusion

Most Kyrgyz schools remain physically and pedagogically inaccessible to students with disabilities. Lack of public transport services hinders travelling from and to the school, especially in rural areas, and many disabled children are therefore kept at home. Inadequate toilet facilities, lack of ramps for wheelchair users, lack of handrails supporting children in walking up the stairs or along the corridor, and other difficulties prevent children with motor impairment from having meaningful access to inclusive schooling. Lack of technical and pedagogical devices for enhancing pedagogy deprives disabled students of the opportunities for success that non-disabled children have, and makes “going to school” a constant struggle, not only for students but for their parents and the school itself. As a consequence, special-needs children may be discouraged from attending regular schools, schools may be reluctant to enrol special-needs children, and parents may consider that special schools are the best place for their disabled child. The team observed that, in some remote areas, non-disabled kin of disabled children may be enrolled in special schools in order for them to have access to education.

Family poverty is certainly a barrier, since families having a disabled child are among the poorest in the country. According to UNICEF (UNICEF, 2005, pp. 23-26), links between disability and poverty are well established in both developing and developed countries, but children with disabilities are a diverse group and families cope in different ways with the needs of chronically ill or disabled children. Needs change; and not all children with special needs require permanent personal care. However, raising a special-needs or disabled child increases family expenditure, while it also decreases the opportunities for one or both parents to earn income outside the home. Direct costs may also be substantial: medicines, special food, clothing, furniture, equipment, and transport all place additional stress on poor households. Poverty among rural households with a disabled family member is particularly high in many countries, and Kyrgyzstan is no exception.

Poor maternal and child health is also linked with poverty and disability. In Soviet times, nearly all children received regular health check-ups, but primary health care has suffered since then and few children in Kyrgyzstan now receive early childhood care and education. Low birth weight, increased risk of birth complications, unsafe water, poor nutrition and lack of micro-nutrients are all associated with infant mortality, congenital anomalies, immune system and vision problems, intellectual impairments, and under-development in children. Vitamin A deficiency, for example, is usually a sign of poor nutrition, and high infant mortality rates (for example in the Caucasus and Central Asia) are a useful proxy for widespread malnutrition. In Kyrgyzstan, poor nutrition affects a considerable number of young children.

Table 7.7. Some indicators of child health and nutrition in Kyrgyzstan

Annual no. of births (thousands), 2007	115	% of rural population with access to improved drinking water (2006)	83
Under-5 mortality rate, 1990 (per 1 000 live births)	74	% of under-fives suffering from wasting (moderate/severe 2000-2007)	4
Under-5 mortality rate, 2007 (per 1 000 live births)	38	% of under-fives suffering from stunting (moderate/severe, 2000-2007)	14
Infant mortality rate (under 1), 1990 (per 1 000 live births)	62	Children 0-17 orphaned due to all causes (thousands) estimate	140
Infant mortality rate (under 1), 2007 (per 1 000 live births)	34	Annual number of under-5 deaths (thousands), 2007	4
Neonatal mortality rate, 2004	30	Life expectancy at birth (years) 2007	66

Note: “Wasting” means below minus two standard deviations from median weight for age of reference population; “stunting” means below minus two standard deviations from median height for age of reference population.

Source: UNICEF Statistics, Kyrgyzstan. http://www.unicef.org/info_by_country/Kyrgyzstan_statistics.html.

Why are children with special needs not being served?

Beyond aspects related to disability, nutritional health, and family poverty, weaknesses in the education system itself raise barriers to inclusive education. As suggested earlier, inclusive education depends very much on an education system being inclusive for all learners, regardless of their academic or physical ability, social background, gender or race, and allowing each learner to be successful at school and to be included in society. Thus, the implementation of inclusive education is closely linked with the ability of the educational system to reduce inequalities, and to foster equity by taking the unique needs and abilities of every learner into account. Equity in education for students with disabilities can only be reasonably expected and achieved if all learners have equal opportunities in education.

As Table 7.6 shows, lack of access to a suitable school, especially in rural areas, is a major barrier for children with disabilities or other forms of special educational needs. Even if a place can be found, families are often reluctant to send their child away to a distant boarding school or institution (for example, Issyk-Kul and Naryn *Oblasts* have no specialised boarding schools at all), and local mainstream schools may be reluctant (or unable) to accommodate special-needs students. Even where an attempt at integration is made, mainstream schools have no more than between one and five disabled students, and most of these attend only occasionally or they spend a lot of time in the hospital and miss several months of school (OECD, 2010). These children find it increasingly difficult to keep up with the rest of the class, and when it becomes too hard for them they often drop out of school, especially after grade 4.

Kyrgyzstan's low pre-school enrolment (about 12% of 3-6 year-olds) deprives most young children, especially among the poorest, of early diagnosis and timely remediation of cognitive and developmental problems. Late enrolment in primary school further delays such diagnosis and remediation: only 72.6% of children at the primary entrance age of seven actually attended primary school in 2006 (NSC, 2007 and UNICEF, 2007d). Of the 1 542 school age children (seven to 17) who had never attended education in school year 2007-2008, 19.3% worked, 16.3% supported their families, 11.7% came from families refusing to send their children to school (some of these were almost certainly children with special needs); and 10.3% from families who could not afford to pay the costs of education (NSC, 2008).

Inequity in quality and in learning outcomes is a major issue. The [educational] quality of the special school system in the Kyrgyz Republic is considerably worse than that of mainstream schools – and there, too, quality is unacceptably low. Quantitatively, the figures are impressive: in 2005 the national primary completion rate reached 98% and the secondary completion rate reached 86%. But the education system still does not seem to provide

learners with the most basic skills. As set out elsewhere in this report, the PISA 2006 survey showed that 15-year-olds in the Kyrgyz Republic had a proficiency level in science that is significantly lower than the OECD median. Likewise, the results of Kyrgyzstan's own 2007 National Sample-Based Assessments showed that 64.4% of grade 4 students scored “below basic level” in reading comprehension, and 62.0% scored “below basic level” in mathematics.⁵

Clearly, *even when disabled students have access to mainstream education*, they do not receive education of acceptable quality – and access without quality is not “access” in any meaningful sense.

Legal framework

There is no doubt that the Kyrgyz Republic has created a strong and comprehensive legal framework in support of human and child rights. But *entitlement without provision* is meaningless. Poorly funded, poorly implemented, and poorly supported by *rayons*, schools and teachers, appropriate education for all SEN/CWD learners remains a challenge. As for access to quality, policy requirements for education and/or inclusion of children with disabilities are not adequately linked to performance management. Schools, for example, are not held accountable for being inclusive, or even for “integrating” SEN/CWD learners. In addition, any analysis of the enabling effect of policies and practices is impeded by the inaccuracy of data on the actual numbers on SEN learners in education, on the extent to which they participate in education, and on their rates of completion.

Current legislation governing SEN/CWD provision

- The Constitution of the Kyrgyz Republic forbids any form of discrimination or restriction of freedoms and rights on the basis of origin, race, ethnicity, language, religion, political and religious views or other circumstances of a private or social nature. (However, the Constitution does not mention disability in this non-discrimination list.) The *Law on Education* (2003) makes basic education grades 1-9 compulsory for all children regardless of their physical or mental ability.
- The 1992 Law “On Social Protection of Disabled People in the Kyrgyz Republic” recognises that all citizens have the right to education, and guarantees special-needs children “the right to get free education in the state educational organizations and initial vocational education, adequate to their physical condition and capacities.” Public buildings, as well as infrastructure and transportation, must be accessible for people with disabilities. Moreover, ratified international treaties have precedence over national legislative provisions, and the

United Nations 1991 Convention on the Rights of the Child plays an important role in Kyrgyz education policies.⁶

- The 1998 law on “*State Benefits in the Kyrgyz Republic*” allocates benefits for persons with special needs and their families. The “*Labour Code of the Kyrgyz Republic*” states that employers must allow parents of SEN children to work part-time if they wish. Parents are also entitled to an additional 14 days off-work without pay, as well as to making use of annual leave without restrictions and at any time of the year. In 1999, the Kyrgyz Republic approved also a national basic programme and an “Action Plan on Integration and Rehabilitation of Disabled People for 2004-2007”, as well as a “National Programme on State Support for People with Special Needs”.
- The *Children’s Code* adopted in 2006 guarantees to every child the right to participate in mainstream education, as well as the right to freedom of expression regardless of their physical or mental condition. It makes health care and rehabilitation free of charge irrespective of disability, protects children from exploitation and gives every child the right to a family. Nonetheless, it does not explicitly forbid discrimination on the basis of disability, while forbidding discrimination on the basis of gender or race.
- In 2008, the Kyrgyz Republic adopted Law n° 38 on the *Rights and Guarantees of Persons with Disabilities*. This law forbids discrimination based on disability, guarantees the social protection of persons with special needs, ensures equal opportunities in receiving social privileges and services appropriate to the severity of the disability, and in offering rehabilitation and social protection services based on the needs of the individual.
- Article 33 of this Law guarantees access to information, education and vocational training. It states that educational institutions, jointly with the agencies of social protection and health care, must provide pre-school education as well as home teaching and that children at all levels must be educated in accordance with an individual rehabilitation programme. Education and training must be free of charge in State comprehensive education institutions, and remain free of charge without age limitations for the children of persons with disabilities, as well as for children who themselves have disabilities. Families with a disabled child wishing to educate him/her in private schools are entitled to discounted tuition.
- The Millennium Development Goals seek to achieve universal primary education for all girls and boys by 2015, and the Dakar Framework for Action (2000) specifies its second education goal as “ensuring that by 2015 all children have access to – and

complete – free and compulsory primary education of good quality”. Kyrgyzstan is a beneficiary of the Education for All Fast-Track Initiative, and is therefore committed to both access and quality for every child.

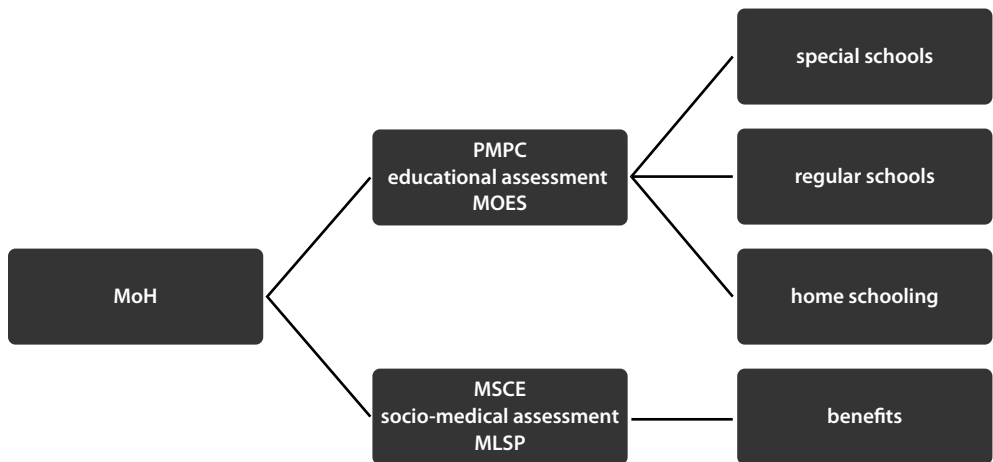
- However, both the new Law (April 2008) on the *Rights and Guarantees of Persons with Disabilities* and the *Law on Education* (as amended, 2003) perpetuate the notion that children with disabilities may not be educable, and promote a divided education system separating specialised schooling from the mainstream. Even though the *Law on Education* states that parents have the right to choose the form and type of their child’s education (article 34), the emphasis remains on *special settings* rather than inclusion in mainstream schools.⁷

Diagnosis and placement of SEN/CWD students

Identification of SEN students

Access to various services requires that children are eligible, which in turn depends on the assessment and registration carried out by the Medical-Social Commission of Experts (MSCE) which is under the jurisdiction of the Ministry of Labour and Social Protection (MOLSP), and the Psycho-Medical Pedagogical Commission (PMPC) which is the responsibility of the Ministry of Education and Science (MOES).

Figure 7.5. Identification process of children with special educational needs



Source: OECD (2010).

To be given a medical-social assessment, children must first be diagnosed as having a disability. Ideally, health care institutions carry out a full medical examination in a hospital, and once a diagnosis has been made, referrals to the Medical-Social Commission of Experts (MSCE) may follow, with the approval of the Ministry of Health (MOH) in collaboration with the MOLSP. A referral to the MSCE includes information on the health of the child, indicating the degree of dysfunction as well as the results of any rehabilitation or treatment given so far.

In order to be assessed by the MSCE, children and families must have a birth certificate confirming that the child is under the age of 18, and a referral delivered no more than three months before the assessment is made. An outpatient card, and medical documents confirming the dysfunction, have to be provided as well.

Identification of benefit recipients by the MOLSP

The MSCE is located in Bishkek within the MOLSP's Department of Medical/Social Examination and Rehabilitation of Disabled People. The Commission is chaired by a neurologist and includes a surgeon, a therapist, and a pediatrician. Its main function is to diagnose a child's illness, categorise the disability, and provide documentation on the impairment for which benefit should be given. The MSCE also refers children to service providers (rehabilitation centers, special schools, home services for children with severe needs) and ensures that registered children receive appropriate medication, education and support by home services providers, who also evaluate the child's progress.

The MSCE's decisions are recorded in a "passport" which gives access to support or privileges (e.g. free travel within a city or territorial district, free medical care, discounts on rehabilitation services and support for obtaining wheelchairs, crutches, and other equipment).

As shown in Table 7.8, 7 743 children under 18 were assessed in 2006, which is 0.3% of the total 0-18 population. In 2005 the number was 8 121. Most (95.6%) of the assessed children were subsequently registered as disabled. The number of children with disabilities registered for the first time increased by 157% between 1995 and 2006, and reached 41.3% of all children registered as disabled.

Those children registered as disabled in 2006 were mainly males (56.4%) and lived in rural areas (73.4%). Most of them (71%) were registered for up to two years, while 1.5% were registered for up to five years and 17.1% until the age of 18 (UNICEF, 2007).

Table 7.8. Assessment and registration of children under the age of 18 in 2005 and 2006

	2005	2006
Number of children assessed	8 121	7 743
Number of children registered as disabled	7 766	7 402
Of which first registration	3 117	3 055
Repeated registration	4 649	4 347

Source: OECD, 2010.

According to the MOLSP, 28.5% of children registered as disabled in 2006 had a congenital developmental disease, whereas 22.8% had a psychological disorder, 19.2% a sensory impairment, 12.9% an intellectual impairment and 8% a trauma. Only 4.9% of them were diagnosed with an osteo-muscular impairment and 8.2% with a chronic illness. The percentage of children with congenital developmental diseases increased to 2.3% between 2003 and 2006 and the percentage of children having nervous system diseases increased to 3.4% during the same period. According to UNICEF's report on the situation of disabled children in Kyrgyzstan, such increase may be due to infection in the womb, alcohol or drug use during pregnancy, anemia during pregnancy, iodine deficiency, traumas, inherited diseases, domestic violence and ecological crisis (UNICEF, 2007d).

These figures underestimate the real numbers of children with special needs. The national background report for the OECD study (OECD, 2010) states that according to the MSCE between 5% and 10% of children with disabilities are not identified or known to the services; in reality, the percentage is probably much higher, but because these children are by definition "invisible", their number and needs are unknown.

Barriers to registration also arise due to parents' lack of information about their rights and about the registration procedures. Shortage of pediatricians and specialists, in particular at local level, inhibits access of parents to the screening process and to their claiming of benefits. Parents may also lack the skills and financial means to draw up documents needed for a benefit, and they may have to pay doctors for medical tests that would allow their child to be registered as disabled.

Identification of special-needs children and those with disabilities by the MOES

While social welfare issues are dealt with by the MSCE, *educational* issues are looked at by the Psycho-Medical-Pedagogical Commissions (PMPC), established in 1994 with Resolution No. 554 to replace the Medical-Pedagogical-Commissions (MPCs) of Soviet times. The PMPCs are administered by the MOES. The PMPCs include: the Inter-*oblast* PMPC at national level, under the supervision of the MOES; the Bishkek PMPC on municipality level, supervised by the Bishkek local Education Department; as well as all other PMPCs at *oblast*, municipality and *rayon* levels throughout the Republic which are under the supervision of the respective local Education Departments. The Republican level and Inter-*oblast* PMPCs are supervised directly by the MOES, while the *oblast*, Bishkek municipality, *rayon* and other municipal PMPCs report to their local educational authorities. In 2008 there was one commission at Republican level, six at *oblast* level (out of seven *oblasts*) and about nine at *rayon* and city level (out of 59 *rayons* and cities) (OECD, 2010).

All PMPCs assess children's learning difficulties, orient them to "special pre-schools and special boarding schools", consult with parents, and refer children to the public health system and social welfare services as needed. PMPCs also must identify those disabled children who may require additional support based on referrals from the public health system, register them and "record the development and degree of social adaptation of all graduates of special education establishments" (OECD, 2010). In addition, they are expected to work in close collaboration with authorities of the departments of education, public health, social welfare and other relevant public organisations.

Variations among the PMPCs do, however, exist. The Republican level Inter-*oblast* PMPC has, for example, an additional co-ordinating and oversight role which includes review of complex diagnoses and disputed cases on the basis of documents presented by the relevant *oblast/rayon/municipal* PMPC.

The oversight role means that the Inter-*oblast* PMPC is expected to conduct prophylactic examinations of orphans and other deprived or marginalised children educated in orphanages, to develop a national register of children with disabilities, and foster early diagnosis jointly with educational and public health authorities.

At *oblast* level and at Bishkek-municipal level, PMPCs have to conduct examinations of children, assign children to appropriate special establishments, and arrange consultations with children, teachers and parents. They are also expected to provide organisational, pedagogical and methodological assistance to special schools, supervise the work done at *rayon* or at municipal levels, and monitor the implementation of decisions and recommendations made.

In practice, PMPCs mainly assess children and recommend where they should be placed, although this may vary among the PMPCs. The Republican PMPC does not have the means to fulfill its co-ordinating and oversight roles, and the OECD review states that most of its time is spent in assessing the children and in prescribing a type of schooling. The co-ordination task is all the more difficult to implement because not all PMPCs work continuously. While the Republican PMPC meets on a daily basis, the PMPC of Osh meets twice a year for only three or four mornings to fulfill the same task, and no co-ordination takes place between the two meetings. District and city PMPCs, with the exception of the PMPC in Bishkek, do not have the budget to provide salaries or financial compensation for staff.

Assessments are supposed to be done by a multi-disciplinary team of seven experts who are nominated both through the MOES and the MOH. These experts are by profession “defectologists” (e.g. speech therapists, specialists in mental impairment, social pedagogues) and doctors (e.g. psychiatrists, ophthalmologists, neuro-pathologists, pediatricians). The Republican PMPC includes a speech and language specialist, a pedagogue specialising in mental retardation, a psychologist, a hearing pedagogue, a social pedagogue, a psychiatrist, an ophthalmologist and a neuro-pathologist, while the Osh PMPC includes three pedagogues, an ophthalmologist, a psychiatrist, a pediatrician and four other defectologists.

Parents must provide a birth certificate, a warrant and ambulatory (outpatient) cards or medical documents confirming the illness or the impairment. Assessment may be based on the medical diagnosis, formal instructions from the ministries, information in a document given to parents by the school (e.g. notebooks, drawings) or/and doctors, and if necessary on tests made by the PMPC itself.

The PMPC’s recommendation for the child’s education has to be agreed by the MOES, and by the MOLSP if the child is being referred to a residential setting that is under its jurisdiction. Parents who disagree with the proposal of the Commission have the right to appeal to the MOES. The latter will refer them to the Republican clinic (run by the Ministry of Health) for a 10-day observation period, in order to confirm or reject the Commission’s proposal. Parents who decide to ignore the final decision, and send their child to a regular school instead, have to find an appropriate school themselves. Schools may then argue that they do not have the appropriate skills or setting to cater for the child’s needs, or for delivering appropriate schooling at home. The law also allows home schooling, but few schools are able to provide home tuition, and few parents of special-needs children are themselves able to provide home education of suitable quality.

But PMPCs, as well as the MSCE, seem to find it difficult to fulfill their tasks. This may be due to a range of problems, such as lack of funding, lack

of qualified staff, and the inability of parents to pay for tests or registration. (By law, tests and registration are free, but lack of funding often leads the PMPCs to ask parents for informal contributions.) For example, many parents do not have a precise or appropriate diagnosis of their child's disability when they appear before the Commission. The Commission then has to send the child to the Republican MOH clinic for a diagnosis. The child's entry into education may therefore be substantially delayed, since parents will first have to make an appointment with the relevant professionals and then restart the whole procedure for their child to be assessed by the PMPC.

*“Gate-keeping”*⁸

From a child protection point of view, the assessment procedures themselves are unsatisfactory. Assessment tools used are old-fashioned, and many are still based on outdated ideas about educable and non-educable children. Lack of time also drastically reduces the quality of the assessment, and decisions may be made without taking into account all factors affecting the child's capacity to learn. For example, while the Republican PMPC spends on average 30 minutes per child and assesses about five or six children in a morning, the PMPC of Osh assesses 10 to 12 children in half a day, and spends on average 15 minutes on each child (OECD, 2010). Proper assessment may also be impossible if a child is frightened or intimidated by the interview procedures, particularly if parents are not present or if the effect of the child's social and linguistic background is not taken into account (UNICEF, 2007d).

In all matters of social ethics, *the higher the stakes, the higher the safeguards* must be set. If critical decisions are to be made about a child's future; if these decisions are likely to be irreversible; and if they seriously, and irrevocably, limit a child's long-term prospects, then these decisions must rest on relevant and trust-worthy evidence. In the opinion of the review team, the necessary safeguards are not in place, and children are at serious risk of being placed in dead-end special schools or institutions on the basis of flawed, superficial, sometimes even outdated evidence.

Mainstream schools

The law allows SEN/CWD children to attend mainstream schools if they are certified fit by a medical doctor. According to the latest available NSC data, in the 2004/5 school year there were 433 children in (separate) classes established within mainstream schools; all of them were categorised as having “delayed mental development”. The data do not record any special classes for physically disabled children within in mainstream schools. As for children integrated into regular mainstream classes, there are no official data although some (donor-supported) schools do have inclusive policies.

Parents often face difficulties in getting their disabled children accepted in mainstream schools; frequently, even children with very slight impairments are rejected. This is partly because of discriminatory attitudes in the general population, but also because mainstream classes are large and teachers are not trained to work with special-needs or disabled children, who in general need more time and individual attention than regular students. School directors also fear that the academic standing of the school may be lowered because these students may not have good results (ADB, 2008, p. 15).

Special schools

When a child is registered as disabled, or when a doctor cannot give a child a satisfactory health certificate for admission to a mainstream school, the parents may request that their child be assessed by a psycho-medical-pedagogical commission (PMPC). PMPC experts evaluate the child, and if they decide that he/she should be educated in a special school, they may issue a warrant placing the child in an appropriate school, class, or institution.

The majority of special schools are boarding schools, although there are also day schools in Bishkek and Osh city. In these schools, in addition to special lessons related to their disability, students follow the mainstream curriculum, except for those with moderate to severe mental impairment. These children follow a simplified curriculum that focuses on basic literacy (oracy for those unable to read and write), numeracy and life skills. For them, compulsory education is reduced from nine years to eight.

Detailed norms and regulations set out the categories of impairment that can be accommodated in each type of school, the ages of the children who can study there, and the maximum number of students per class. There are also special classes within special schools for children with multiple disabilities.

In theory, it is possible for children to transfer from special schools to mainstream schools if their condition allows. In practice, only a tiny number of such transfers take place. Thus, once a child has been placed in the special education system, his/her options for future inclusion – educationally as well as socially – are very small indeed.

Home tuition

Children who cannot be placed in a suitable special setting, or who cannot attend their local mainstream school, are entitled to home tuition. The PMPC must write to the director of a local school; a teacher then visits the child at home to assess his/her needs. If it is determined that he/she is unable to cope with mainstream school, private home tuition (1-3 hours per day) may be offered. A reduced curriculum is used, based on three subjects including literacy and numeracy.

Since the NSC does not collect data for home tuition, it is not possible to determine how many children are, in fact, being taught at home. Anecdotal evidence, however, shows that the number is small; in Naryn City, for example, in 2008 there was no home tuition service because there was no money to pay for teachers' travel expenses, or to pay them for the additional work.

Teachers and teacher training

The overall shortage of teachers in the Kyrgyz education system is even more severe in the SEN/CWD sector. There are not even enough qualified teachers and specialists to cover the existing 20 special schools (the ADB reports, for example, that in 2008 there was not a single speech therapist in Naryn City and *Oblast*) [ADB, 2008, p. 24]. Many staff members in special schools are at or near retirement age, and few young teachers choose to specialise in “defectology”.

Pre-service

The Department of Defectology (to be re-named “Department of Correctional Pedagogy”) at Arabaeva University offers a five-year initial teacher training course for students who wish to work in specialised schools and medical facilities as teachers and carers. There are four specialisations available: speech therapy, clinical psychology, hearing disabilities and sign language, and mental retardation. In 2007/8 there were 500 students in the department: 100 full-time, and 400 part-time. Twenty full-time students are trained every year; about half of them are State-funded. However, only a small number of students complete the course: the graduation rate in 2007/8 was eight out of an original cohort of 20. Obviously this does not even meet the demand of special schools; let alone the need for expert support to SEN/CWD students in inclusive mainstream schools, as appears to be the MOES's strategic intention.

Social workers are also in short supply. A number of universities (Bishkek Humanities University, Arabaeva Teacher In-Service Training Institute, and State universities in Jalal-Abad, Batken and Osh), as well as the Institute of Social Development under the MOLSP, train social workers. How many of these intend to work with families of SEN/CWD children is not known.

In-service

In terms of in-service professional development for special-needs teachers, very little is available; the KAE no longer offers in-service for defectologists, but there is a three-day KAE-approved module offered by KAE-affiliated Centres of Innovative Educational Technologies (CIET).

Limited inputs from international donors or international and national NGOs (USAID, Participation, Education and Knowledge Strengthening [PEAKS] Project, Save the Children) have produced a small number of qualified trainers in inclusive education, but once external funding ends, so do professional development workshops and seminars for teachers.

Financing of education for children with special needs and those with disabilities

Chapter 3 sets out the funding system for all State educational institutions (general as well as special schools). Special schools are mainly financed by the Ministry of Education and Science which, according to a national background report prepared for the OECD study (OECD, 2010), allocated KGS 104 833 million for special schools in 2006. Out of this, nearly 81% was allocated for current expenditure, especially for salaries (41%) and logistic services (22.9%).

Funding for SEN/CWD is very low. In 2004, for example, special schools represented only 0.2% of the education sector expenditures from the Republican budget, children's boarding schools with a special régime 5.2%, and orphanages 1.2%. Orphanages were funded by the local budgets and represented 0.2% of the local expenditure on education in 2004. However, funding for these institutions was shifted back to the national government after local governments began closing orphanages due to lack of funds without making proper provision for the children they housed. There is no recent data on funding for SEN/CWD.

In Kyrgyzstan, lack of funding is the main barrier to an inclusive education system. Regular schools as well as special schools lack the money and the authority to be innovative, to provide effective teaching, and to develop quality assurance policies. The continuing reliance on parental contributions hits the families of special-needs children particularly hard, because many of them are poor to begin with – and they also have heavy direct costs related to their child's disability. As noted earlier, poverty among rural households with a disabled family member is high.

Issues in special needs education

Jurisdiction

The various ministries and other agencies responsible for special-needs and disabled children do not co-ordinate their work, or share information routinely and easily. The complex bureaucracy involved in assessing, diagnosing and placing a child discourages parents from seeking help; moreover, the many documents required even before an assessment can take place – as

well as the expense of tests, and the hardship of travelling with a disabled child to attend an MSCE or PMPC hearing – are barriers preventing families from obtaining services to which their child is legally entitled. To a large extent, this is why so many families struggle on their own, and why so many children are not receiving services, including education.

Quality

Issues here can be divided into: (i) those related to identification, assessment, diagnosis and placement of children; and (ii) those related to the quality of special education once the child is in the system. First, the labyrinthine procedures for registering a child as having special needs or a disability seem almost designed to “keep out” inconvenient children; and the MSCE and PMCE expert commissions do not have the funds, the tools, the up-to-date knowledge about special needs, or indeed the *time* for proper evaluation of a child’s individual capacities and needs. Therefore “gate-keeping” is poor, and referrals – in practice, irreversible referrals – are based on superficial evidence. The safeguards to prevent this are not in place, and while in theory it is possible for children to be re-assessed and “mainstreamed” later, for most it will be too late.

Second, while the overall quality of Kyrgyz general basic education is far from satisfactory, the quality of special education is worse. Lack of individual educational plans (IEPs) for each child; lack of trained and qualified teachers; lack of funds; poor facilities; poor equipment and suitable materials are evident throughout the system. Even for those few children who are in special classes in mainstream schools, provision and support are poor. Segregation remains the rule. None of the mainstream schools visited by the review team had been adapted in any way to accommodate disabled children, and there is at present no incentive, or wish, to do so.

Supply

An attempt by the ADB to calculate the shortfall in special-school places estimated that more than 20 000 places are lacking, with Osh, Jalal-Abad, Issyk-Kul and Naryn particularly badly served (see Table 7.6) (ADB, 2008). While no claim is made that this calculation is accurate, it does indicate that the need for special education places far outstrips the supply.

Moreover, the existing (boarding) schools and institutions are unevenly spread around the country, and children are often sent to schools far away from their families which add to their isolation and their poor prospects of social integration when they are adults. Nevertheless, poor families accept such placements because they believe their child will be better fed and looked after than they could manage at home, but most would prefer not to be separated.

Locally, however, SEN/CWD learners are neither integrated nor included in the regular school system, and thus there is often no alternative, other than home schooling or no schooling, to special schools (if available).

Finance and fees

The special-education sector receives only a small fraction of the overall state budget for education. Categorical grants from the State budget to *rayons* cover staff salaries; but the *rayon* education budget has to fund other types of recurrent costs as well as maintenance of buildings and grounds. At local *ayyl-okmotu* level, funding comes from local taxes, land rental, and so-called “special means” – *i.e.* contributions parents are “invited” to pay. According to UNICEF, the share of special means doubled between 2001 and 2004 (from 5.2% to 10.5%) and is still rising as State and *rayon* budgets shrink. In rural areas, UNICEF found that parents’ payments are the main source of additional funding, in spite of the official abolition of parental fees (UNICEF, 2007c).⁹

Since many families of disabled or special-needs children live in poor, rural areas, the expectation of parental contributions is an additional reason for not sending children to school.

Recommendations

- Quality and availability of data on attendance, transition and drop-out needs to be improved. School administrations and most of all – teachers – should be provided with incentives to better keep track of children of school age and report differences between formal enrolment and actual attendance. Student numbers should furthermore be reported at the beginning and at the end of the school year.
- Provision of labour market oriented training for young people who left school early must be an integral element of all policy measures for raising the quality of education. Well functioning system of initial VET training is of crucial importance for providing students who drop out before finishing compulsory education a “second chance” (see Chapter 8 for more details).
- With respect to children with SEN/CWD, although the review team understands the government’s severe financial difficulties, and can see why inclusive education is not, at present, a high priority, Kyrgyzstan’s national and international legal commitments have to be respected. Entitlement without provision is an empty promise. If Kyrgyzstan is to meet the EFA/Millennium Development Goal of providing, by 2015, quality basic education for *every* child through grade 9, children with special needs or disabilities must be included. The MOES cannot

expect donors and NGOs to look after children who are, legally as well as morally, the full responsibility of the Ministry on the same basis as every other child in the Republic.

- Moreover, reforms in teacher training, textbook provision, curriculum and general classroom practice that would support the integration of children with mild to moderate disabilities and learning difficulty would also support the improvement of education *as a whole*: by improving the system's capacity to provide meaningful access for all children. Well-trained teachers, who are capable of working with children as individuals and structuring lessons that are accessible and engaging, would benefit *all* children. Thus, inclusive education benefits everyone.
- Assessment and registration procedures for children with SEN/CWD need to be simplified, and unnecessary bureaucratic barriers (such as excessive demands for documentation, and repetitive, expensive "tests") must be eliminated.
- Assuming full responsibility for SEN/CWD children will mean ensuring adequate *funding*, not only of the special education system itself but also of the various agencies and commissions involved in assessment, diagnosis and placement of special-needs children. More also needs to be done to train members of MSCE and PMPC panels, and *teachers* throughout the education system so that in due course all teachers are able to cope with inclusive classes in regular schools.
- Health, education and welfare policies must be better co-ordinated at national, *rayon* and *aiyl-okmotu* levels. For this purpose, disability could be a cross-ministerial issue, directly under the President's cabinet. At local level, this could be achieved through new cross-sectoral departments of support for families and children.
- Data collection across social sectors should not stop at simply counting children who are already *in* the health, social welfare, or special-education systems. Targeted efforts should be made (with the help of local communities) to identify children who are currently "invisible", and are likely to be the most vulnerable of all.
- Gate-keeping must be improved to ensure that placing a child in a special school or an institution is viewed only as a last resort. The aim is to keep children with their families and local communities, and to provide support services that are affordable, accessible, inclusive, and community-based (*e.g.* day centres). When such services are in place, it will also be easier for youngsters now in institutions to re-join their families and participate in normal educational and social settings.

Notes

1. In percentage of the population of the corresponding age group.
2. The high rate in Chui may be due to migration into the region.
3. The thousand-year-old *Manas* Epic is Kyrgyzstan's most important cultural treasure, and one of the world's great oral poems. With half a million lines of verse, it is 20 times longer than Homer's *Odyssey* and the *Iliad* combined. To the Kyrgyz, who regard it as their sacred ancient history, it goes to the heart of their spiritual identity and is a symbol of their nationalism and culture. It has been passed down through *manaschi* (story-tellers); about 60 versions of the epic exist, and are still recited today.
4. This section draws upon research done for Special Needs Education in Kyrgyzstan, one of three OECD studies of Students at Risk and Those with Disabilities in Central Asia [OECD (2010), *Reviews of National Policies for Education: Kazakhstan, Kyrgyz Republic and Tajikistan 2009: Students with Special Needs and those with Disabilities*, OECD Publishing]. In addition, the Asian Development Bank policy study on Inclusion (ADB, 2008b) has provided useful material for this section of the Review, as have UNICEF studies.
5. "Below basic" means that "students do not demonstrate sufficient knowledge and skills for successful further learning". See the sections on learning assessment in this review.
6. The Kyrgyz Republic signed the UN Convention on the Rights of the Child in 2004. However, it had not (as of July 2009) signed the UN Convention on the Rights of Persons with Disabilities, which came into force on 3 May 2008 when the required number of signatory countries was reached (see <http://www.un.org/disabilities>).
7. Article 27: children requiring long-term treatment may receive education and treatment in sanatoria as well as in hospitals and homes. Article 29: those with intellectual and physical impairments are entitled to attend special schools, classes and groups allowing for joint access to education and treatment. Article 33: children with special needs unable to cope with the state educational organisations on a general basis should be provided with special conditions, including the establishment of special groups, classes and institutions providing treatment, education, vocational training and allowing for social adaptation and integration into society.

8. In the context of SEN/CWD, “gate-keeping” means making it harder for children to be institutionalised, and easier for them to be placed in community-based inclusive settings suitable to their needs.
9. Although the abolition of school fees is clearly in line with the Kyrgyz Constitution and the UN Convention on the Rights of the Child’s requirement that compulsory education must be free, no compensatory (government or local-authority) funding has reached schools. As a result, most schools continue to charge fees and ask for parental contributions, which disadvantages poor families and contributes to non-attendance and drop-out.

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Chapter 8

Vocational education and training and adult education

This chapter gives a thorough overview of initial and secondary professional and adult education in the Kyrgyz Republic. It discusses options for raising the efficiency of the sector and its quality, its responsiveness to the needs of the labour market, and its significance as a pathway which should be transparent and permeable to the education continuum for a growing number of youngsters and adults in Kyrgyzstan, ensuring lifelong professional and personal development.

Overview

Basic data

All sources of data and information used in this chapter are listed under references, but the following are highlighted because of their particular relevance:

- Strategy for consolidation and modernisation of professional-technical education in the Kyrgyz Republic and Action Plan (2009-2011), and Annexes (unpublished).
- Standard duration of learning for professions of the secondary professional education, approved by decree of the Government of the Kyrgyz Republic, 5 November 2003, No. 702.
- National Report of the Kyrgyz Republic on adult education within the framework of the preparation for the sixth international conference dedicated to adult education (CONFITEA VI), MOES 2008 (unpublished).
- Analytical note on the status of the system of adult education in the Kyrgyz Republic and development prospects in the framework of the order of government “On the draft Law of on adult education”. MOES. (Undated, unpublished).
- List of professions and specialisations of initial vocational education in the Kyrgyz Republic. 2006. Ministry of Labour and Social Protection, Directorate of Initial Vocational Education, Scientific-Methodological Centre.
- National Statistical Committee, 2008. Employment and unemployment, results of the integrated household survey in 2007.

Vocational education and training within the framework of the education system

The *Law on Education* (2003) sets out a range of professional programmes, which “... aim at sequential enhancement of the professional level, and preparation of specialists of the respective qualification”. These include:

- *Initial professional education* (integrated programmes correspond to ISCED level 3): “Preparation of labourers of qualified labour (workers, employees) for the main areas of social useful activity, on the access level of basic or of secondary general education”.
- *Secondary professional education* (can be classified as ISCED level 4): “Preparation for acquisition by the learners of professional knowledge,

skills related to an area of specialisation, on the basis of basic, secondary or initial professional education”...: “People with secondary professional education of the respective profile may receive higher professional education via accelerated programmes”;

- *Higher professional education*: “Training, preparation and re-training of specialists of the respective level of education programmes and standards”;
- *Post-university professional education (post-graduate programmes)*: “Professional qualification level related to full higher education programmes of the respective area of specialisation, giving the right to raise the qualification in the respective forms of post-university education”; and
- Complementary education.

This chapter deals uniquely with two sub-sectors: “initial” and “secondary” professional education. In this report the term “initial VET” (or VET I) refers to the specific level of the Kyrgyz system. Internationally, initial VET has a wider definition.

Administration and links

At the time of the review visit *Initial professional education* (VET I) was administered by the State Agency for Professional-Technical Education (SAPTE), established in early 2007 and reporting to the government. At the time of completion of this report Initial Professional Education was put under the responsibility of the newly created Ministry of Labour, Employment and Migration, through a dedicated Directorate *Secondary (VET II) and higher professional education* are administered by the MOES, by the Department of Secondary and Higher Professional Education. This shows that secondary professional education tends to be closer to higher education, and this is reflected in the principle of accelerated higher programmes for graduates of secondary professional education (in the relevant areas of study).

The institutional separation of initial and secondary professional education reflects a conceptual separation of the purposes of each of these, and underlines the dichotomy between manual and intellectual work and functions. This framework does not, therefore, promote the development of VET as a truly attractive offer for all users – students and employers alike. Other Commonwealth of Independent States (CIS) countries (*e.g.* Armenia, Kazakhstan) have avoided this problem by unifying the administration of both initial and secondary VET. Some Baltic states have progressively promoted the best establishments of secondary professional education to tertiary technical level, while other establishments are associated with initial VET.

This simplified structure eliminates the ambiguous status of programmes that are neither really secondary, nor really post-secondary, and obviously not tertiary. In Kyrgyzstan, this ambiguity still persists.

Pathways and qualifications

Although the required entrance level is similar for both initial and secondary professional education, continuity of pathways and interactions are largely absent between them. Higher professional education covers all tertiary education programmes.

Graduates from the integrated programme of VET I (3 years) receive a secondary education diploma and a professional qualification for the respective area and level. Consequently, access to higher education is possible, depending on grades and performance in entrance procedures. Although the *Law on Education* allows entrance of graduates of initial professional education into secondary professional education, this is not a common occurrence.

Graduates from VET II (3 years and 10 months) are entitled to enter the second or even third year of the relevant programmes in higher professional education, bypassing common entrance examinations and procedures. VET II can be classified as ISCED level 4. According to the classification criteria of ISCED 4, paragraph 74:

It requires as a rule the successful completion of level 3, *i.e.* successful completion of any programme at level 3A or 3B, or, for 3C programmes, a cumulative theoretical duration of typically 3 years at least. However, the criterion of successful completion of ISCED 3 should be interpreted in the context of the duration of the programme. For example, a programme that builds on a 2-year programme at ISCED 3 and has a duration of 4 years, would normally be classified at ISCED 4 even though the preceding 2-year programme at ISCED 3 does not qualify for the completion of ISCED 3.

(http://www.unesco.org/education/information/nfsunesco/doc/isced_1997.htm)

Educational attainment of the population

Despite the hardships experienced by households and by the country as a whole during the early years of transition, Kyrgyzstan has managed to improve the overall educational attainment of its population. Table 8.1 shows that the share of the population over 15 years of age with tertiary education grew by more than 4% between 1999 and 2006, taking into account both complete and incomplete higher education.

Table 8.1. Educational attainment of the population aged 15 years and above (in %)

	1989	1999	2006
Higher education	9.4	10.5	13.2
Incomplete higher education	1.6	1.5	2.9
Secondary professional education	15.7	10.8	11.6
Primary professional education			7.8
Secondary education	39.1	50.0	43.7
Basic education	18.4	18.3	11.9
Primary	9.1	6.3	8.0

Note: Education categories used for 2006 differ as reforms in the structure of education and related statistical representation changed over time. In 2006 the statistics capture holders of VET I diplomas. Data for 1989 reveals inconsistencies, the total is 7% short of 100%.

Sources: 1. Education and Science in the Kyrgyz Republic, 2008, pg 14. Calculation: Review team. 2. NSC, Educational level of population (in Russian), extract.

The share of the population with VET II level decreased by about 4% between 1989 and 2006. Furthermore, it is important to note the substantial contraction of the share of the population with lower educational attainment (basic and primary education) by approximately 7.6% between 1989 and 2006. By 2006, approximately one-fifth of the population over 15 had at least basic or complete primary education; this does, however, leave a share of about 5 to 6% who have no education or have only incomplete primary education.

The review team learned that, during the years of transition, two contradictory trends in education emerged and grew stronger:

- Growing numbers of students in higher education;
- Growing numbers of early school leavers, dropping out of primary and basic school.

Vocational education in the Kyrgyz Republic: key figures and trends

The network of VET I Schools shrank in the years of transition, as the economic basis (large enterprises) that supported part of these educational establishments was restructured or lost its vigour and demand. But in Kyrgyzstan, unlike some other CIS countries, the VET Law of 1999 protected VET schools from privatisation (VET Law 1999, amended in 2008, Article 22), and at the time of this review the country had 111 initial VET (VET I) schools (this figure includes the Pedagogic-Industrial College of Tokmok).

Trends

Statistics on students' completion by levels of education in the period 1990-2007 show considerable changes in graduation numbers from the three levels of professional education (VET I, VET II and higher education). In 2007, the total number of graduates from higher education exceeded the total number of graduates from the two non-tertiary levels of professional education. This is a radical change compared with 1990, when the ratio of graduates from both non-tertiary professional levels to tertiary stood at 5:1 (also dealt with in Chapter 10).

The number of graduates from VET I programmes declined from 33 200 students in 1990 to a low of 18 800 in 2003, recovering slightly to approximately 21 700 in 2007. In secondary VET (VET II) programmes, the lowest number of graduates was reached in 2004, with 7 200, down by almost 50% from the year 2000. In higher education, the trend is the reverse: the number of graduates grew by more than 2.3 times between 1990 and 2006, and reached approximately 30 800 in 2006 (26 400 in 2007). In the same period, the number of students completing basic education grew from 85 100 in 1990 to 101 200 in 2007, while secondary education completion grew almost by the same percentage (over 18%), from 58 800 to 69 600 students.

Structure

VET I is basically public, as all schools are public and financing is largely public as well. Programmes of VET II are provided in 82 schools (colleges and *tehnikums*), of which 12 are private. According to verbal information from MOES, there are 90 VET II establishments, including the colleges established by some higher professional education institutions.

In fact, a number of universities have started what could be called a “*process of vertical backward integration*”, by establishing VET II (colleges) and even VET I programmes under their jurisdiction. This trend towards multi-level education has substantial advantages; it extends the VET capacity under educational institutions that have a relatively good public image, and thus could help attract more youth and young adults to VET pathways. On the other hand, there are certain dangers, in particular a risk of extreme commercialisation of VET programmes (as has already happened with tertiary education programmes), and a consequent loss of the social role and responsibility of public VET. Universities with multi-level programmes may also tend to become self-contained “islands”, not necessarily developing close links with the world of work, following the academic traditions of the sub-sector.

Figures 8.1 and 8.2 offer an overview of trends in student participation in both VET I and VET II. While total participation in VET I programmes grew only slightly (13%) in the given period, VET II shows a steep growth of more

than 65% between 2002/03 and 2007/08. The year 2006/07 showed the most substantial increase in the total number of students (by 20%).

It is important to understand who the entrants in VET I programmes are in terms of their entrance educational attainment as shown in Table 8.4.

These figures show that less than 60% of entrants come straight from general school. This is a signal that VET I is already used by other categories of the population, namely the unemployed supported by active labour market programmes of the state; enterprises and individuals paying a fee; and other groups. This can be considered positive: it means that initial VET is opening up to various user groups and their needs and expectations. Further analysis of the user groups of VET I schools is provided in Table 8.5.

Table 8.2. **VET I – key figures^a**

	2002	2003	2004	2005	2006
Number of education institutions	113	112	112	112	111
Number of students	25 972	27 698	28 481	28 623	29 319
Admitted students	21 204	21 344	21 344	22 114	22 802
Graduates	20 099	18 764	19 379	20 617	20 711
Number of teachers	3 036	3 101	3 228	3 228	3 281
Student/teacher ratio	8.6	8.9	8.8	8.9	8.9

Note: a. These are official statistics, reflecting the situation only in licensed establishments.

Source: NSC, 2008a, p. 9.

Table 8.3. **VET II – key figures^a**

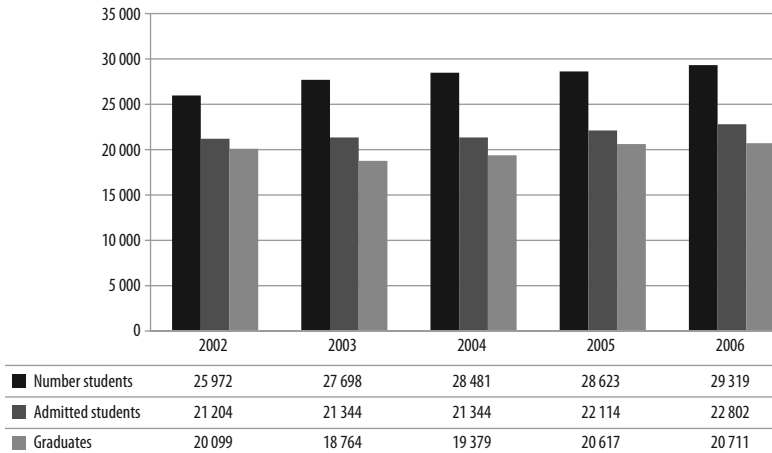
	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Number of education institutions	66	66	75	78	80	82
Of which private	3	4	3	5	10	12
Number of students	25 989	27 154	31 178	35 580	40 254	43 413
Students in private VET	445	643	658	908	1 064	3 327
Admitted students	10 477	12 106	14 053	15 705	15 843	16 447
Graduates	8 634	8 021	7 316	8 343	7 745	8 647
Number of teachers	3 714	3 019	2 984	3 273	3 680	3 410
Student/teacher ratio	7.0	9.0	10.4	10.9	10.9	12.7

Note: a. These are official statistics, reflecting only the situation in licensed establishments.

Source: NSC, 2008a, pg. 9.

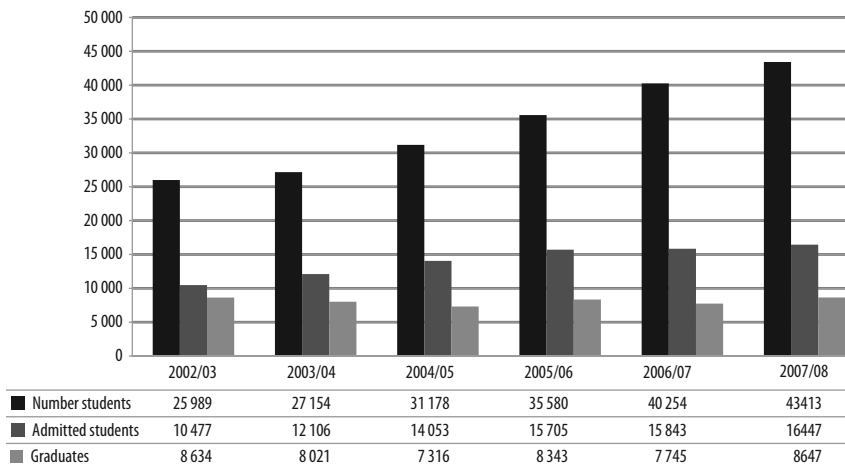
However, Table 8.4 also shows that a group in most urgent need of policy support (youth who leave the education system after basic education) is only to a limited extent covered by the VET offer in the country. 30% of entrants are youngsters after basic school, and a similar share are graduates from secondary school. When comparing these figures with the large number of youth

Figure 8.1. VET I – students



Source: NSC, 2008a, p. 9.

Figure 8.2. VET II – students



Source: NSC, 2008a, pg 9.

out of education (after basic school), one of the immediate conclusions is that VET I has insufficient ability and capacity to provide much-needed opportunities for learning and qualifications for this growing number of young people.

Table 8.5 is an attempt to estimate how well VET I absorbs students who did not complete secondary education. In the absence of accurate data, the estimate is a proxy of the drop-out after basic education, taken as the

Table 8.4. Number of admissions in VET I schools – by level of education at entrance

	2002	2003	2004	2005	2006
Kyrgyzstan total	21 204	21 498	21 344	22 114	22 802
With secondary education	5 934	6 233	6 436	6 460	6 782
% of total	28.0%	29.0%	30.2%	29.2%	29.7%
With basic education	5 027	5 225	5 200	5 686	6 423
% of total	23.7%	24.3%	24.4%	25.7%	28.2%

Source: NSC, 2008a, pp. 106-107.

Table 8.5. Youth out of education after basic school

	2003/04	2004/05	2005/06	2006/07
Basic school graduates	102 263	101 034	102 248	101 218
Secondary school graduates	73 327	78 802	74 291	69 668
Difference	28 936	22 232	27 957	31 550
Difference in % of basic school graduates	28.3%	22.0%	27.3%	31.2%
Admissions in VET I from basic school	5 225	5 200	5 686	6 423
% of difference of basic school graduates	18.1%	23.4%	20.3%	20.4%
Admissions in VET I from secondary school	6 233	6 436	6 460	6 782
% from secondary school graduates	8.5%	8.2%	8.7%	9.7%
Admissions in VET II from basic school (assumption: 70% of VET II admissions)	8 474	9 837	10 994	11 090
% of difference of basic school leavers	29.3%	44.2%	39.3%	35.2%
Total coverage of difference of basic school leavers in VET I and II	47.3%	67.6%	59.7%	55.5%
Share of difference of basic school leavers out of education	52.7%	32.4%	40.3%	44.5%

Source: NSC, 2008a. Calculation: review team.

difference between the number of graduates of basic education and those of secondary education. According to these estimates, VET I absorbs only about 20% of these youngsters. Another share of basic school leavers enter VET II establishments.

The fate of the remaining substantial proportion of youngsters out of education (after basic school) should be a matter of concern, as international and national measurements show that most of them have only limited basic skills. They are therefore more vulnerable in a tight labour market, and usually limited to low-level activities and jobs. The situation of graduates from complete secondary education raises less concern, as most of them either enter higher education or VET I and VET II programmes, according to estimates based on official education statistics.

These figures tend to coincide with estimates provided by SAPTE, indicating that about 30 000 students leave school after basic education. This is a clear signal that stronger VET policy is required to create attractive VET opportunities that will keep more of these youngsters in education and training.

Initial¹ Vocational Education and Training (VET I)

VET I: schools and students

VET I schools are under-utilised by day-student programmes (mostly for youth with the full 3-year curriculum), according to the data provided by SAPTE (Annex to the *Strategy for Consolidation and Modernisation of VET*, April 2009, p. 73). Two-thirds of VET schools have between 100 and 250 students, seven schools have fewer than 100 students, 17 have between 250 and 350 students, 11 have between 350 and 450 students, and only two have more than 450 day-students. These schools do, however, have the physical capacity to admit much larger numbers of students. Review team visits to VET schools often left a clear impression that student participation is low. But financing is inadequate, and the organisation of learning leaves much to be desired. According to the Director of a VET school visited in Jalal-Abad, his school could admit more students after basic school from neighbouring villages and cities, as many parents express interest. But this would require more teachers and resources; moreover, while (SAPTE could finance the increment), VET schools may not be keen to take on young school-leavers who often enter with poor basic skills and who may negatively affect the school's performance.

Based on discussions in the field, it is the review team's view that leavers of basic education are in serious need of additional help, but the VET I schools have only limited interest in being a second-chance pathway. This seems to be particularly true for the mixed secondary-professional education programmes (*licei* groups), where these lower-performing students have substantial difficulties:

“Many of them cannot really read or write”, the review team was told. “But our resources don’t allow the school to offer proper extra teaching and tutoring, so those who want to succeed, sit long nights in the student residence and try to learn by heart some biology, maths and English. What else can we do?”

In Jalal-Abad, directors of general education schools recommended increasing the capacity and quality of VET, as a substantial number of basic school leavers do not continue into grade 10. But what is their future? Several directors of general schools told the review team: “Many parents send their children after basic school to workshops to learn on-the-job. We should have more VET schools, with student hostels and good practical teaching. Our rural children need vocational education and training”.

Low-achievers and children at risk in VET I

The current reality is that VET I schools are expected to take care of vulnerable low-performing youngsters, particularly those without parental support or living in difficult economic conditions. In response, by 2007/08 a total of 17 VET I schools had special centres for disadvantaged youngsters: these are the so-called “rehabilitation groups”. In addition, more than 400 orphans studied in VET I schools in the same year. One director of a VET I school near Bishkek told the review team:

I have received several 14-year-old street children who had hardly two years of schooling. They require special attention, first to build up some confidence and trust towards society. I tried various ways to break the ice and reach their soul. A breakthrough moment occurred when I took them to a classical music concert. They were moved to tears. Afterwards I started a school theatre in one of the un-used spaces in my school. These children have started to open up; now we can start teaching them. I have to do it all with very little support from the State; but actually I prefer it this way because I can innovate without having to ask permission.

Asked about the challenge of combining catch-up basic education with technical training for entrants who do not possess adequate basic skills, the director of SAPTE stated: “It is actually worse than that. We have to teach hundreds of youngsters with very low educational attainment, many having just few years of schooling. They are working in the markets and the fields, and they are out of schooling. How can we give them a standard education programme? What else can we do but teach them some basic vocational skills, to enable them to find a job with some decency?”

Beyond these perceptions and opinions, there is evidence. An official MOES report (2008) on adult education in Kyrgyzstan states: “Unemployment, growing poverty levels, alcoholism and drugs lead to a situation, in which the number of children left under care of the State in boarding and

special schools has increased by more than three times in a decade. Hardship affects large numbers of families, and many children must work to earn their living: in markets, washing cars and so on. This leads to disruption of schooling, and poor attendance. As a result, the overall educational attainment of the population will be negatively affected, and increase the share of the labour force with low skills and no qualifications”. (MOES, Analytical note on the status of the system of adult education in the Kyrgyz Republic and development prospects in the framework of the order of Government, p. 4)

Who is being served by VET I?

The users of VET I are a diverse group, as are their needs and potential. Vulnerable youngsters with education below basic have needs and expectations that differ from those of students who have finished secondary education and are now looking for qualifications that permit them to work in modern enterprises. Young adults with higher education but unable to find a job may be interested in acquiring additional skills through flexible but recognised courses in one of the good VET schools, for example in Bishkek, or Jalal-Abad. Young farmers and rural residents are a large category of potential users of short-term, flexible, innovative training for rural economic activities that VET schools can (and should) develop in partnership with village administrations. And the many unemployed who are supported by active labour market programmes of the State Migration and Employment Committee all have different individual profiles, life experience, skills and education. These adults need training that is adjusted to their interests and their previously acquired competences. Finally, competitive enterprises that are keen to improve the skills of their staff, represent another highly demanding group of users.

Is VET I already open to various users’ needs? A quick look at figures shows that VET I schools are indeed already offering training to non-traditional groups as well. Table 8.6 conveys official statistics from SAPTE that might not include non-formal training taking place in some VET schools and some rare partnerships with local authorities and NGOs in the framework of projects sponsored by international donors.

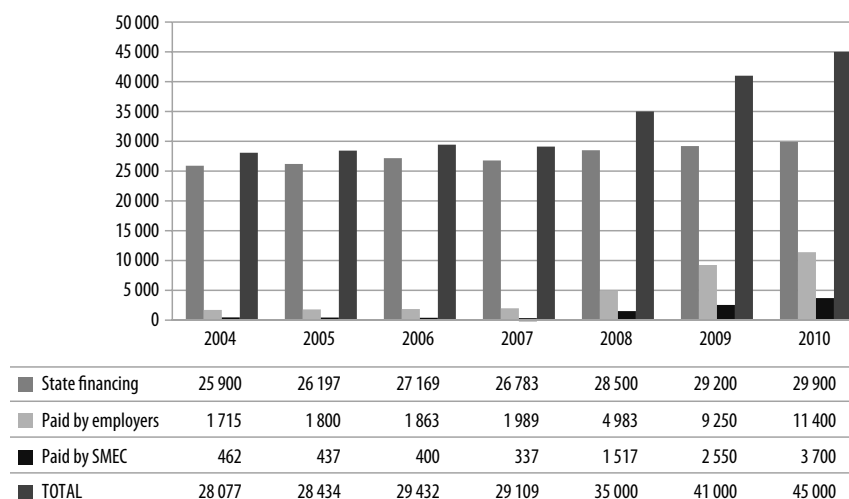
The figures in Table 8.6 demonstrate that 84% of all students admitted in 2006 were day students (proxy for traditional groups of youngsters after basic and secondary education). Thus, a fourth of admissions in 2006 were adults. Within this group, the larger part were staff of enterprises and individuals paying for their training (48%), the unemployed represented approximately a third of the group, and 20% were learners in the penal establishments of Ministry of Justice.

Table 8.6. VET I – students of various categories

	Total students 01/01/06	Planned		Actual		Total students 01/01/07
		Admissions for 2006	Graduations for 2007	Admissions for 2006	Graduations for 2006	
Total	29 166	24 260	21 559	23 108	20 916	29 897
Of which: day students	24 542	14 555	12 462	14 763	12 752	25 525
Access with basic education	14 289	5 895	4 784	6 423	4 761	15 345
Access with secondary education	6 706	7 026	6 284	6 782	6 311	6 909
Youth programmes without general education	3 548	1 634	1 394	1 558	1 653	3 275
Tekhnikum (Tokmok)	580	276	266	306	205	578
Penal establishments Ministry of Justice	1 605	1 620	1 620	1 614	1 482	1 611
Special VET school	63	50	10	16	44	33
Training for unemployed	341	3 842	3 426	2 561	2 590	287
Paid training	1 663	3 917	3 812	3 259	3 209	1 593
Training paid by enterprises	372			589	661	270

Source: Strategy for Consolidation and Modernisation of VET and Action Plan (2009-11), Annex, pg 63.

Figure 8.3. VET I – students by source of financing (2008: planned figures; 2009 and 2010: forecast)



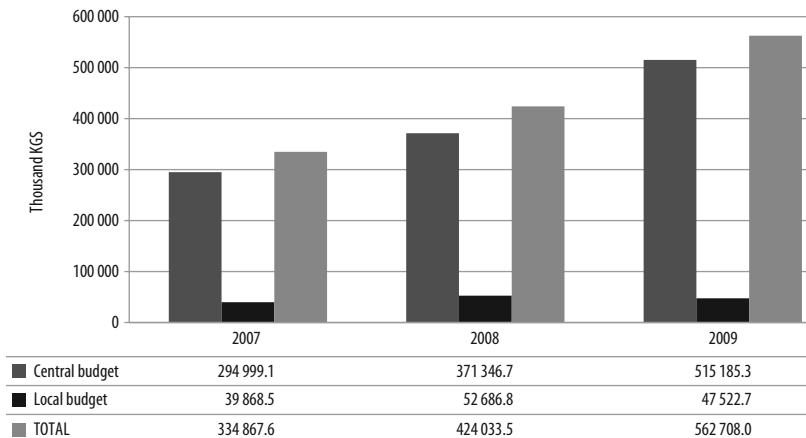
Source: Strategy for Consolidation and Modernisation, 2009, Annex, p. 67.

Financing of VET I

More than 90% of students in VET I were financed by the state budget in the period up to 2007, but SAPTE now seeks to increase the share of students financed by other sources (“multi-channel financing”), such as individual fees, contracts with enterprises and budget of the State Migration and Employment Committee (training for the unemployed).

Public financing of VET I has grown substantially between 2007-2009, as shown in Figure 8.4. The central budget grew by 75% in this period, and its share of total public financing rose to 92% in 2009, against 88% in 2007. This trend is certainly associated with the reform that separated the leading sector institution (SAPTE) from the ministry, and upgraded it with autonomy and a quasi-ministerial level in the government.

Figure 8.4. **Public sources of financing of VET I**



Source: State VET Agency, data provided upon request by the review team in June 2009.

The role of local budget declined in the same period. It would be worth exploring the potential of local resources to fund local VET projects and initiatives.

Analysing the evolution of various spending categories (Table 8.7) between 2007-2009, it is worth noticing the strong increase of the total wage bill (by 85%), and of the food bill by (by 117% or more than double). Thus in 2009 salaries represent approx 46% of total central budget, and food – 27.3% (up from 22% in 2007). Remarkably, the share of spending on repair of buildings has *declined* from a tiny 2.9% to an even tinier 2.3%, and a similar trend can be observed with the share of spending on equipment, which fell from 4.4% to 0.5%.

Table 8.7. VET I – central budget by spending categories (thousand KGS)

	2007	2008	2009
Central budget	294 999.1	371 346.7	515 185.3
Per student ratio	11 014.4	13 029.7	17 643.3
Salaries	126 987.9	166 542	23 533.0
% of total	43.0%	44.8%	45.7%
Social contribution	26 026.3	31 883.8	44 813.7
Current expenditure	55 670.3	56 588.7	80 048.7
Food	64 755.9	99 523	140 585
% of total	22.0%	26.8%	27.3%
Repair of buildings	8 466.8	14 833	11 607.9
Equipment	13 091.9	1 976	2 800
% of total	4.4%	0.5%	0.5%

Source: State VET Agency, at request of the review team, June 2009.

The theoretical per-student budget increased sharply over the period 2007-2009, by 60%. This calculation is the ratio of total central budget by total number of students financed by State resources. The figures on state-financed students are given in Figure 8.3. According to verbal information shared with the review team by the Planning and Financing Unit of SAPTE, per-capita financing varies according to the area of study, and fluctuates from KGS 12 000 to KGS 15 000.

SAPTE aims to promote diversified, or multi-channel financing, namely co-financing from enterprises. However, there are no policies or incentives to attract enterprises to invest in training, neither in initial nor in continuing training. A new regulation introduced in 2009 penalises also providers of education and training who are successful in extra-budgetary operations, and hence does not encourage efforts to plan and increase income generating income activities.

Teachers and staff in VET I

The teaching profession in vocational education faces the same challenges as elsewhere in Kyrgyzstan: ageing staff, low salaries and motivation, difficulty to recruit and retain good teachers and instructors.

Teaching and learning are organized differently in VET I schools than in VET II. The former includes learning in workshops and laboratories, whereas the latter tends to be more academic, with less time spent in practical learning environments. VET I has far fewer teachers with higher

education qualifications; for example, only half of VET I principals have higher education. Among teachers of practical vocational skills, there has recently been a significant increase in holders of higher education qualifications; their number doubled between 2002 and 2006. Interestingly, in VET I schools there are more male than female teachers, unlike other sub-sectors of education.

Pre-service training of VET I teachers

The Tokmok Industrial-Pedagogic Tekhnikum is the main pre-service teacher-training institute serving VET I. The college has the status of a VET II institution, and reports both to the MOES and to SAPTE. The college has relatively good and well-maintained academic and practical learning premises and equipment, and takes part in various initiatives to improve VET I pedagogy and innovation. This college benefited from a long-term co-operation with *Deutsche Gesellschaft für Technische Zusammenarbeit* (German Technical Co-operation – GTZ), and has retained most of the assets and knowledge of that experience – for example, it has a modular curriculum.

One of the key issues in teacher training policy in Kyrgyzstan is the concern about effectiveness, or how to ensure that public spending on teacher training benefits the schools. To ensure that the majority of its graduates will agree to teach in their communities, Tokmok Tekhnikum tries to motivate student-teachers from various regions/villages to return there to teach. The review team was told that this approach is working: although not all graduates stay in the teaching profession, a substantial number of them do, especially those who come from rural areas even though salaries and career prospects are unfavourable.

In-service training of VET I teachers

In the period 2006-2008, various in-service teachers training activities were organised, but the coverage remains low: in 2006 it included only 192 teachers and in 2007, participation was even lower at 104 teachers, although in 2008 the figure almost doubled to 273 persons. The majority of staff trained in 2008 were educators, managers and, particularly, instructors in the areas of construction, farming and ICT studies.

Graduations by professional areas

Graduates of VET I programmes have maintained a stable figure of approximately 20 thousand persons per year. Table 8.8 shows the study areas with larger number of graduates. Unlike the students choices in VET II, in VET I there is a relative balance across a range of areas of study, and only

welding and the operation of sewing equipment show some predominance that is not substantial. A few new areas emerged in the statistics for the year 2006, namely; office managers, housekeepers (domestic work), hospitality and operators in hotel and restaurant business. The demand for human resources in other professions was disrupted in 2005 and 2006, for example in a number of narrow occupations in agriculture and construction.

Table 8.8. **VET I – graduates by areas of study**

	2002	2003	2004	2005	2006
Computer operators	224	213	181	318	320
Electricians	989	1 034	535	1 342	1 104
Metal workers	818	805	803	835	660
Lathe operators	251	255	260	266	302
Power and gas welders	1 062	998	1 181	1 462	1 871
Sewing equipment operators	1 624	1 526	1 735	2 049	2 168
Tailors	1 403	1 222	1 180	1 319	1 323
National souvenirs and handicraft makers	365	363	367	218	302
Tractor drivers	327	277	264	325	342
Car drivers	1 189	1318	1 255	1 247	1 373
Automobile repair workers	335	371	497	511	530
Joiners, carpenters	377	392	493	487	574
Plasterers	163	174	197	146	112
Waiters, bartenders, barmen	365	282	376	343	348
Pastry cooks	627	626	772	668	510
Cooks	686	582	507	699	666
Hairdressers (men, women)	620	426	645	556	727
Secretary-assistants	349	199	171	287	304
Book keepers	820	703	237	696	477
Total selected areas (table)	12 594	11 766	11 656	13 774	14 013
TOTAL graduates	20 099	18 764	19 379	20 617	20 711

Source: NSC, 2008a, p. 10.

Future directions for VET I

Adapting education and training to such a varied range of needs and expectations requires strategy, client orientation, flexible training services and teachers, but also social responsibility. VET in Kyrgyzstan's transition economy needs to branch out, as each user category wants a specific training product or approach. Can the traditional inward-looking VET system cope with this challenge?

If potential demand from varied groups of users is so wide, the second question is whether the country can afford to substantially *decrease* its existing VET capacity, and focus investments and technical assistance on a small group of "strong" VET schools – as is being recommended by some important donor organisations. What criteria will guide such options? Can the *social* responsibility of VET be ignored? In the view of the review team, the key for efficiency in the VET sector is better management, improved responses to labour market signals, and better quality of outcomes and services across the VET system. *Economic competitiveness should go together with equity and with social inclusion – these are the big objectives of VET.*

Secondary Vocational Education and Training (VET II)

VET II: schools and students

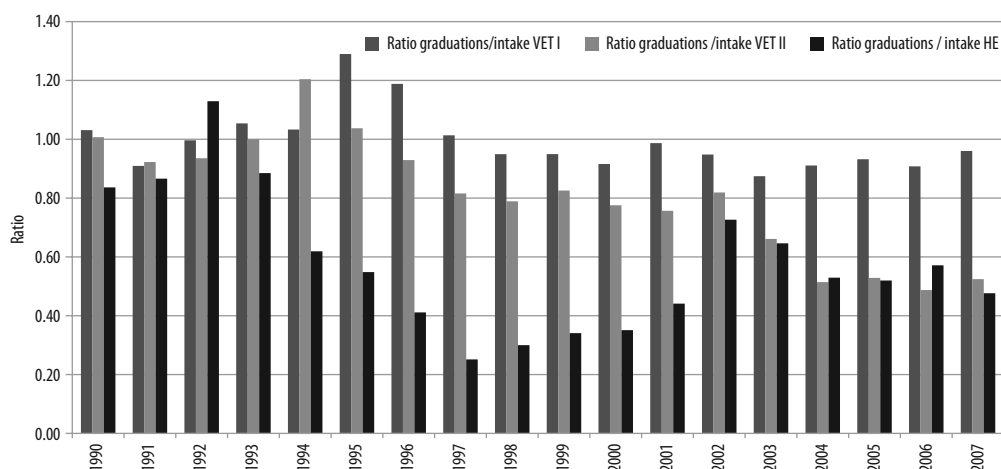
Secondary VET schools substantially increased their number of students in the period 2003-2008, particularly in the academic year 2006/07 when growth reached 20% year-on-year. A curious feature is the discrepancy between admissions and total number of students, which are much higher than the number of graduations (see Figure 8.2).

This growth of student intake in VET II is remarkable, considering that only a minority of places are financed by the public budget, which means that most students are fee-paying. However, the tuition in secondary professional education is significantly lower than tuition in higher education. This factor, together with the expectation that VET II offers access to accelerated higher education programmes, may indeed make VET II attractive for some students.

As seen in Figure 8.2, graduations from VET II declined in 2003-2005, and again in 2006/07. Against a background of increasing student intake, the review team has no explanation for this volatility in the number of graduates, which might be equally due to students' performance, drop-out or other reasons. One possible reason could be failed students' expectations regarding future transition to higher education. This observation was compared with similar results for the other two levels of professional education, seeking for possible commonalities.

Analysis of historical data for the period 1990-2007 shows a similar decline of the ratio number of graduates / student intake in higher education. Figure 8.5 depicts the behaviour of this ratio in the three levels of professional education: initial (VET I), secondary (VET II) and higher education. Only VET I shows a less significant decline and the ratio tends to stabilise at over 0.9 in the last four years of the series. However, VET II shows a steep fall of the ratio since 2003, to levels approximately 0.5. In higher education this decline started much earlier, in 1994, and tends to levels around 0.5 in the last four years, which is certainly better than the 0.25 – 0.3 ratio reached in 1997/98.

Figure 8.5. **Graduations vs. intake in the three levels of professional education, 1990-2007**



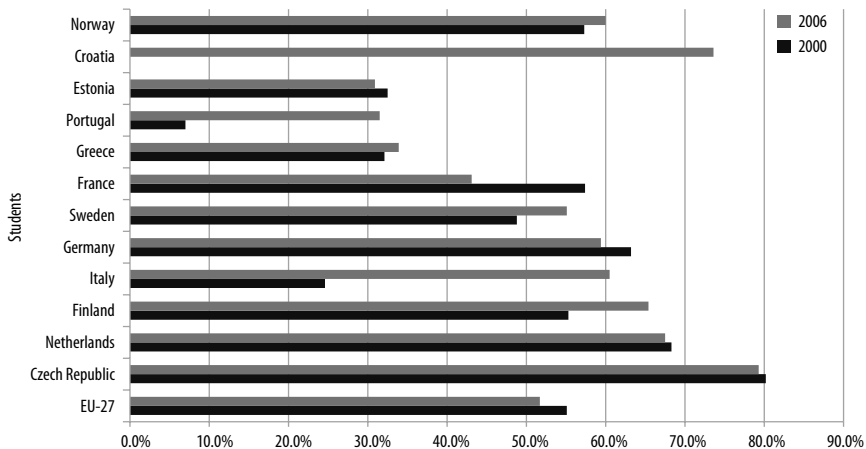
Source: <http://www.stat.kg/rus/part/obr.htm>, tables 5.03.00.11 and 5.03.00.14. Graph: review team.

Who is being served by VET II?

Table 8.5 seeks to estimate the coverage by VET II of students in Kyrgyzstan who have left school at basic education level (*i.e.* the difference between total graduates from basic and from secondary education). Assuming that 70% of all those admitted to VET II enter after basic school, then this intake corresponds to a maximum share of 44% of this group, but on average to around 35% in the indicated period. This is only a theoretical estimate, but it confirms the review team's assumption that there remains a large share (between 32% and 53%) of leavers of basic school who are out of formal education – *i.e.* VET I and VET II; and obviously also out of secondary general education.

An overview of students in VET in countries of the European Union, plus Norway and Croatia shows that the share of VET students (as percent of all ISCED 3 students) in Europe is significantly higher than in Kyrgyzstan. The situation varies across countries, but the share of students in vocational programmes at ISCED level 3 (as % of all ISCED 3 students) is significant at more than 50% in 2006. The evolution of this share has been different, as the 13 countries featured in Fig. 8.6 show a considerable increase (Italy, Malta, Spain, Finland, Sweden, Portugal), while some others (France, Lithuania, Poland, the United Kingdom) reduced their share of students in VET programmes by more than 20% during the period 2000-2006. Vocational programmes are predominant at ISCED level 4, where over 90% of full-time equivalent students follow vocational programmes. As for pre-vocational and vocational programmes at ISCED level 2, the share of such students is very low or non-existent in most EU Member States.

Figure 8.6. Students in vocational programmes at ISCED level 3 as % of all ISCED 3 students



Source: Commission of the European Communities, Commission staff working document, "Progress towards the Lisbon objectives in education and training, indicators and benchmarks 2008", p 56.

Financing of VET II

In VET II the share of study places financed by the State budget has declined from 50% (2002/03) down to 33% (2007/08) (Table 8.9). Although this distribution of state-financed vs. privately-financed study places in VET II is still far from the picture in the Kyrgyz Republic's higher education system, which is largely predominated by students' fees, the trend could go in a similar direction.

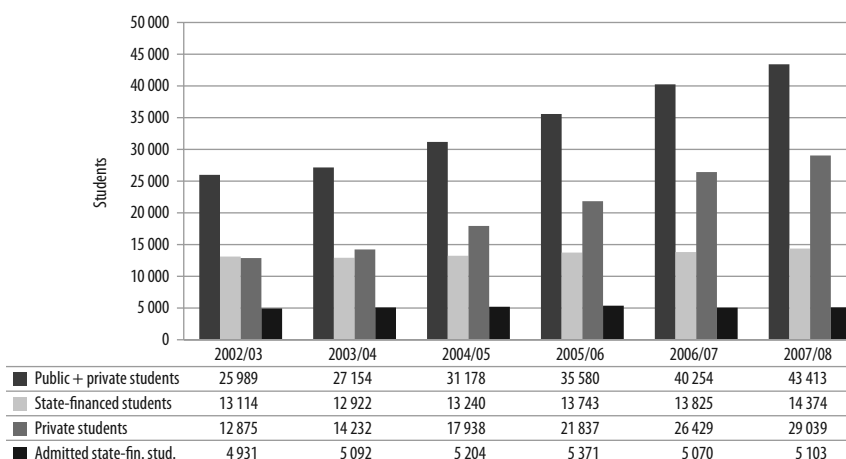
One immediate conclusion is: demand for education and training for youth justifies the growth of private household expenditure/investment in education. In the view of the review team, this should prompt policy makers to create the conditions to build up the quality and relevance of the VET II system.

Table 8.9. VET II – State vs. private financing of students

	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Public + private financed students	25 989	27 154	31 178	35 580	40 254	43 413
Financed by state budget						
Current students	13 114	12 922	13 240	13 743	13 825	14 374
Admitted	4 931	5 092	5 204	5 371	5 070	5 103
Graduates	4 611	3 861	3 534	3 683	3 363	3 341
% of total students	50.5%	47.6%	42.5%	38.6%	34.3%	33.1%
Fee paying students						
Current students	12 875	14 232	17 938	21 837	26 429	29 039

Source: NSC, 2008a, pg 11.

Figure 8.7. VET II: students by source of financing (public budget and private fees)



Source: NSC, 2008a, pg 116.

Table 8.10. **VET II – revenues from private fees (KGS thousands)**

	2007 (actual)	2008 (final)	2009 (projected)	Change 2009-2007 (%)
Total revenues	31 128.6	47 447.1	49 201.7	58.1%
Contract studies (students' fees)	29 883.5	45 549.3	47 233.6	58.1%
Rent	55.6	237.2	246.1	342.6%
Other	1 089.5	1 660.6	1 722.0	58.1%

Source: MOES, Summary plan of special resources for 2009 of secondary professional education schools, provided by MOES at review team's request, June 2009.

Revenues from student fees are projected to grow substantially in two years (by 58%), which is mostly due to the substantial growth in the total number of students. In fact, the average per student revenue (which should approximate the average tuition fee) is relatively low: slightly over KGS 1 500 (EUR 27) in 2009.

A tax of 20% on the extra-budgetary revenues of all educational institutions was established in 2009. During the review team's mission in April 2009, intensive negotiations in Parliament and within the government were taking place to cancel this new tax, but the current tight public finance does not offer a favourable context to withdraw such a source of additional budget revenue.

Teachers in VET II schools

The number of teachers decreased by 9% in 2007/08, compared with 2002/03. But this is irrelevant given the wide fluctuations during the period, with large drops in 2003/04 and 2004/05. This occurred against a background of rapidly growing enrolment, hence the student/teacher ratio almost doubled in 2007/08 (12.7), compared to 2002/03 (7).

Table 8.11. **VET II teachers**

	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Total	3 714	3 019	2 984	3 273	3 680	3 410
With higher education	3 499	2 800	2 755	3 038	3 502	3 253
<i>Of whom:</i>						
Full-time teachers	2 782	2 250	2 172	2 465	2 672	2 426
Full-time with higher education	2 643	2 096	2 008	2 301	2 550	2 311
Part-time and combining jobs	932	769	812	808	1 008	984

Source: NSC, 2008a, pg. 115.

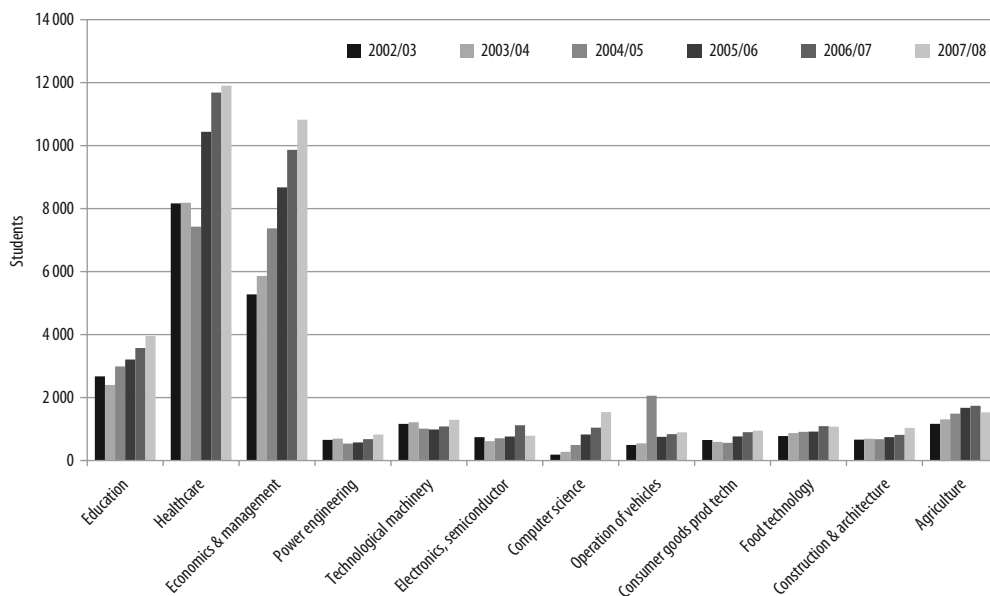
Approximately 71% of VET II teachers were full-time in 2007/08, slightly down by 4% from 2002/03. This may indicate a trend towards greater flexibility in contractual arrangements, and increased teacher mobility. Financial data from MOES show a trend towards savings in the wage bill of teachers in VET II, as projected for 2009, compared with 2008. More than 95% of all teachers have higher education, which shows that the sector has substantial potential.

Graduates of VET II and their specialisations

Analysis of students' study choices in VET II shows a strong predominance of three areas: education, economics and management, and – as the top priority – healthcare. Figure 8.8 is self-explanatory. Growth trends are clear in healthcare, but particularly in economics and management. Education shows low growth, which may reflect the low attractiveness of the career.

Among the remaining areas of study, the numbers of students seem to be better balanced. Areas of strong growth are: computer science (by approximately 10 times during the period), construction and architecture (approximately 40% growth), operation of vehicles (80% increase), and consumer goods production technologies. In agriculture, the sector providing revenues

Figure 8.8. **Student specialisations in VET II**



Source: NSC, 2008a, pp. 118-119.

to over a third of Kyrgyz households, there is relatively limited interest from students. Kyrgyzstan is a producer of hydro-power and an exporter of electricity, so that another career that (at least theoretically) could attract greater student interest is power engineering.

Labour market outcomes

Summary information on labour market indicators in relation to educational attainment

The employment rate was close to 60% between 2005 and 2008, but the breakdown by gender shows substantial differential – 70.9% for men, and only 49.7% for women (2008).

The unemployment rate floated between 8.1% (2005) and 8.2% in 2008, and despite the crisis this indicator shows no increase in 2008. Unemployment rates are higher in rural areas (9.8% against 7.3% in urban areas), and according to the preliminary figures for 2008 released by NSC, women are more affected (9.4% unemployment rate, against 7.3% for men),.

The largest employer in Kyrgyzstan is by far the agriculture sector, which retained, in 2006, over 36% of the employed population. Retail trade and repair followed with approximately 15%, and construction with less than 9%. Manufacturing employs approximately 8.5%, transport 5.7%. Employment in education exceeds 7%.

In 2007 the share of total employment in agriculture fell to 34%, while the share of construction grew to over 9.5%. Net employment growth was registered in the following sectors (2007): manufacturing, production and distribution of gas energy and water, construction, trade and repair, hotels and restaurants, transport and communication, education and public administration.

Another significant feature of the labour market is the very large share of informal employment. According to NSC, the share of informal employment in total employment reached approximately 70% (69.1% in 2005 – 70.4% in 2007). The size of informal employment was much larger in rural zones, in a proportion of 2.8 to 1. Another fact worth mentioning is the continuous growth of the number of employed in the informal sector. Finally, the majority of those employed in the informal labour market declared having this activity as sole employment (over 96% of total of informally employed) (NSC, 2008b, pp. 68-70).

Analysis of the educational attainment of the employed population shows that informal employment has a predominance of people with secondary education and in general, a lower educational attainment, comparatively with the

picture of total employment. Approximately 65% of the population in informal employment have general education (secondary and basic), a consistent trend in 2005-2007. The share of employed with this level of education in total employment is lower – approximately 48%. The share of employed with higher education is much lower in informal employment (from 7.9% in 2005 to 8.8% in 2007) than in total employment (17% to 17.7% in the same period, as presented below).

In 2007, 17.7% of the employed population had higher education, 13.7% had secondary VET, 9.9% had initial VET and 48% secondary education. The largest share of employed with higher education were absorbed in education and public administration (42% of total employed with this level of education). The next largest employer of people with higher education is trade and repair services (14.7%) and manufacturing (8%).

Labour market indicators by levels of education

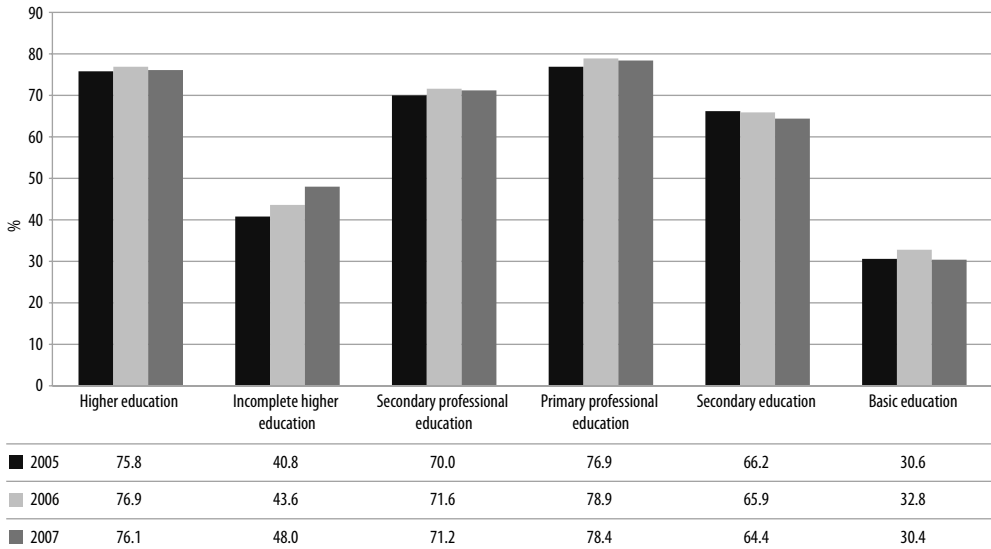
The review team analysed the labour market status of the labour force by educational attainment levels, using the figures of integrated sample household budget surveys and labour force published by the NSC and listed in the bibliography. The used concepts – employed, unemployed, active and inactive population – are compliant with the framework of the International Labour Organization (ILO). Data on unemployment are not based on registered unemployed, but on household surveys.

Table 8.12. Labour market indicators by levels of education: rates of employment and unemployment (%)

Rates	2005		2006		2007	
	Employment	Unemployment	Employment	Unemployment	Employment	Unemployment
Higher education	75.8	6.7	76.9	4.9	76.1	6.3
Incomplete higher education	40.8	12.1	43.6	16.3	48.0	8.1
Secondary professional education	70.0	7.1	71.6	6.3	71.2	6.3
Primary professional education	76.9	7.5	78.9	7.5	78.4	6.7
Secondary education	66.2	8.2	65.9	9	64.4	8.7
Basic education	30.6	15.9	32.8	12.7	30.4	13.7
Primary basic / none	17.1	6.3	16.9	9.5	16.6	11.8
Total	59.5	8.1	60.1	8.3	59.8	8.2

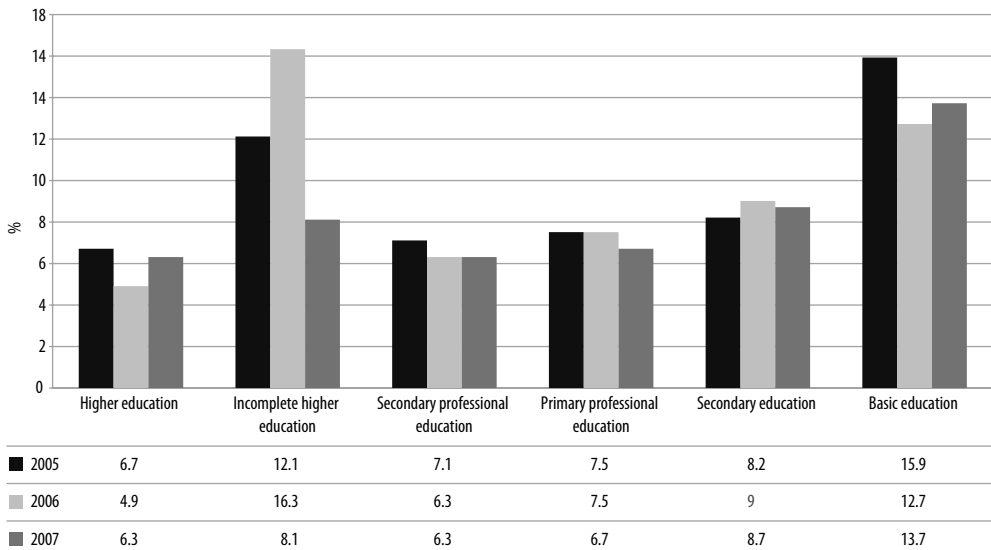
Source: NSC, 2008b.

Figure 8.9. Employment rates by levels of education, 2005-2007



Source: NSC, 2008b.

Figure 8.10. Unemployment rates by levels of education



Source: NSC, 2008b.

The population with initial VET qualification has the highest employment rates, followed by those with complete higher education. The employment rate of the population with lower educational attainment (basic and primary education) is extremely low and clearly raises a challenge for designing better adult training policies and programmes.

The highest unemployment rates are registered among active population with lower educational attainment (basic and primary), as well as with secondary education. This fact is coherent with the analysis in Tables 8.13 and 8.14, which shows continuous excess supply of the workforce with this level of education.

Table 8.13. Distribution of population over 15 years age by educational attainment level (shares, %) and estimated excess supply, 2006

	In total population	Active population	Unemployed	Employed	Excess supply
Higher education	13.2	16.3	9.6	16.9	-7.3
Incomplete higher education	2.9	2.3	4.6	2.1	2.5
Secondary professional education	11.6	13.5	10.3	13.8	-3.5
Primary professional education	7.8	10.2	9.3	10.3	-1
Secondary education	43.7	48.3	52.8	47.9	4.9
Basic education	11.9	6.8	10.4	6.5	3.9
Primary basic / none	8.0	2.4	2.7	2.4	0.3

Source: Calculations of the review team based on NSC (2008b).

Table 8.14. Distribution of population over 15 years of age by educational attainment level (shares) and estimated excess supply, 2007

	In total population	Active population	Unemployed	Employed	Excess supply
Higher education		17.3	13.4	17.7	-4.3
Incomplete higher education		2.4	2.4	2.4	0
Secondary professional education		13.5	10.4	13.7	-3.3
Primary professional education		9.7	8.0	9.9	-1.9
Secondary education		48.3	51.7	48	3.7
Basic education		6.3	10.6	5.9	4.7
Primary basic / none			3.5	2.4	1.1

Source: Calculations of the review team based on NSC (2008b).

Supply of labour with different education levels

Using a simple methodology proposed by Bartlett in 2006, the distribution of educational attainment across employment and unemployment in Kyrgyzstan can be compared using the same source of data (Bartlett, 2006). The rough indicator of *excess supply of persons of different education levels* is derived by subtracting the *share* of persons in employment in each category from the *share* of persons unemployed in the same education attainment category. Tables 8.13 and 8.14 show the distribution of the population over 15 years by levels of educational attainment, and the estimated excess supply in 2006 and in 2007, whereby the positive figures indicate excess supply.

Labour force with higher education, with secondary and initial VET attainment is in demand and supply can further grow. But labour force with secondary and basic education, on the other hand, is clearly in excess supply.

Urban-rural distribution of skills (levels of education)

Analysing the rural-urban distribution of the labour force by labour market status and levels of educational attainment, one can see that in rural areas secondary diplomas predominate, with 49.2% of the working age population having secondary education. This level of education is also largely predominant among the active population (55.7%), and the employed population (55.2%). And 62.3% of the unemployed are also holders of secondary education diplomas.

In urban areas, the distribution of education levels by labour market status shows a much less visible predominance of holders of secondary education diplomas (35.4% of the active population, 34.5% of the employed and a lion's share of the unemployed: 42.4%). In urban areas, holders of higher education represent 27.1% of the active population, and 28.7% of the employed, and only 13.9% of the unemployed.

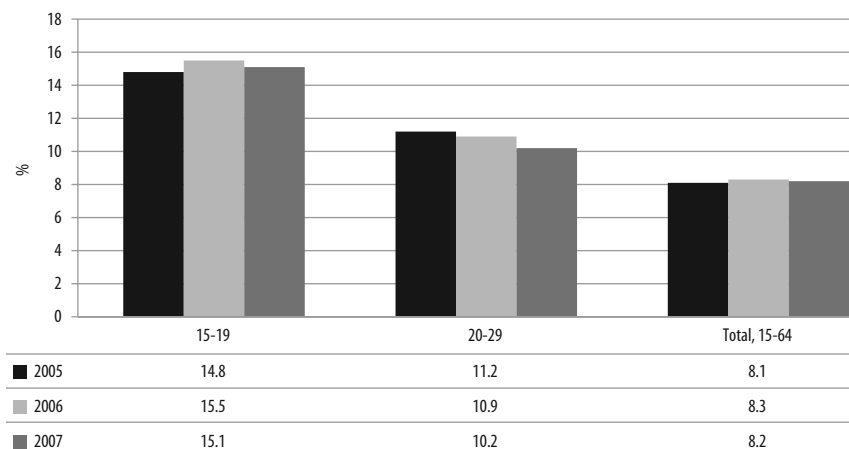
In urban and rural areas, holders of initial VET diplomas perform similarly in the labour market: they represent 8.5% of the total over 15 years age population (7.4% in rural areas), and 11.1% of the active population (9.7% in rural areas); but they have a share of 11.2% of the employed and 10.6% of the unemployed (respectively 9.8% and 8.1% in rural areas).

VET II population represents 14.7% of the population over 15 years in urban areas (9.7% in rural), but a large share in the inactive population in urban areas (10.8%). The percentage of this level of education amongst the unemployed is relatively high in urban areas as well: 14.7%.

Youth unemployment

The entry of young people in the labour market is not easy, as visible in the higher-than country average unemployment rates for younger age groups. However Kyrgyzstan displays better indicators of youth unemployment than many other transition economies (Figure 8.11).

Figure 8.11. Youth unemployment rate



Note: Unemployment rate is computed as the ratio between the numbers of unemployed in the active population (total, or within same age group or within same educational attainment level).

Source: NSC, 2008b.

In Kyrgyzstan the ratio of the unemployment rate of age group 15-19 to the country average unemployment rate is 1.84, while in Azerbaijan this figure reaches 2.35 and in Georgia – 2.09. The unemployment rate of the age group 20-29 was 10.2% in 2007, against an average rate of 8.2%. In general, Kyrgyzstan displays reasonable unemployment rates over time, in the range of 8 to 8.3% (2005-2007). Compared with the Caucasus countries, Moldova and the Western Balkans, these figures are less challenging.

Issues in Vocational Education and Training

VET at the crossroads

There is a lively debate in Kyrgyzstan about the role and relevance of VET in the education system, and in the country's overall socio-economic development. Television programmes, donors' events, surveys of employers' satisfaction and the emergence of new projects funded by different international partners all come to give external observers the impression that there are many new developments, both at policy level and in the schools.

The review team's main impression, based on many documents and interviews, is that VET is at the crossroads. Deciding on the proper direction and the right trade-offs will require strategic judgment, but under the pressure of economic, financial and social difficulties, such decisions are hard to make.

Changes are already happening in the qualifications system. New diplomas, new designations of professions, new assessment and certification methods, and new competence-based curricula are no longer in line with the established legal framework. To understand the current qualification system, it is not enough to know the formal rules; it is also necessary to understand what is being *piloted* and *innovated* by expert groups, schools, and sector associations. Choices have to be made, between what is legally prescribed and what is innovative and creative but may need a more flexible approach.

A key question is, should VET I continue to develop integrated education and training programmes that provide a route to further study? Or should VET I gradually abandon the integrated approach, and focus on practical, technical training? What are the benefits and pitfalls, especially for youngsters leaving basic education at the age of 15? How can Kyrgyzstan improve its integrated system of secondary and vocational education, while also being responsive to employers' needs?

Innovation in VET schools is easier at "the margins of the system" – *i.e.* non-standard training programmes for adults of various categories, as this part of the VET school portfolio is less (or not at all) subject to standards imposed by the Law, and can experiment with new curricula. For VET managers, the question is how they can "fertilise" the standard programmes with these innovations while remaining within the bounds of the state standards.

For donors, the question is whether they should direct their relatively short-term projects towards assisting the main sector authorities, or assist directly the more manoeuvrable and innovative VET schools, where they could test various innovations, construct new curricula; train specific social groups and strengthen the capacity of VET school staff, rather than the costly "model" centres for modern VET that are, in some cases, supported but not replicated in the system. In this context, each stakeholder has a different

agenda: VET system officials, employers, students, teachers, and local governments seeking to satisfy their constituencies and create appropriate training for local farmers and small businesses so that they can help raise productivity, household earnings and the region's wealth.

What is missing here are links and connections. Or, in the words of one national specialist: “There are too many new ideas and new developments going on in VET in Kyrgyzstan. What we need now is to evaluate and consolidate, and analyse the bottom line. Otherwise, all efforts to innovate are wasted, as they do not really serve systemic development”.

There are, however, ways to improve communication and reduce waste and inefficiency. For example:

- A functioning platform where good practice, innovation, ideas, resources, and methods are shared, analysed, and contribute to the development of all VET schools. The years of transition have seen the development of important and appropriate innovation in VET, often fuelled by international partnerships. But a substantial share of these innovations are lost because they are not shared, not disseminated, and often also not endorsed by the bodies that have the authority to approve curriculum, textbooks, and teaching methods. In Kyrgyzstan's context of scarce resources and urgent need to improve the system and its building blocks, such waste is simply not affordable.
- A structured observatory, involving State and private players, within inter-sector logic, and in close communication with the many donors that shape most of the innovations in VET. Such an observatory could analyse and evaluate programmes, and review policies accordingly.
- A strong information, guidance and communication tool on VET for all users, based on new technologies, but also adapted to local rural contexts, as well as to regions and groups deprived of modern communications. The tool would serve to inform potential students and learners, parents, teachers and managers, but also employers. It will help point out the the strengths and weaknesses of the system, the performance of VET schools against clear indicators, the various study pathways and training on offer, the professional profiles and curriculum information for students' guidance. In other words, the tool would be a nation-wideportal into VET.
- A clear recognition that VET is a unified system, even if diversified in forms of training (formal, non-formal), institutional setting (initial, secondary), and reporting hierarchy. *What separates is not the substance, but the form.* This can be resolved by adopting a common agreement on areas of study, levels of qualification, assessment

rules, quality assurance tools and flexible links with the education continuum. For this is the *substance* of a good VET service, and the population and the country's economy are entitled to it. For students it doesn't make a difference whether their VET school reports to MOES or to SAPTE; and employers do not want to know whether the curriculum had 20 or 30 subjects. They do, however, all care about the final outcome of the student's effort, the investment of parents, and about the ability, autonomy, responsibility and reliability a young person demonstrates at work.

Policy framework

Like other CIS countries, Kyrgyzstan is fond of formulating laws and regulations. This is, of course, an excellent premise for sustained development and the rule of law – but sometimes it is used to maintain the *status quo*. One policy-maker said: “VET schools transformed into Centres for professional development? Sounds good, but the Law does not mention that kind of entity, so it is impossible.”

Legal foundations

The VET sector policy framework is based on a number of legal acts and strategic documents. First of all, the Law on initial vocational education (“VET Law”) was approved in 1999, but amended in 2008, reflecting adjustments in a number of areas, such as: definition of initial vocational education, citizens' rights to VET guaranteed by the State, promoters and shareholders of VET schools, qualification documents, types of VET schools, licensing and accreditation of VET schools, teachers of VET schools, financing of VET schools. The Law refers to “initial vocational education”, whereas the Regulation (Charter) of SAPTE (August 2008) refers to “professional-technical education”. The latter might express a broader concept of VET.

As noted earlier in this Chapter, the VET Law defines initial vocational education as “preparation, enhancement of qualification and retraining of workers / employers of qualified labour (...), on the basis of basic and general education. When necessary, training for a professional qualification is organised also for people without basic education”. The Law guarantees the access of all citizens to initial VET, by providing public funding to VET schools (partial or total), scholarships and material support to students, assistance to organisation of systematic training in enterprises, assistance to establishment and operations of private VET schools. Citizens are entitled to one initial VET qualification funded by the public budget. This position of initial VET as a *public service* gives it a role in social inclusion, which goes beyond the mere formation of a qualified labour force.

According to the team's discussions with leading staff at SAPTE, the policy priority now is not only to train qualified workers/employees, but to train them *for employment*. This implies a need for better career guidance and counselling; however, the VET Law and the new strategy documents issued in 2008 and 2009 do not explicitly address this issue. Only the policy documents of the State Migration and Employment Committee (SMEC) include explicit programmes for guidance and counselling for various groups of users, including students of secondary education.

To ensure that VET capacity is maintained and strengthened, the VET Law stipulates: (i) public VET schools cannot be privatised or used for purposes other than VET; (ii) private promoters/investors/donors may establish private VET schools, under the condition of compliance to state standards of VET; and (iii) public funding from local resources, for training in non-public VET schools is possible if there is a respective state order.

Public VET schools are subject to a common standard regulation and charter. These schools are funded by the public budget, and are entitled to offer paid services to the market, and retain the property over these extra-budgetary revenues and other assets and intellectual rights formed as a result of the school activity.

Governance

As noted, the governance of VET I is based on a combination of a central sector policy and administration body (SAPTE) with three regional directorates² (Southern Directorate [Osh, Batken, Jalal-Abad], Northern Directorate [Naryn, Issyk-Kul] and Bishkek Directorate) in charge of methodological support to VET schools, and of providing updates on regional labour market needs. Social partnership is also mentioned in the VET Law, under Article 18 on tripartite co-ordinating commissions for VET. These commissions should be established at all levels: central, regional, city and local. The commissions operate on a voluntary basis and are expected to elaborate recommendations and proposals for public VET policy, on involvement of employers in VET, and introduction of modern and effective training approaches and forms. The co-ordinating commissions function according to a standard set of regulations that has been approved by the government.

This explicit mentioning of a structured social partnership model in the Law is highly positive, and if implemented, it could bring considerable benefits for co-ordinated development of the system, and clear interactions with the world of work, and businesses. However, the review team had no contact with or information about such commissions, and saw no sign of their operations. What the team did hear repeatedly (from the SAPTE leadership, from VET schools, and from Chambers of Commerce and Industry) were

comments about poor links of VET with employers. SAPTE now seeks to establish so-called regional platforms on VET, aiming to co-ordinate efforts of donors and social partners.

Quality assurance

Public and private VET schools are subject to common state standards, licensing and attestation/accreditation.³ Licensing gives schools permission to exercise educational activities, whereas attestation reviews their educational programmes and their compliance with state educational standards, allowing the accredited school to issue state-recognised diplomas.

The central administrative body in charge of the VET system (SAPTE, since 2007) exercises the quality control of VET. The same body controls the actual compliance with the conditions stipulated in the license, which may be withdrawn by the Inspectorate of MOES according to the Law on Licensing (Chapter 25, amended in 2004 and 2007), in case of breach of these conditions by the VET school.

Licensing of initial VET schools is the prerogative of the relevant Inspectorate in MOES, as are licenses for any other educational establishments as required by law. Three elements are essential in the licensing process: *(i)* infrastructure and equipment; *(ii)* teachers; *(iii)* information basis (textbooks, methodical material, manuals).

Licenses state the areas of study in which the VET school may operate and issue state diplomas and certificates. The licensed school is obliged to remain within the terms of the license, as far as education and training offer as well as maximum number of students are concerned.

SAPTE has a department of Inspection and Accreditation, with a staff of five that exercises control over the processes of school accreditation. The latter is a relatively new concept and was introduced by the VET Law in 2008, although the 2004 regulation on attestation of initial VET schools already referred to accreditation as the final outcome (award) of the attestation process.

According to this regulation of 2004, VET I schools undergo attestation every five years, and newly established schools – in the first year after graduating their first students. Attestation is defined as: "...a type of state control over the effectiveness of VET schools activity, and is based on the comparison with requirements (state standards) of the results of the activity of the VET school undergoing attestation". Hence, the benchmarks are the state standards of initial VET. Besides control, alignment with state standards and review of the school's learning conditions, attestation aims to help the school correct any shortcomings, and supports creative initiatives.

Is accreditation important and necessary? The accreditation document specifies the status of the VET school (*lyceum*, school) and offers a number of benefits such as: (i) the right to issue initial VET diplomas recognised by the State; (ii) curricular autonomy for the accredited school; (iii) career progression for the staff (higher categories); and (iv) preferential participation in state and international programmes. In many countries, accreditation entitles private VET schools to receive public financing, thereby largely determining their competitive position in the market. In Kyrgyzstan, public financing goes mainly (or totally) to public VET schools.

SAPTE's department of inspection and accreditation carries out random checks on admissions and attendance. This kind of inspection is done in combination with thematic or other verification visits to VET schools, focussed on student performance. Data on admissions is collected in July-September and consolidated in October for statistical reporting.

In VET II, both licensing and attestation (accreditation) are conducted by the Inspectorate of MOES, once every five years. Accredited colleges are entitled to issue diplomas recognised by the State.

The State Inspectorate for Licensing and Accreditation of the MOES recognises that the attestation process is weak, and expressed the hope that MOES would now be willing to introduce independent external accreditation. MOES is working on this with international organisations, such as USAID and GTZ. Introduction of autonomous accreditation would then separate licensing (which is a state function) from accreditation.

VET schools do not use performance indicators, but they do have objectives, and are rewarded for performance against these objectives. Self-assessment is also not used, but VET schools do have a regulation on internal control. This regulation is used also for external inspections. The concept and practice of school self-evaluation, with analysis and dissemination of summarised results, are yet to be developed.

Curriculum

The VET Law stipulates four main formats for VET, ranging from integrated VET for basic education (3 years minimum) to professional courses lasting up to one year. The Law allows a shorter course if a student is able to acquire the professional skills more rapidly. Interestingly, the Law also allows programmes geared towards partial qualifications. Students can work if they have a partial qualification, adding more skills and knowledge along the way.

Curricula for initial VET are developed by SAPTE; however, for the secondary education component of the curriculum MOES standards must be observed. To date, SAPTE has developed new modular curricula for 17

professional areas adapted to short-term training (2-3 months), without a general education component. In 2008-2009 SAPTE was working with the ILO to consider the advantages of using ILO modules of “skills for employability”, already prepared for 25 professional profiles. Other international organisations with long experience in introducing modular training are ready to adapt the ILO approach for Kyrgyzstan.

Books, materials and libraries

For VET I, the quality of books and materials is an issue, but their availability is perhaps a more pressing problem. The SAPTE Methods Department reports that textbook coverage reaches only 32% for the professional cycle and 60% for the general education cycle (MOES standards). Most of the textbooks are old, and no longer in line with modern approaches to learning.

One frequent observation during the review mission was that schools do not have a range of books and materials in addition to textbooks. Libraries do exist everywhere, but in most cases they are kept closed and students are certainly not encouraged to look around, read, or use the libraries for studying. Electronic libraries are very rare. A teacher of literature in a VET school reported that her only successful method to introduce students to literature is through videos and films that she shows in the classroom. Her library has a relatively good stock of Russian literature, but was also kept closed during the working hours of the school when it should be available to students and teachers.

In secondary VET, development and management of curriculum and textbooks is the task of the colleges. Based on general parameters given by MOES regarding such key aspects as number of study hours, colleges that are designated “*profile colleges*” develop curriculum and education plans. These profile colleges function as model or resource colleges in specific fields such as architecture, agriculture, humanities etc. MOES analyses and approves submitted curricula, which can then be disseminated to other colleges. Colleges and teams of teachers may initiate the development of new textbooks, although the MOES controls the final stages of review and approval, and gives its *imprimatur* to the best books.

Teacher evaluation

Two main regulations form the framework for the evaluation of teachers:

- Regulation on attestation of teachers, management and other staff of general education organisations (2008);
- Regulation on internal control of educational institutions of initial VET (not dated).

The regulation on internal control concerns exclusively the performance and skills of teachers of various categories and types of activity (teachers and instructors). Internal control is defined as: “purposeful, systematic and objective control of the work of teachers, one of the forms of leadership of the teaching community”. The main objective of internal control is “a further development of the teaching-educational process, corrective measures, support to teachers capacity building – aiming to raise the quality of training and education of students in initial VET” (Articles 1.1 and 1.2). Internal control is exercised by the school director, assisted by the deputies in charge of teaching and methods; education and social work; professional training and economic activity; and senior teachers. Besides internal control, teachers also are subject to attestation.

Learner achievement in VET: PISA 2006 – a comparison

The comparison below is merely indicative, and should be read in the context of different sample sizes, and other conditions.

The Centre for Educational Attainment and Teaching Methods (CEATM), which implemented and reported on PISA 2006, provided the review team with data from PISA 2006 that show that the scores of participants from vocational *lyceum* (integrated VET I) were not, on average, worse than those of students from secondary schools. In mathematics, scores of vocational *lyceum* students were below those of secondary school (287.1 against 294.9), but in reading with understanding the situation was the reverse: 301.3 for vocational *lyceum* students, compared with 295 for those in secondary schools. Natural sciences also showed a slight advantage in favour of the vocational *lyceum*: 296.7 against 294.3.

Of course, these results need to be interpreted in the light of two factors: (i) the number of students from vocational *lyceum* participating in PISA was much lower than the number from general schools (14 to 3 985 in mathematics, 10 to 2 779 in reading with understanding, 17 to 5 174 in natural sciences); and (ii) 100% of the sample from vocational *lyceum* scored below 360 points, *i.e.* none exceeded the scores of the fourth group (300-360 points). This indicates less variation than among students of secondary schools. By contrast, general school students showed wide variations with a considerable share of low performers (5% in the lowest group for mathematics, 25% in the second group for reading with understanding, 11% in the second group for natural sciences). But they also had high performers (10% in the fifth group, for mathematics as well as for natural science; 11% for reading).

Variation of quality across the VET system

Interaction with donors, and new methods and training programmes based on international experience are the main drivers of change in VET schools. However, such projects and programmes are piloted in *selected* VET schools, or in *selected* regions/sectors, and run in parallel with mainstream standard VET programmes. This creates “islands” of innovation that are not connected to other islands or to the mainland, as public funding cannot afford the replication of such pilot schemes across the VET network. Only the “soft” innovations – particularly curricula and textbooks – are sometimes accepted, but not officially approved, and not suitable to be combined with standard curricula.

This is a serious source of variation in the quality of VET. The positive effects of this variation are the influence of good practice and the creation of precedent. The less positive effects are that many schools and students do not have a chance to benefit from these new approaches, and that learning outcomes will suffer by comparison.

Reforms

VET I had started a strategic reform programme (2008-2011), approved in 2008 to serve as an overarching sector development document. An Action Plan supports this programme, but its implementation depends on availability of financial and technical resources that are expected to be available in the framework of the new ADB project. The size of the ADB grant is USD 10 million, to be disbursed up to the end of 2011. The contribution of the government amounts to USD 3 million. About 70% of ADB financing is intended for infrastructure and equipment, 5% for textbooks, and the remainder for staff training, as well as for technical assistance. The project has 2.5 years to implement its complex Action Plan.

A critical element of the ADB project is the optimisation of the network of VET schools. The aim is to form a system with fewer but more effective and efficient schools which should be, able to be multi-profile and multi-level providers. The implementation approach of this objective is still under discussion, as SAPTE is careful about the possible negative effects of a large reduction of the number of VET schools for rural and distant regions: SAPTE is likewise conscious of the risks linked with the resistance that these measures may prompt in the VET community. Finally, the legal basis will require considerable amendments, another critical moment in the implementation path of these measures.

The Strategy for Consolidation and Modernisation of the VET system in Kyrgyzstan (2009-2011) is a parallel strategy that supports specifically the ADB project started mid-2009. This document was developed with international expertise. Both strategies share a number of objectives and activities. The strategic lines of both documents are schematically compared in Table 8.15.

Table 8.15. Comparison of strategies for VET reform

Strategy of ADB project	SAPTE strategy (overarching)
1 Optimise the network of VET schools	Modernisation and consolidation of the VET system
2 Bring training quality in line with the requirements of professional competence	Formation of efficient VET financing system, economic relations
3 Raise economic independence of VET schools	Staff development
4 Promote participation of private organisations in implementing VET programmes	Development of social, and public-private partnership
5 Modernise organisational structure management structure	Social guarantees and modernisation of VET content (competence based learning)
6 Set up multi-level system of partnership	
7 Comprehensive plan for staff development for VET system (managers, teachers)	

Source: Review team.

Both strategies omit proposes a very important element: establishment of a sector monitoring system, based on agreed indicators at various levels, and a statistical system able to provide analysis and reports on the VET sector performance. The strategies are not explicit on the strategy review process, but one can assume that the ADB project has clear provisions regarding steering and monitoring implementation.

Institutional capacity and mandates

The VET system in Kyrgyzstan is regulated by two main bodies – the State Agency for Professional-Technical Education (SAPTE) and the Ministry of Education and Science (MOES).

1. State Agency for Professional-Technical Education: VET I

The formation of SAPTE in 2007 added significant institutional capacity and autonomy to revitalise VET I. The staff of the former Department under the Ministry of Labour moved to SAPTE, but it took another 18 months for the Charter and the organisational structure of the Agency to be approved (August 2008), delaying its authority to make decisions and start work.

SAPTE's Charter states that the purposes of the Agency are “implementation of the unified policy to supply the labour market with qualified labour force, based on the standards of initial VET; and satisfaction of the needs of the society in professional training, based on the interest and potentialities of citizens”. In practical terms, SAPTE is in charge of: (i) implementation of VET sector policy; (ii) provision of

training services; (iii) regulatory functions; (iv) co-ordination, control and monitoring of programme implementation; and (v) assistance and support to development of the VET sector staff, and information for mass media. At the time of preparation of this report, the Agency has ministerial-level status; it reports to the Prime Minister, has its own budget, and has a staff of 56 including directors and *Collegium*.⁴

2. Ministry of Education and Science: VET II

The Department of Secondary and Higher Professional Education of MOES has only four staff to deal with all matters related to VET II. The Department is not in charge of licensing and attestation, which are managed and implemented by the State Inspectorate for Licensing and Accreditation under the MOES. Given the Department's limited human and technical resources, a number of key functions are shifted to the VET II schools themselves: curricula, education programmes, and even textbooks.

Qualifications system

At the time of this review, the VET qualification system was based on the following elements:

- General classifier of professions for workers, employees and tariff categories, 2 volumes, for all 3 levels of professional education. This document provides the basis for the list of professions of VET I. The classifier has a very detailed and narrow definition of professions;
- General classifier of occupations, 1998;
- List of professions for VET I, approved in 2003 (booklet published in 2006); and
- Standard duration of areas of study (professions) of VET II, 2003

One serious problem with these tightly defined lists of professions for VET is that they are not updated and revised as often as they should be. They therefore contain many descriptions of professions that are outdated.

In 2008 initial VET approved 17 new vocational standards, which combine modules and learning programmes for short-term training.

The Chamber of Commerce, in co-operation with some donors, is pilot-testing an independent certification of professional competences in a limited number of profiles, based on judgement of external to VET school entities (employers and experts). For now this independent certification concerns only short-term professional courses, and involves a few initial VET schools. One of the problems though faced by this endeavour remains the absence of modern professional standards and outcome based curricula.

Considerable debate, led by expert groups supported by international organisations, is taking place with respect to *qualifications*. For example, the European Training Foundation has played a key role in this area of VET policy, having started in the early 2000s with new conceptual and technical work on occupational standards, and continued since 2004 with a specific project dedicated to support national debate, capacity and methods on a National Qualifications Framework (NQF). The NQF was instrumental in engaging employers in the debate, and in building national capacity in relation to the European Qualifications Framework, learning outcomes, design of functional maps and occupational profiles.

Parallel efforts to reform the qualification system and improve learning outcomes include SAPTE’s strategic programme for VET development (2008-2011); its first priority (modernisation and consolidation of the system) is the introduction of new approaches to training that meet the requirements of the NQF. The new ADB project also includes the development of “professional standards of competence” for the professions targeted by the project.

Adult education and training

Main issues

A growing population, a growing number of young adults with higher education, and a growing number of vulnerable youth dropping out of education require urgent new policy directions for Kyrgyzstan. Training for people with low or no qualifications also needs attention, as does the quality of higher education. While the number of higher education graduates may not have a decisive effect on the pace of economic growth, the existence of large numbers of unskilled people of working age *is* likely to have an effect, as new technologies require a skilled and adaptable work force.

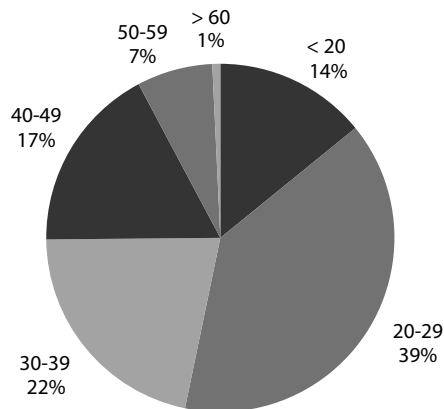
Another concern is access to the labour market for young school leavers. Unemployment rates are highest among young age groups (15-29 years). They represent only 37% of the active population, but over half of the unemployed. This clearly indicates the relative inefficiency of the transition into active life for thousands of young entrants, despite the fact that the majority have completed secondary and even tertiary education (see Figure 8.12).

In secondary VET and higher education – the two sub-systems where most of the labour force entrants come from – the technical fields of study have been gradually losing their share of students. This will affect the “skills mix” in Kyrgyzstan’s labour force, with the balance shifting to areas such as law, management, health and education. Because job opportunities in these fields are still limited in the country’s economy, many of these graduates will sooner or later need re-training or re-qualification.

Mobility across jobs and sectors also requires re-training. In Kyrgyzstan, the transition to a market economy led to a decline in state-owned enterprises and the loss of traditional jobs. Mobility in various forms and areas will remain a permanent challenge for youth and adults, and education and training policy will have to adapt accordingly.

Both education and active labour market policies are connected with life-long learning. Although the dialogue is not always as productive as needed, a sound co-operation has now been established and formalised between two partners: VET-SAPTE, and employment agencies such as the State Migration and Employment Committee (SMEC). The MOES is less involved in this co-operation, as are the secondary VET II institutions that could, theoretically, deliver relevant training for the population groups targeted by Kyrgyzstan's national employment policy.

Figure 8.12. Unemployed, distribution by age groups, 2007



Source: NSC, 2008b.

The labour force

At present, the labour market in Kyrgyzstan has an excess supply of people over the age of 15 with general secondary and basic education, although the economy requires professional skills and qualifications of intermediate and higher level. Access to such skills and qualifications is possible via the formal education system, but also via non-formal education and training, as well as informal learning.

During the transition period, the previous system of adult education and training (also called “continuous education”) declined substantially, and its

services were replaced by numerous non-state providers, often linked to donors or international organisations. New subject areas were introduced (management, human rights, local initiatives, project planning), new ways of teaching (small groups, trainers or facilitators instead of teachers) and new sources of funding (often directly linked with donor projects). Equally important were new ways of organising training, *e.g.* using interactive technologies and modular programmes. But only a few of these providers were sustainable, and even fewer were able to comply with official licensing criteria.

Rarely did these new ways of training engage with the state providers that form the network of formal education and training. Differences in education and training culture, and a certain mistrust still continue to hamper cross-fertilisation between the two. As a result, the state providers continue to offer most of the formal training, but are slow to adopt interactive methods, while non-state providers are more agile and innovative, but weak in systematic training for qualifications and employment. Nevertheless, lifelong education and training requires a wide variety of partnerships – partnerships that will create synergy, multiply resources and create much-needed synergies between formal and non-formal learning.

Law and policy

The Law and other education policy documents recognise the importance of lifelong learning, and adult education policy is based on the principle that education is the bridge between all elements of national and human development: poverty reduction, gender equality, and dissemination of democratic principles. (MOES, Analytical note on the status of the system of adult education in the Kyrgyz Republic and development prospects in the framework of the order of Government, p. 4).

Kyrgyzstan is signatory to international agreements related to adult education and training, and a participant in key international discussion forums. This has helped to draw attention to the importance of adult learning. For example, the International Forum on Education brought Kyrgyzstan into the Education for All (EFA) movement, and the country is now committed to its objectives. In the 2002 follow-up, the Government approved the EFA National Action Plan, which includes a section specifically dedicated to adult education. This action plan is reflected in a number of national development documents, such as the *National Strategy for Poverty Reduction 2003-2005*, the *Country Development Strategy 2007-2010*, and others. Kyrgyzstan also endorsed a number of other international declarations, including:

- The Hamburg Declaration on adult education, 1997;
- Agreements among CIS countries “On co-operation in the field of dissemination of knowledge and of adult education”;

- The Decision “On development of the system of adult education in CIS”, 2003; and
- The “Concept of Development of Adult Education in CIS”, approved by the heads of all CIS governments in May 2006.

Kyrgyzstan is a leading member of the analytical Forum on Education of Central Asia and Kazakhstan. Nationally, the Kyrgyz Association of Adult Education represents the interests of providers and lobbies for more effective policies in favour of the adult education agenda. Its associate members issue certificates recognised by the network of the Association.

However, according to SAPTE and MOES, innovative methods and curricula are not yet integrated into a coherent system that is accessible to all users. Many VET providers that offer courses for adults continue to use training methods that are not suited to these learners, do not offer the kind of active learning that they require, and do not motivate or encourage them. Sustained efforts are needed to build the capacity of State VET providers in appropriate adult education methods, and to disseminate good practice to all licensed providers.

Participation

More than 50 000 adults per year enrol in courses, formal or non-formal. In non-formal training, the most popular subjects are foreign languages, ICT, technical-professional skills, economics and finance, and dressmaking. (MOES, Analytical note on the status of the system of adult education in the Kyrgyz Republic and development prospects in the framework of the order of Government, pp. 9-10). However, since a large number of providers are not registered or licensed, estimates of users and provision remain incomplete.

Financing of adult education and training

For the same reason, it is not easy to determine the sources and scale of funding. In 2007, it was reported that *public* financing of the various sub-sectors of education was as follows:

- 7.5%: pre-school education;
- 64.2%: basic and secondary education;
- 11.4%: others; and
- 16.9%: education for youth and adults within the professional education system (initial, secondary and higher, with respectively: 7.6%, 3.4% and 5.9% of the total).

Yearly per-student spending by sub-sectors, as reported in 2007, was as follows:

- Basic and secondary school: KGS 4 126
- Initial VET: KGS 10 852
- Secondary VET (*tehnikum*): KGS 11 849
- Higher education: KGS 12 569

(MOES, Analytical note on the status of the system of adult education in the Kyrgyz Republic and development prospects in the framework of the order of Government, p. 7)

Programmes of the State Migration and Employment Committee (SMEC)

SMEC is responsible for implementing the employment policy of the Kyrgyzstan Republic. It has been working in its current format, which includes both employment and migration, since 2005. The *Law on Employment Promotion* (adopted 2000, amended in 2002-2005) provides the legal basis for SMEC's work on issues of employment and social protection of the unemployed. SMEC prepares strategic documents and programmes (short and medium-term), for example the "*National Employment Policy of the Population of the Kyrgyz Republic, up to 2010*".

Current thinking in SMEC is that active labour market policy and measures are a priority, and that passive measures will rapidly become a minor element of employment policy. The reasons for this change are the constraints on public finance, but also the need to be more effective. At the time of this review, SMEC was revising its main policy documents accordingly. Training and skills development will play a more prominent role, but this will also mean that the training providers that work with SMEC must modernise their approach and the courses they offer.

SMEC provision

SMEC itself does not provide training; it outsources training through tenders and agreements. SAPTE and its VET I schools are the most important provider for SMEC, in quantitative terms. However, a number of private providers and small centres that function within the premises of public VET schools are better prepared to offer tailored courses, flexibly organised for very small groups, and new training programmes oriented to new professional profiles; SMEC also co-operates with these.

Two-thirds of the registered unemployed are young people aged 16-35 years, many with professional education (higher, secondary and initial). To assist youth with career and study choice, SMEC provides guidance services. Due to lack of resources in the regional committees, these services are mostly concentrated in Bishkek, and thus have limited coverage.

SMEC financing

In 1991 the State Fund for Employment Promotion was established and, in 1993, it was integrated with the newly created Social Fund. From 2005, financing of active and passive labour market programmes is based on different sources such as the State budget, special funds, donors, sponsors, and others.

Active labour market measures include: training, micro-credits, public works and professional guidance. In 2007, 17.3% of the budget allocated for active labour market measures was spent on training of the unemployed. By comparison, public works received a 42.8% share, and micro-credit – 11.4% of this budget. A total of 5 150 unemployed were sent for training in 2007, against 19 932 persons involved in public works, and 1 548 beneficiaries of micro-credits for business projects.

SMEC's involvement in training for the unemployed

By 2008, the number of trainee unemployed persons served by SMEC had grown to more than 6 200, in a wide variety of professions (over 70 profiles). The highest number of trainees was concentrated in the professions of welder (650 persons), driver (530 persons), personal computing (450 persons), computer literacy (434 persons), hairdresser (415 persons), bookkeeper (550 persons), cook (235 persons), operator of sewing machines (470), secretaries (300), massage-cosmetics (150), veterinary services (132), tractor driver (105) and others. These professions have high rates of employment for those completing the training.

Table 8.16. Training organised by SMEC

Year	Sent for training		Employed trained	
	(persons)	Trained (persons)	persons	% employed
2006	5 085	4 880	3 883	80%
2007	5 150	4 563	3 685	81%
2008	6 238	6 202	4 765	77%

Source: SMEC, Information on activity of SMEC on training of unemployed, unpublished, 2009, pg. 4.

Table 8.16 provides an overview of the training programmes for unemployed people offered by SMEC. According to the figures, the effectiveness of the programme is high, with 77-80% of trainees finding employment after training. However, to better assess effectiveness, it would be important to know more about these jobs, their duration, and how long it took for trainees to find them.

Conclusions and recommendations

- What VET system is to be developed? In the studied context it is not redundant to recommend viewing VET as part of the education continuum for youth, as well as an important element for lifelong competence and professional development for security in employment, and for productivity. VET in its diversity is called to respond to personal and professional development needs of various users groups, and the recognition of this wider mandate and possibilities of VET as a system may represent additional leverage in the path of the reform.

The key question, in the context of Kyrgyzstan's scarce resources, is what format of VET is the right basis for labour market as well as education policy? To focus on short skills training, or to offer diversified formats adapted to needs and potential of youth after compulsory education, as well as to youth after secondary and adults with varied training objectives? One that is closer to employment, or one that is closer to academic expectations? One that is well connected with apprenticeships, or one that is more school-based? One that is primarily financed by the State, or increasingly by fees and enterprises? Only serious analysis can resolve these issues, and probably the new system should combine a wide range of schemes and approaches.

What should one learn in VET I programmes? Integrated general knowledge and professional skills? Professional skills and competences for specific occupations? Broad-based competences or sets of narrowly defined technical skills? Is broad-based competence building incompatible with specialised knowledge? Who should provide specialisation to fit the needs of enterprises and organisations? The review team considers that public VET I should focus on lifelong development of citizens.

This means, firstly, that ongoing reforms should not transform VET I into a dead-end path for youth after compulsory education. Workers, employees, self-employed are all, first and foremost, citizens and individuals. The long duration of integrated VET I (secondary and professional) is increasingly criticised for its inefficiency and low appeal for youth, but the reform needs to improve curriculum and

organisation of provision rather than withdraw general knowledge and basic skills that are indispensable for professional competence, as well as for further progression in education and lifelong learning.

Box 8.1. Open questions

In the last quarter of 2009 the reformed structure of the Kyrgyz Government has given a response to one of the question marks underlined in this report: what will be the future position of SAPTE (and of initial VET) in the institutional setting of the country? Indeed, the Ministry of Labour, Employment and Migration emerges with a reinforced mandate, as both SAPTE and SMEC were merged within this Ministry. The hope is that lessons learnt in the last three years will not permit a return to a poor leadership in the VET and employment sector by the Ministry of Labour.

One of the reforms announced by this reformed Ministry, but not yet known in detail, concerns one of the key questions discussed in this report: the quality of integration of general and professional education for lifelong learning for youth. While the team's recommendations underline the need for VET programmes that build on wide professional competencies and key skills to permit further personal and professional lifelong development, the announced reform points to exclusion of general education from VET curricula in initial VET schools. At the time of drafting of this report additional and comprehensive information on possible accompanying measures (such as reform of VET curriculum based on competencies) was not yet available. Hence the question remains, for now, open: will VET schools now cater only for training of adults of various age groups? Will these schools focus on short-term courses (up to 1 year) to train technical skills only? What will be the bridging education pathways considered for youth enrolled after compulsory education in VET schools, to allow these students a continuous education progression?

Introduction of modular learning, a credit system for vocational education, recognition and certification of learning and a national qualifications framework are measures that can support the objective to built vocational pathways that can be shorter, while ensuring individual accumulation of competences and transparent and flexible pathways for progression in education and professional development. Development of these policies will take time, and require substantial expertise and capacity. But currently the authorities tend to overlook these challenges.

- **What strategies for VET system development?** Kyrgyzstan has a good number of reform strategies and concepts in education and training: SAPTE strategy of 2008 (wider, national reference strategy), ADB

strategy of 2009 (to support the ADB project) and the draft concept for development of secondary VET (2009), amongst other valid and newly drafted strategic papers. Most of these documents have been drafted with limited consultation of key stakeholders outside closely related governmental circles, and these are only to a limited extent based on good comprehensive studies and analysis of sector trends, of problems and their causes, of scenarios and their possible effects. In other words it is not clear why this or the other option or package of solutions is preferred. To save scarce resources and time, it would be important to use methods for strategic planning and programming that would allow for objective adoption of the most feasible options for addressing the social and economic needs. Briefly said, there is a need for a progressive shift to evidence based policy making.

The steering and implementation of a sector strategy needs to be backed by reliable monitoring and evaluation, transparent reviews, political support to enforce measures that have social implications, and build on good stakeholders' consultation and information. Rumours about liquidation and mergers of VET schools circulate easily and only structured stakeholder information can avoid risky levels of disenchantment and misunderstanding about the reforms and their benefits.

It is also important to link sector strategies with mid-term macro-economic and expenditure frameworks. The intellectual benefit of strategic planning alone does not justify the effort to draft a document, circulate it for formal consultation and official approval, if the cost of the programme and future funding to support its implementation and monitoring are not considered.

- **Bridges for policy effectiveness:** the two VET levels (I and II) are under different institutional authorities. Many share the opinion that one sole institutional authority would contribute to better interaction between the two systems, and a greater efficiency in reforms, legislative changes and investments. However, in the view of the review team such institutional restructuring may create more risks than immediate benefits, and could disrupt many ongoing positive developments.

What could be truly useful, in the short and medium term, is the formation of *an operational platform for co-operation and co-ordination* of reforms, and of new technical developments that are relevant and important for initial and secondary VET. Such a platform can take more traditional forms, as a VET Council unifying the leading ministries as well as offering new room for sustained social dialogue; or emerge in flexible open formats, with regional extensions, and thematic groups with clear work plans.

The Kyrgyz Republic has a sound national capacity that can be mobilised for this platform; but it is essential to ensure a dialogue with all stakeholders and eventually the wider public interest, which rests with credible outcomes of education and training. In a context of scarce resources the solution is in joining forces to reach out to wider objectives, rather than tearing forces apart securing a tiny territory.

- There seems to be a trend to centralise governance of initial VET, while the contrary seems to be true in secondary VET. Initial VET is essentially state-owned and state funded, while secondary VET is still primarily dependent on state funding but increasingly funded also by other sources (fees paid by individual students, as well as by enterprises). VET I focuses on preparing students for employment, while the latter looks for closer links with higher education. Connections among these disparate components of the VET system are crucial for governance, but usually they are poorly organised, and overlooked in strategies. The review team would like to see **permeability and articulation**, starting with co-ordinated and linked sub-sector strategies and policies. For example, none of the VET strategy documents known to the review team mentions the need for career and vocational guidance and counseling for potential and current users of the VET system.
- **Information and guidance** for youth and adults need to be given much more attention in education and employment policies. Currently only SMEC policy documents refer to guidance and counseling and only SMEC implements guidance programmes, and this is mainly done in Bishkek, where the Information and Counselling Centre is located. More systematic guidance for youth should also be organised at general school level, and through Internet and ICT tools. VET schools could develop tool kits for vocational guidance, and organise seminars and debates with enterprises as part of curricular activities. In the regions, the outreach of SMEC guidance services could be multiplied by operating in partnerships with VET schools, NGOs and community centres, amongst others.
- The issue of a modern and wide **qualifications framework** has been in discussion for several years and some national expertise and experience has now been formed. Development of technical and policy proposals applied to a sector of economic activity (tourism) within experts and employers' groups, supported by international organisations is now gradually followed by the complex phase of transfer of this innovation into the field of policy decisions and future application. Beyond the merits of a newly conceived sector qualifications framework, the review team considers that consistent progression

towards a wider qualifications framework that allows mobility, and smooth transitions between the various VET levels will be particularly relevant a step to minimise the divide between initial and secondary VET, by focusing on learning outcomes rather than on school types. As the leading authorities in question seem to readily recognise this unifying role of a common qualifications framework, the issue will be how to proceed, and make appropriate use of some available international financial and technical resources.

- **VET for diverse skills development needs:** VET can be flexible and diverse and, in the team's view, this is an advantage. VET cannot be rigid and bound to monolithic approaches, since its target population is so diverse: young students, young adults, adults with work experience, older adults, women entering active life, young owners of a plot of land, employees of enterprises, redundant employees, and youngsters who are victims of social inequity or who are without education. In a responsive and humane VET system there is room for individual approaches to learners, ability and willingness to leave no student behind. For many low-achieving students VET can offer a different way to learn, different from the standard programmes offered by general education schools.

There is considerable potential in the existing VET I schools network, and there are large numbers of people with training needs – but the two do not seem to meet. Many rural VET I schools are under-utilised, while adults and young rural workers are looking for appropriate, good quality training to help them cope better with their farms and livestock and make them more productive. Considerable numbers of pupils who leave basic school cannot find a VET school in their *rayon* to acquire relevant skills.

To revitalise the adult learning agenda, sustained efforts will be required to help public VET providers adopt suitable adult education methods, and to support dissemination of good practice and innovation to all licensed providers.

- It is known that innovations in training were built up substantially in the years of transition. But without well-organised knowledge management, sharing and dissemination, much of this effort reaches only a limited number of schools and beneficiaries, or is simply forgotten. **Resource centres** to manage, develop and disseminate good practice can be established on the basis of dynamic VET schools. Such resource schools already exist, but their model, role, activities and funding schemes can be further developed, as a basis for future partial decentralisation of methodology and teaching support.

VET schools that engage in projects and studies, with donors and enterprises should be known and the results of such endeavours shared through the network of VET schools. A modern network and web portal of VET schools to share information on the VET system, performance of all VET schools/colleges, VET courses and qualifications and existing VET resources throughout the country can add substantial transparency and visibility to the VET sector.

- **VET schools management** can benefit from the introduction of Boards with participation of social partners and parents. Boards can create a structured link of the school with the socio-economic environment, and represent stakeholders' interests in strategic and business planning and review of school performance. Under recently-started structural reforms in the network of initial VET schools, it could be possible to study the possibilities and ways to pilot the introduction of Boards.

VET school management is a wide agenda, and SAPTE and MOES need to have the capacity and resources to plan together with the schools a range of reforms that include activity planning and monitoring, and school self-assessment. Gathering of evidence on performance against objectives and indicators, and communication of performance to the wider public are important aspects to be developed. The review team recommends a participative and transparent approach to planning, design and implementation of such reforms, where school teams and management are taken into due consideration, and are assisted.

- Updated and reliable **information on trends of the labour market** and skills needs with geographic and economic sector specificity is indispensable to support options of policy makers, employers, learners, and job seekers. SAPTE seeks adequate approach and solution for this big need. The review team recommends SAPTE and MOES to co-ordinate the search for a practicable mechanism for labour market monitoring with SMEC and employers associations, and to use lessons from other countries. The current system of gathering information on jobs and skills needs could be reformed, in order to offer results that combine the qualitative and quantitative aspects of skills anticipation.
- Finally, **partnership** is one of the relevant keys – private-public and public-public partnerships at macro, intermediate and local levels; partnerships that create synergy of scarce resources, that share responsibility and inputs, and above all, eliminate irrelevant but persistent barriers to reaching common objectives. In practice, managing partnerships among public and non-public organisations is not easy; mutual trust and a common language will have to be built first. It will be important to pursue current efforts for a more dynamic and purposeful collaboration between businesses and VET. The successful

establishment of this collaboration will depend on trust and permanent dialogue and consultation that need to be institutionalised and go beyond the currently existing *ad hoc* and sporadic exchanges.

Capacity of sector or professional associations/councils need to be supported by state policy, through programmes of exchanges and twinning with international peers, training, training partnerships co-funded by donors and state funding (SAPTE, sector ministries). These associations need to be helped to become the recognised partner for VET programmes and VET policy dialogue that all sides wish to have.

“VET for the labour market” is an often-heard statement. But active, dynamic, and consistent social partnerships are needed to link VET with the labour market. At present, only employers are considered relevant social partners, while other partners are simply ignored. The review team formed the impression that that the key interests of students and parents, civic organisations, and employees are underestimated by the state, as well as by task forces and expert groups; and that this lack of dialogue may distort future policy on VET.

Joint projects of VET providers with enterprises and NGOs are another feasible and rewarding approach to link education with economic and social activity in the local context and offer students and teachers the missing links with innovation in VET. These measures have potential for promising outcomes, which is important to break the persisting image of VET as the weakest link in the education system.

Notes

1. This term reflects the terminology of the Kyrgyz system. It is narrower than the international definition of “initial” VET.
2. VET schools of Chui and Talas report to SAVET Central. (Management Scheme of SAVET, approved 28 August 2008 by Government Decree No. 484).
3. Only public pre-schools and public general education schools (basic, secondary) are exempt from licensing.
4. In the course of the political changes of 2010 in the country, SAVET was integrated in the structure of the Ministry of Labour, Employment and Migration.

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Chapter 9

The teaching career and teacher education

Teaching as a career in the Kyrgyz Republic is experiencing major problems which, if not addressed, will undermine other efforts at educational reform. Teacher salaries are low, amounting to about only 60% of the average wage for the country: teaching is an ageing profession and an unattractive career choice for prospective students, and retention of good teachers, especially in subjects such as mathematics, sciences, IT, languages proves to be very difficult. The chapter also discusses teacher training, the quality of which is found to vary greatly. The review team recommends attributing teachers a high priority in the reform agenda, and suggests reform steps including a re-appraisal of teacher training in terms of provision, content, methodology, evaluation and staffing.

Introduction

The quality and character of a country's teaching force is a key determinant of the quality of its education system. There are many inter-connecting constituents which go to form a quality teaching corps. When the teaching career benefits from good social status, attracts intelligent and well-motivated candidates, has good quality initial teacher education supplemented by appropriate continual professional development, is well circumstanced with regard to pedagogic conditions, benefits from satisfactory salaries and career structure – such criteria provide the conditions which promote good professional performance. The OECD comparative study of the teaching career, *Teachers Matter* (2005) stated, “Of those variables which are potentially open to policy influence, factors involving teachers and teaching are the most important influences on student learning. In particular, the broad consensus is that ‘teacher quality’ is the single most important school variable influencing student achievement” (OECD, 2005, p. 26).

As the Kyrgyz Republic seeks to improve the economic, social and cultural life of its society it, quite rightly, identifies educational reform as central to this. Its Country Development Strategy 2007-2010 states, “Education today is the most important indicator and priority direction of public development in the world,” and it sees education as “the most important condition, way of progressive development of human civilisation” (p. 61). Education reform is integral to the future well-being of the state. There are many strands to this education reform agenda but unless there is a comprehensive, co-ordinated policy on improving the teaching career many of the other reforms are unlikely to succeed.

Teaching as a career in the Kyrgyz Republic is experiencing major problems which, cumulatively, point to a crisis situation. Unless the problems are addressed very serious consequences are in the offing which, if they occur, will be very difficult to ameliorate at a later date. Improvements to the teaching career are an underpinning issue upon which the success of other reforms depend. Accordingly, the review team considers that policy on teachers needs to get priority. This chapter seeks to identify and analyse the issues affecting the teaching career and to propose feasible recommendations for action. As will be demonstrated, there are links among many of the facets being examined. It will take time to achieve the recommended policy initiatives, but a crucial aspect should be to establish a holistic policy approach which seeks to bear the various dimensions in mind, albeit that they may not be tackled simultaneously. This chapter deals with teachers in the general school system; vocational teachers are treated in Chapter 8.

Teacher status and remuneration

In conjunction with the economic difficulties which set in during the 1990s, after political independence, the remuneration and conditions of employment of teachers deteriorated significantly. Over the years this has had a very debilitating and demoralising effect on teachers and the image of the career. Despite good percentage increases in salary over recent years, they were on a very low base rate, and have had limited effect (see Figures 2.6 and 2.7 and Table 2.4 in Chapter 2).

Even today teachers' salaries only amount to about 60% of the average wage in the country (Kyrgyz Republic Draft Education Strategy 2011-2020, section 3.2). The very poor salary conditions have been a major cause of the decline in the social status of teaching which has major ramifications for its continuing well-being as a profession.

Teachers form part of the United Tariff Scale (UTS) introduced by the Government in 1993, which prevails for a number of public sector careers. This is a common 23-level salary scale, built on the basis of fixed co-efficients of a government-set basic salary point. A teacher's salary is set at a point on the UTS scale, based on education qualifications, responsibilities, and the salary "Category", established by an individual attestation process.

Four categories apply to teachers and principals – Uncategorised; Second Category; First Category; and Highest Category. Teachers with higher education (over 80%) are placed between salary scale level 6 to 12 (of the 23 levels). Progression through the categories, based on attestation, is time-linked *e.g.* access from Second Category to First Category requires a minimum of 10 years teaching experience, and from First Category to Highest Category requires no less than 15 years experience.

National attestation is a formal process, usually undertaken by teachers on a five yearly basis. Despite the formality of the process, its quality as an assessment process of teachers' pedagogic and associated professional skills is not highly regarded. Once gained, it is difficult for a promotion category to be withdrawn. This may be linked to the very low stakes involved in terms of salary increases, as the salary scale throughout is very flat. Most levels of the UTS scale are less than 10% of the previous level, and only 2% at the top levels, of a salary scale which itself is very low. When teachers reach the Highest Category, at level 12, this is the maximum, and they are stuck at this level for the rest of their teaching careers. This maximum is very much less than what the Kyrgyz government identifies as "the minimal consumption budget." Thus, the dilemma for the teaching career becomes very stark, in that a teacher at his/her top salary scale is not in a position to survive economically, if relying solely on that salary. Teachers can also benefit from a range of extra payments such as marking students' work, supervision of classes and some extra-curricular activities. However, the sums allocated to such duties are very small.

The teachers' contract specifies that teachers of primary grades (1-4) need to teach for a minimum of 16 hours per week, while those for grades 5-11 have a specified minimum of 18 hours per week. About 80% of schools operate two teaching shifts per day, with a further 10% offering three shifts. What happens in practice is that most teachers opt to teach extra hours, many of them teaching two shifts involving 36 hours and, in some cases, teach up to 40 hours per week. Such unacceptably high teaching loads have obvious effects on the quality of teaching, preparation and planning time and, in the long-term, on teacher burn-out. However, the pressure is on teachers to extend their teaching loads so as to earn a living.

Principal teachers can reach level 14 of the UTS scale, and the salaries are linked to the number of pupils enrolled. However, for a teacher at the Highest Category, on level 12, there is little financial incentive to take on the extra responsibilities of school leadership and management. Principals are also allowed to teach up to 12 hours in secondary schools and up to 18 hours in primary schools. Many principal teachers opt to engage in such teaching to supplement their salaries. Such practices are likely to have negative effects on the quality of school leadership.

Legal framework

Provision is made in a number of legislative measures for supports for teachers, but these have not been satisfactorily implemented. Article 32 of the Law on Education (2003) relates to "Social protection of the workers of the Education System". Among other provisions it makes the significant statement, "The initial level of wages and salary rates should be established at the amount not below the level of average wages in the Kyrgyz Republic." However, this has not been achieved. As an incentive to young teachers, it states, "The young teachers arriving for work in rural schools are provided with a lump sum at the amount of ten official salaries for household expenses; the sum is paid from the local budget" (Law on Education). Teachers were also to be entitled to free medical check-ups. Admirable as such statements were, they have been more aspirations than delivered reality. Provisions included in the Law, on the social position of teachers and in the Law on Social Partnership involving support in the form of residences, land, travel costs and utilities such as gas and water for teachers are not generally available, as local authorities state they do not have the financial resources to provide them.

The government and the public of the Kyrgyz Republic are conscious of the problems of poor teacher salaries, and in recent years, impressive percentage increases were made, but these had limited overall impact on the situation. In 2008, an Inter-ministerial Committee on Teacher Salaries was set up but it has not published a combined report.

Role of the teachers' union

The Trade Union of Education and Science Workers (TUESW) is well established within the Kyrgyz Republic. It has 214 000 members of which about 90 000 are categorised as “students”. It operates within a social partnership model. It focuses a good deal of its attention on the legislative framework and contributes to draft legislation. The leader of the union is a member of the Collegium of the Ministry for Education and Science, and union officials sit on many official educational bodies. The handbook of the TUESW states, “Practical work of the Central Committee of the TUESW is based on legislative documents operating in the country” (TUESW, 2007, p. 4). One of its main techniques is to try to keep sustained pressure on the government to ensure the fulfilment of legislative commitments. The union also engages in pilot projects that seek to alleviate the financial problems experienced by the teaching force. While the efforts of the TUESW have yielded some improvements, the harsh reality remains that teaching as a career is in deep trouble. Teacher attitudes towards the union, as expressed to review team members, acknowledged its existence and efforts, but did not reflect enthusiasm or high hopes that its efforts would redress their predicament.

Donor involvement and pilot projects

With the assistance of donor agencies a number of pilot projects in relation to teacher remuneration have been initiated. One of these, the Rural Education Project (REP), financed by the World Bank, incorporated a salary incentive scheme for the teachers and principals involved. It took place in two pilot *oblasts*, Issyk-Kul and Naryn. Initiated in 2005, the project set out to reward teachers for the quality of their classroom practice, their planning and assessment capability, and the progress (not simply the level of achievement) of students in their charge. For school principals the criteria covered leadership and management qualities as well as student progress, and performance. Annual school self-appraisal against these criteria forms the basis for progression through the salary scale, supplementing the reliance on length-of-service and qualifications. The project develops appraisal procedures laying stress on teacher competences, observed classroom teaching, assessment skills in monitoring student progress, and so on, within a whole-school approach.

The REP pilot also provides criteria for the award of two new category levels for the teaching career. One involves a category for demonstrated qualitative school leadership and management, against criteria of good quality international practice. The other category is of the nature of a “master” teacher, where the teacher exhibits outstanding professional skills. The underlying emphasis is on promoting improved quality of the educational experience of students. The project was accompanied by appropriate training seminars for all the staff involved, including many team-work sessions.

The implementation of such a scheme with its emphases on performance management, teacher competences, outputs of the process and skilled leadership roles involved quite a cultural change for participating staff. However, it was reported to the team that teachers warmed to the process and considered that the new performance standards urged them to think and reflect on their work and to engage in more co-operative planning. Teachers also considered that the formative assessment that was used gave greater insight into student progress. The review team considers that such a project has much to contribute to the future development of the system, particularly as it targets the key goal – *improving the quality of the educational experience and achievement of students*.

The MOES is offering another pilot incentive scheme, “Young Teachers Deposit Programme”, designed to attract and retain teachers in rural schools. Teachers in key subjects, and teachers in schools with an over-supply of teachers are assigned to rural schools for a period of three years. Under this scheme incentives of at least KGS 2 000 per month per teacher are deposited in a designated bank for the three-year period. Each teacher receives the accumulated sum, with interest, upon completion of the teaching contract. Certain conditions apply for rural schools to qualify for the scheme. As a targeted scheme, it seems to have been quite effective. The Programme is now extended nationwide and over the past six years it supported 3 600 young teachers, of which 3 000 funded by the state, and 600 by the development partners (ADB and the World Bank).

The government has also launched a per-capita financing system (PCF), on a pilot basis, in the Tokmok and Issyk-Ata regions. Among other features, it incorporates incentives for improved teacher performance. The Ministry of Finance has decided that the per-capita scheme will be extended over coming years (see Chapter 3 for more detail on the PCF). During the drafting of this report the pilot was extended to Chui, Batken and Issyk-Kul *Oblasts*. A desirable outcome would be the blending of the incentives based on teacher performance criteria of other schemes within the per-capita scheme. A key value of such initiatives on teacher salaries is the building up of experience and skills focused on performance criteria, based on the conditions which operate within the Kyrgyz Republic. A great deal can be harvested from the experiential experience of such projects.

To make serious improvement on the salary and conditions of work of teachers it would seem necessary to tackle inherited traditions regarding the teacher contract and pupil-teacher ratios. At present, the specified teacher-pupil contract hours are 16 hours per week at primary level and 18 hours for grades 5-11. These are small by international standards but, of course, they allow for extra teaching for extra pay. In the long-term interests of teachers it might be best to specify a figure of, say, 25 hours per week as the expected

class contract hours for teachers. An appropriate figure could be set for the payment of such teachers, which payment would also encompass payment for correcting homework, attending parent meetings, school planning and so on, as in most other countries. These latter involve qualitative elements of the teacher's work, and are not optional extras in good professional performance.

The great gain for the teacher would be a satisfactory salary linked to a workload which was professionally manageable. At present, many teachers have to teach up to 36 hours per week, not including correction, planning or evaluation work. The existing practice is likely to foster poor quality teaching due to tiredness, lack of preparation time and inadequate teaching materials. While the two-shift teaching framework in schools is the predominant pattern throughout the country and is linked to inadequate provision of school places, this pattern is also linked to a desire to provide more teaching hours to allow teachers earn more. A rigorous analysis of the utilisation of school places could lead to a reduction of this predominant mode of schooling.

Pupil:Teacher Ratio (P:TR)

Another structural feature that should be re-examined is the prevailing pupil:teacher ratio. At present, the national average is about 15:1, which is generous by international standards. There is a large number of teachers, approximately 75 000, but they are paid inadequate salaries.

The review team suggests that consideration should be given to gradually raising the pupil:teacher ratio to 20:1. The balancing provision would be to pay the smaller number of teachers much better, linked to performance criteria, which would be agreed. In straitened economic circumstances, such as exist at present in the Kyrgyz Republic, it would seem to be a more desirable option to go for a smaller, better remunerated teaching force, rather than a very large teaching force who are very poorly paid. The re-structuring of the teachers' contract, with a re-definition of the teacher's role, and salary linked to performance standards would be a progressive way forward towards improving the status and remuneration of teachers.

Teacher recruitment

As is to be expected from the decline in remuneration and social status which set in for the teaching career, teaching has lost a great deal of its attraction for intelligent, ambitious young people. Access to higher education has expanded greatly, but teacher education, as the access route to a career in teaching, has lost its popularity among school leavers. Entrants to higher education who achieve well on entry tests avoid teacher education programmes. Thus, a culture is being established whereby it tends to be students who cannot

gain access to higher-entry courses who end up in teacher education courses, *faute de mieux*. In discussions review team members had with student teachers, it was clearly stated that teacher education was not where most of them wished to be, and that if other opportunities presented themselves, the students would be quick to take them. While understandable in the circumstances, such attitudes indicate a very undesirable foundation and preparedness for a commitment to the demands of the teacher education courses, or to the idealism desirable in prospective teachers.

The relatively low standards of entry into teacher education and the general awareness of associated student attitudes have inter-penetrating effects on the quality and standards of what is achieved. When established teachers and teacher education staff were asked if they would encourage their children to take up teaching as a career it was revealing that the great majority replied in the negative, despite their own declared valuation of their work. In their view, teaching no longer holds out the prospects of a rewarding career.

In an endeavour to improve the supply of teachers, the government awards the large majority of higher education scholarships to student teachers who sign a contractual agreement to spend three years in teaching, subsequent to graduation. However, of the graduates who benefit from such scholarships (“budget” students), only about half of them fulfil the contract requirements. A large number of students change out of teacher education courses during their period in higher education. Of the students who pay their own fees (contract students) and attain teacher education qualifications only a small minority, calculated in 2009, at about 20%, actually take up a teaching career after they graduate. (Kyrgyz Republic draft *Education Development Strategy 2011-2020*, section 3.2).

Teacher retention

As well as the problems relating to recruitment and entry to the teaching career, there are also significant problems regarding the retention of teachers, within the education system. The percentage of drop-out during the first year of teaching is as high as 20% (Kyrgyz Republic, draft *Education Development Strategy 2011-2020*, section 3.2). The financial problems for teachers during the first five years, before the first attestation takes place, are particularly acute. The support for getting established, such as subsidies for housing, which are contained in legislation, are only rarely provided. Depending on the subject in which the teacher has specialised, there may be a much better remunerated position outside of teaching. This, no doubt, is a contributory factor to the significant teacher shortages in subjects such as mathematics, sciences, information technology (IT) and languages. The teacher shortage is calculated by agencies at different levels, but could be as

high as 5 000 teachers. The shortage is most acute in remote rural schools, where domiciliary and transport arrangements are not attractive to teachers. In many rural schools subjects are taught by teachers who have not studied these subjects at higher education level. The challenges facing teacher supply for rural schools have elicited the promising pilot projects mentioned earlier in this Chapter.

The review team also noted a worthwhile initiative taken, in March 2009, by the Bishkek State University involving a tripartite arrangement by the local authorities, the university and the students, whereby 1 000 students would be supported to obtain teacher education qualifications through a specially designed course, with a commitment to stay and work in rural schools (interviews with Bishkek State University staff, 22 April 2009.) It will be interesting to see if this initiative will prove successful, in due course.

Another aspect of the teacher retention problem is the trend whereby ambitious, energetic teachers emigrate to other countries such as Kazakhstan and Russia, where they can obtain better salaries and living and working conditions. This haemorrhage of talent is a loss to the Kyrgyz Republic on two counts. It is a loss of able teachers at a time of teacher shortage; but, it is also a loss to Kyrgyzstan of the resource and effort that went into the training of such teachers.

The teaching force: current status

The composition of the current teaching force has two striking features. One is shared by international experience and that is the strong preponderance of females within the teaching force, comprising over 80% of teachers. The other relates to the ageing of the teaching force.

As in any education system, it would be desirable to have a better male-female balance in the teaching force. It is difficult to achieve this, particularly when the teaching force enjoys low public esteem and a very poor salary structure.

Almost 60% (57.4%) of the teaching force is over 37 years old, 36.4% have been teaching 19 years and more (National Statistics: Education and Science, 2008, Table 8.19). Most of the current teaching force were educated and trained under the previous Soviet system. As has been noted earlier, teachers reach their maximum salary after 15 years; thereafter it is a flat salary with no further increments. Despite this lack of monetary incentive, older teachers tend to stay on in teaching. In focus group discussion with teachers, the review team was struck by the sense of commitment and love of the work expressed by older teachers. However, teachers were very conscious that the salary system and conditions of work are not commensurate with their needs or expectations.

Teachers often stated that it was a sense of “patriotism” which sustained them, considering their work to be of national importance. This is a valuable asset for the society, but it should not be taken advantage of. If the current problems affecting recruitment are not addressed, then the lack of “new blood” with high motivation and professional calibre signals serious problems ahead for the teaching profession in the Kyrgyz Republic.

The official retirement ages for teachers are 58 for women and 63 for men. However, the pension rate is very low at between 20 and 25% of the low salaries at retirement age. Teachers or principals are not compelled to retire on reaching official retirement ages, and with such inadequate pensions many tend to carry on teaching, sometimes into quite advanced ages. While their experience may be of value at this time, it may be counter-balanced by a lack of energy, unfamiliarity with new forms of pedagogy and habituation in outdated practices. While the age balance of the teaching profession requires attention, the increased entry of poorly qualified and poorly motivated recruits to the profession is not the way to resolve it. Time is not on the side of the Kyrgyz Republic in addressing the issue of establishing a high quality teaching profession.

Teacher education: pre-service (initial) teacher education (training pedagogical cadres with higher and secondary professional education)

The provision of pre-service teacher education in the Kyrgyz Republic is very loosely organised, is diversified over many institutions, and varies greatly in quality. The report of the National Statistical Committee for 2008 lists 51 independent higher education institutions, with a further 53 divisions associated with them, making a grand total of 104 agencies which graduated young teachers during the years 2005-2007 (Table 8.25). Most of them graduated very small numbers, but the extraordinary diversity of the institutions involved is very unusual by international standards for a population of a little over 5 million people.

Another unusual feature is the very high proportion of distance learning students among graduates of teacher training faculties, at 61% (draft *Education Development Strategy 2011-2020 of the Kyrgyz Republic*, 2009). Distance education student teachers benefit only from limited direct contact with the staff of the teacher education institutions. As has been noted earlier, the entry standards for teacher education courses are lower than for most other faculties. Despite this, there is a very low failure rate at the termination of courses for those who persevere to the end.

There are two main types of teacher education provision for those who attend on a full-time basis. One could be termed the “pedagogical college” route, and the other the “university” route. The college focuses on the preparation of

primary and pre-school teachers. The college course varies in relation to the category of students who enter. Those who enter from the 9th grade of school (at about age 15) usually take a 3 year and 10 month course. Those who enter from 11th grade follow a course of 2 years and 10 months duration. The review team was informed that while the colleges had to do a lot of foundation work with the 9th graders, the staff found them generally better motivated, while many of the 11th graders were only there because they did not have the results to qualify for entry to university. Success at the college level provides an access route into higher education which some students are keen to grasp, rather than enter primary teaching. The review team found evidence of committed work by ageing staff members in the colleges in seeking to equip their students with the course content and pedagogical skills required for teaching. Nevertheless, they faced significant difficulties, including inadequacies of resources and equipment, in the formation of teachers for the demands of modern teaching.

The predominant model of teacher training within the universities is through the 5-year specialist diploma. In this model, students begin their study of education as a discipline in the third year. In the fourth year they visit schools for an observation period of teaching practice. In their final year they usually spend a period of four months on their own practice of teaching. This is supervised by university staff who are liable for their own travel expenses. If the teaching practice takes place in a school at a far remove from the university little or no supervision may take place.

A very significant feature of this model is that students only take one academic subject for study, *e.g.* mathematics, or geography. They engage in the methodology of teaching their subject and in the educational disciplines, *e.g.* psychology, sociology of education. However, a wasteful pattern emerges whereby scholars in the education disciplines give their lectures to each academic subject group as an entity, hence involving a great deal of duplication as they relate to different groups of students studying a range of academic subjects. A further problem arises in that both staff and students realise that many of the students will not enter teaching on graduation. Such a circumstance tends to have a backwash effect of demotivation in that it is hard to sustain staffs' best efforts in the formation of teachers if it is evident that the students will not take up the career.

Curriculum

An analysis of courses revealed a heavy emphasis on subject content, delivered predominantly through the lecture method. Students tend to have very heavy class-contact hours, at a minimum 24 hours per week, but often much more than that. Teaching hours for staff also tend to be very heavy. The formal requirement is that lecturers have 850 contract hours per annum,

doctors 800 hours and professors 750 hours. This pattern of engagement is based on an older model which prioritised direct teaching and student contact, covering a large range of material in a “top-down” pedagogic process. This tends to crowd-out the teacher’s time, not allowing enough time for research, reflection and innovation. Furthermore, it underplays the necessity of time for students to engage in reading, projects, planning, and personal exploration of ideas and establishing a self-reflective cast of mind as a life-long learner.

Attestation

As with other areas of higher education, teacher education comes under the State’s licensing and attestation processes. However, severe shortcomings exist in the operation of current practice. There is a need for a more independent licensing and accreditation process which would apply rigorous standards aimed at ensuring demonstrable quality assurance in the agencies offering teacher education and in the courses provided.

Over recent years, the state has taken moves to discourage the extent of teacher education through the distance education mode, and this should be more intensified. While pre-service teacher education through distance education can serve a purpose in helping to secure a teacher supply for remote areas, in the past it has been employed far too much.

Efforts need to be made to increase the standard of student entry to teacher education courses which, at present, tend towards the lowest for entry to higher education. Controls need to be tightened on contracted budgeted student teachers to fulfil their commitment to engage in teaching following graduation, for at least the specified three years. At present, student teachers are the main beneficiaries of state scholarships to engage in higher education, but they can be quite cavalier regarding their responsibilities which is a loss to the teaching force, but may also have deprived other very worthy students from a higher education scholarship. As is argued in Chapter 10 on Higher Education, the policy on scholarship needs to be examined, and the large proportion allocated to teacher education students may need to be revised downwards. It is also questionable that pupils from 9th grade of schooling, at age 15, should be recruited into teacher education colleges. It would be best if their formal general education were completed in the schools and they then compete for entry to courses, and thus be better equipped for the demands of teacher education.

The review team considers that with regard to teacher education the Kyrgyz Republic should move towards a different framework for teacher education at university level. A four year Bachelor of Education degree should form the main pre-service teacher education programme. This concurrent degree programme of academic subjects, educational disciplines

and pedagogics would be very appropriate for entry to primary teaching and many aspects of secondary teaching.

There could also be a remodelling of the current five year specialist diploma, to allow for a concurrent model of teacher education involving a degree course in academic subjects, followed by a year devoted exclusively to the educational disciplines and teaching methodologies.

Universities should also provide post-graduate diploma programme and teach Masters in Education programmes for experienced teachers with a special emphasis on themes such as school leadership, curriculum and assessment, school guidance and counselling.

Within the newly structured concurrent and consecutive teacher education courses it would be desirable to reduce the direct class-contact hours for both students and teachers. 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. Provision should be made for small-group teaching of a tutorial type to facilitate students in establishing a sense of mastery over the content and skills being taught. More attention needs to be given to developing students' competence in relation to curriculum studies and pupil assessment skills, particularly formative assessment.

Even though many schools are inadequately provided with information technology equipment, it is important that student teachers are trained to integrate such equipment into their repertoire of teaching skills. They need to develop an ease and competence in the use of such equipment. Accordingly, it is important that teacher training agencies are well equipped with such materials. The criteria for granting licences and accreditation to teacher training institutions need to specify the availability of ICT equipment and the availability of appropriate books and journals in their library holdings.

A more rigorous approach to licensing and accreditation should lead to a reduction in the number of teacher education institutions, and to a higher quality of those remaining. In this context also, it is desirable that the education departments of universities are granted higher status within the institutions as part of a general national effort to promote greater quality of teacher education, and re-building the quality and status of the teaching profession.

At present, many university leaders complain of the poor quality of the entrants who graduate from the schools. It is important for them to see the connection which exists between their modes of teacher education and the quality of the work that takes place in the schools. It is in the universities' own interest to improve the quality of the teacher education they provide. As part of this effort, it is important to try to ensure the availability of "new blood" staff within staff complements who, at present, tend to be old and a

long-time removed from the realities of the classroom. More emphasis also needs to be given to staff development programmes of an appropriate type for long-established education department staff.

Teaching practice

In many teacher education departments efforts need to be made to improve the practical experience of the students. In particular, it is important that teaching practice is organised in a sequential, developmental way so that students can build their competence and confidence over a sequence of teaching experiences at different stages of their teacher education course. Observation and initial teaching experience should not be postponed and held as a large block at the later stage of the teacher education course. Teacher education staff should be available to assist in students' preparation for teaching practice, for regular and structured supervision of the practice, and for formative assessment and feedback on the practice. Supervisors should be reimbursed their expenses for the conduct of supervision. Regardless of the location of the practicing school, student teachers have the right to benefit from expert supervision.

While some universities and colleges have built up good relationships with teachers in the schools to give support and guidance to student teachers, this is by no means universal. In a system where teachers are under so much pressure to teach extra hours to earn a living, it is quite an imposition on them to give the time required to support trainee teachers. Even if this support cannot be paid for, it is desirable that such teachers receive training / guidance from teacher education staff, and that their contributions are acknowledged and recorded.

Teacher education: In-service teacher education (continuing professional development)

The provision of periodic in-service education for teachers was an established feature of teachers' lives during the Soviet era. In subsequent years, this became much more sporadic. Nevertheless, there is a general acceptance of the need for more structured provision of in-service teacher education of a type suitable to modern needs and conditions.

In recent times, a significant initiative was undertaken, with the aid of the Asian Development Bank, to improve the resources at the National Teacher Training Institute (NTTI), at the KAE, and in the seven Teacher Training Institutes (TTIs) in the *oblasts*. Computer equipment, language labs and other teaching and learning materials were provided (ADB, 2005, p. 12). An effort at co-ordinating the provision of in-service courses was also introduced whereby the NTTI, at the KAE, was given a steering role for such training.

Staff of the TTIs attended courses at the NTTI, and the NTTI steers the kind of courses provided at the regional TTIs. However, the implementation of this policy has not been without its difficulties. There is evidence of tension between staffs of the TTIs and the role of the NTTI. Staff have recorded dissatisfaction at the alleged over-theoretical approach of courses provided by the NTTI, and considered that the National Institute is too prescriptive regarding the work of the *oblast* TTIs.

The staffing of the Teacher Training Institutes is a cause of some concern. The salaries tend to be very poor, sometimes less than the pay available to the teachers to whom they give the courses. Review team members were informed of situations where there were no applicants for vacant positions.

On the other hand, there is a tendency to appoint staff to the Institutes as permanent, life-career positions. While experience in in-service work is important, the disadvantage of this process is that as staff grow older they become further removed from the contemporary reality of classroom-life and current curricular and pedagogic trends and problems. In one of the Institutes visited by members of the review team many of the full time staff members were a long-time removed from ordinary teaching; in one case a staff member had been teaching at the Institute for forty years. In another Institute the average age of staff members was given as 53 years, with some staff over 70 years old. As is the case with teachers, some staff at the Institutes can continue teaching there after formal retirement age.

It would seem to be a better policy for the future to make fewer permanent appointments to the Institutes, and to pay those so appointed a salary more in line with the profile such positions should reflect. Full-time staff could be more supplemented by contract and part-time appointments of energetic personnel with a proven track-record of knowledge, expertise and skills in the areas of teaching being addressed in the courses. Such skilled course contributors should be rewarded with fees that acknowledge their expertise. The accreditation of the programmes and courses provided by the NTTI and TTIs should be conducted by an independent accrediting agency.

In-service provision and participation

Despite consultation which takes place with *rayon* education staff, there is a tendency for the courses to be provider-driven, rather than needs-driven. A more structured approach to ascertaining the views of school principals and teachers could help the targeting of courses more close to the needs they identify. It is also important that courses are designed to be inter-active, with the engaged involvement of the participants in workshop-style provision. The current system where participants evaluate courses by filling out questionnaires could be easily extended to solicit the types of in-service they would

value. The input of practitioners to course design and planning can have many benefits. While teacher replies to course evaluation questionnaires are useful, it would be desirable if a form of evaluation could be devised which would focus on what impact teacher participation or in-service courses may have in the daily work of the school. While it may be difficult to obtain, such a feedback loop could be very valuable for in-service providers.

Attendance at in-service teacher education is recorded for teacher attestation purposes, on the five-yearly cycle. This involves a strong inducement for teachers to undergo such courses, but it may not involve whole-hearted commitment to the undertaking, and some teachers attend by way of “going through the motions”. This is likely to be particularly the case if what is dealt with, and the way it is dealt with, are not to the liking of the teacher. An impediment to teacher participation is that the cost of travel to attend courses is usually at the personal expense of the teacher. While provision is made for local authorities to reimburse teachers for such expenses, this is met more often by omission than observance.

While staff in TTIs travel out to the regions to give short courses in August and January, it is accepted that schools in the most remote regions, who may need most assistance, receive least. In general, it would be beneficial if more emphasis was given to school-based in-service training, whereby individual schools, or clusters of small schools could benefit from courses attuned to their specific school plans and local needs. However, this is time consuming of personnel, and the current structure of schooling with 80% of schools working in shifts does not facilitate it.

The education departments of higher education institutions tend not to engage much in the provision of in-service teacher education. This is a loss, in that it would provide a good outlet for their research into teaching and the education system. It would also enrich their work with pre-service teacher education through the encounters and dialogue they would have with experienced teachers. It could also help to foster co-operative relationships with schools where pre-service students are placed on teaching practice. In a particular way, higher education institutions which are licensed for teacher education should move to provide post-graduate diplomas and taught Master of Education courses for experienced teachers. They should include specialist work in areas crucial for the contemporary schooling system. The building up of a cadre of experienced teachers with expertise in areas such as school leadership, curriculum and assessment, inclusive education, guidance counselling, would be of great value to the system.

Recommendations

Context

The Kyrgyz Republic has achieved well in the quantificatory provision of education for its people. The key issue for the future is to try to improve the *quality* of the education provided, at all levels. When the foundations of a system have deteriorated or been neglected, then there is a danger of the whole edifice being imperilled. The quality of the education system into the future will depend a great deal on improving the quality, self-image and commitment of the teaching profession. As previous sections have shown, many indicators exist which demonstrate a range of weaknesses affecting the teaching career. One of the great challenges that faces the country is the re-building of its teaching profession into one where the quality of its work is promoted in a sustained way by public policy. Teaching needs to be transformed into a career which attracts bright, motivated students, who, on graduation, benefit from conditions of work which allow them to deliver a high quality education service for which they are properly remunerated and for which they win public respect.

The re-building process is not a short-term undertaking. It will require a strategic commitment on the part of the government, working with the social partners. In particular, it will require a consistency of policy and sustained commitment, regardless of changes in the political administration. One of the core issues which has given rise to the current malaise is the paucity of the remuneration of teachers relative to other similarly qualified professionals. This has to be the corner-stone on which the re-building process is based. When such a central feature is weak it gives rise to a circularity of effect whereby many interconnected features are loosened and weakened, giving rise to the many debilitating features, outlined above.

One of the significant assets the government can call on in setting out a remediating policy and process is the keen interest in education by parents and the general public. This is evident in high participation and attendance rates for schools, the efforts parents will go to in securing some pre-school education, and the fees they will pay, often at great sacrifice to themselves, to secure higher education for their children.

Regrettably, their interest and support are not always repaid by the quality of the education their offspring receive. Another reason for serious action on teacher quality is to avoid the disillusion which may set in among parents about the poor standards of the education provided. Taking pre-emptive action to retain confidence in the system is a better approach than trying to repair the damage when public confidence has been lost, and disillusion or apathy take over.

Specific recommendations

- The review team considers that the time is ripe for the government to prepare a comprehensive co-ordinated policy on the teaching career. The policy would need to address a range of relevant measures, but teacher remuneration should be a core issue. The policy should set forth all the relevant issues affecting the teaching career at this time, with the many inter-connections which exist between them. As a prelude to finalising policy the government should prepare a position paper, or a Green Paper, which analyses the situation and sets forth proposals for solution. This paper would form the basis for discussion with key stakeholders in the system. The discussions should yield useful insights for the finalising of policy.
- Every effort should be made to ensure that existing legislative measures in relation to teacher remuneration and conditions of service are implemented by central government and local authorities.
- The teaching career should be re-structured resulting in a smaller teaching force, but a better paid one. Among the changes ought to be a raising of the minimum teaching hours per week to 25 hours, which would include correcting homework and pupil assessment, in line with a new statement on the teachers' work profile. Furthermore, the current average pupil:teacher ratio is very generous by relevant comparative standards and should be increased to about 20:1.
- A co-ordinated evaluation of the series of pilot initiatives on teacher remuneration, which the Kyrgyz Republic has engaged with over recent years, should be conducted, with a view to mainstreaming their most valuable features. To underpin this, the government needs to ensure a shift in budgetary resources so that a reasonable, incremental salary for teachers, can be devised, linked to performance criteria.
- The quality of school leadership is central to schooling reform efforts, and the differential in the remuneration of school principals' salary is not commensurate with the responsibilities which need to be exercised. As well as improved training for the position, principal teachers should be facilitated to devote the greater part of their time to school leadership functions.
- Current pension arrangements should be examined with a view to facilitating teachers who wish to retire after a career in teaching and to do so with dignity.
- The licensing and accreditation of teacher education institutions needs to be conducted by an independent agency and be operated in a more rigorous manner in relation to quality assurance. There is a great deal

of scope for the rationalisation of such agencies, and there is a need to demonstrate that those retained are fit for purpose in providing high quality teacher education in line with modern requirements.

- The government should intensify its policy in discouraging the provision of pre-service teacher education by distance education.
- The review team recommends the gradual introduction of a new framework for teacher education. This would take two forms. One would be a concurrent Bachelor of Education Degree (B.Ed.) Course in which academic studies and studies in the theory and practice of education would be conducted in a concurrent manner over a four-year course. Provision should also be made for a consecutive course whereby student teachers would undergo a degree course with two academic subjects, and following graduation would undertake a full-time course specialising on the education disciplines and the practice of teaching, on lines recommended in this chapter.
- Teacher education departments in universities should be regarded as a central feature of the university, and they should provide post-graduate diplomas and taught masters degrees for in-service teachers, with areas of specialism required by the school system.
- Entry standards to teacher education should be raised and tighter controls established for student teachers benefiting from state scholarships to commit themselves to a career in teaching, for a minimum period of at least three years.
- The Teacher Training Institutes (TTIs) should be subject to periodic quality assurance evaluation and their staffing arrangements should be changed.
- In-service courses should be close to the needs of schools and teachers, and more emphasis on school-based in-service training is desirable. In-service courses should be subject to periodic evaluation.
- In conjunction with a serious policy approach to the teaching career, there should be a structured and sustained public campaign mounted through the media and other outlets, which would emphasise the value and importance of the teachers' role in society.

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Chapter 10

Higher education and research

Since 1992, higher education in the Kyrgyz Republic has gone through profound changes. Student numbers have increased massively (from 10% to almost 50% of their age cohorts) with almost half of them studying in some form of distance or part-time arrangements. Public Higher Education Institutions (HEIs) have become hugely dependent on private fees. Although the great majority of students attend public HEIs, less than 20% receive state aid, a large proportion of which is earmarked for teacher training. The absence of a strategy for the development of the sector has meant that there has been no evolution of appropriate quality assurance or of accountability mechanisms for HEIs. Science and research activities are spread among a myriad of small institutes run by the Academy of Science and the line Ministries or within the HEIs, thus fatally dissipating the very small amount of funding available for research. The chapter briefly describes the system, raises some critical issues and suggests policy options for discussion on what kind of system is appropriate at a time when the country urgently needs to improve its competitiveness through the availability of well educated human capital.

The higher education system

The Kyrgyz Republic has a very large network of state and regional public and private universities, academies, research institutions and colleges (Table 10.1). Many public HEIs have regional branches and other institutions, including colleges attached. For instance, by 2005/6, the main institutions had 50 “structural subdivisions”, 27 institution branches and 10 branches of foreign universities, effectively bringing the total number of institutions to considerably more than the 51 in Table 10.1. (*Education and Science in the Kyrgyz Republic 2008*, Table 11.4, p. 124). In addition to the network of 13 public institutions, there are 19 private institutions.

Table 10.1. Higher education institutions by types of education

	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009
Total number of educational institutions^a	49	51	47	49	50
Number of students (persons)	218 273	231 095	236 929	250 460	243 028
of which students of the following departments:					
• full-time	117 153	123 854	122 510	132 077	129 622
• evening	1 806	1 890	2 052	1 373	1 570
• part-time	99 314	105 351	112 367	117 010	111 836
• of all institutions of higher education:					
private HPE colleges	16	18	15	16	19
Number of students (persons)	15 806	17 476	20 803	24 883	25 625
of which students of the following departments:					
• full-time	7 933	8 374	10 302	12 342	13 228
• evening	412	382	127	79	0
• part-time	7 461	8 720	10 374	12 462	12 397
• public HPE colleges	33	33	32	33	31
Number of students (persons)	202 467	213 619	216 126	225 577	217 403
of which students of the following departments:					
• full-time	109 220	115 480	112 208	119 735	116 394
• evening	1 394	1 508	1 925	1 294	1 570
• part-time	91 853	96 631	101 993	104 548	99 439

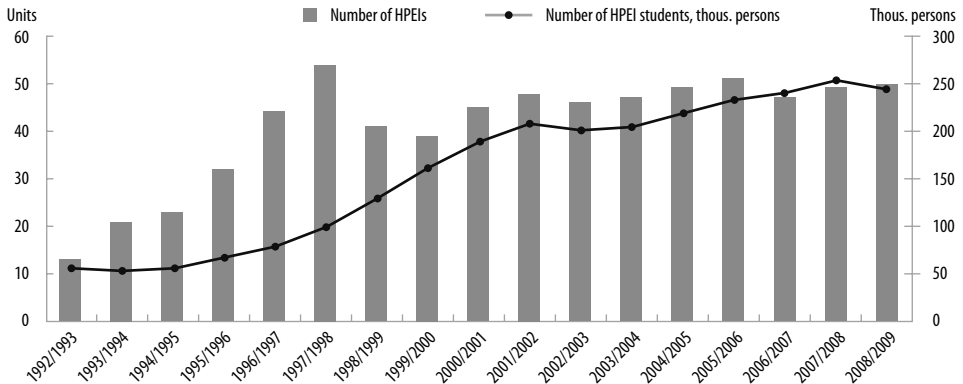
Note: a. Parent higher professional education (HPE) colleges.

Source: Kyrgyz Republic: National Statistical Committee. 2009.

The current total student enrolment in 2008/9 in all HEIs was 243 000, nearly 90% of whom were in the 31 state-financed HEIs giving an average size of 7 000 students. Several of the larger State Universities have much greater numbers of students and, conversely, there are many very small institutions. The 19 private colleges, 11 of which are in Bishkek, have an average size of 1 350 students, and are primarily oriented towards commercial occupations; 40% of their enrolment is in economics, 9.3% in management, and 10.4% in law. 8.6% of private colleges offer education courses, compared with 21.5% in public colleges. Many private institutions were established by staff from public HEIs.

Since 1992, enrolments in higher education have increased from 10% in 1992/93 to approximately 48% of the age cohort in 2006/7. Approximately 75% of Grade 11 students go on to tertiary education (review team calculations). However, in 2008/9, there was a considerable drop in new admissions to public HEIs, an issue which is further discussed below. Enrolments in private HEIs continued to rise in 2008/9. A very large proportion (46%) of the total enrolment is in part-time education, most of which may be classified as distance education.

Figure 10.1. Number and enrolment in higher education institutions



Source: Kyrgyz Republic: National Statistical Committee, 2009.

On a summary level, growth in the numbers of university students in recent years has tapered off somewhat, and except for drops in the proportion studying law and education, there would appear to be a fairly stable distribution among major subjects of study.

However, when one looks at year-to-year changes in admissions into each subject the impression of overall stability changes. Having risen remarkably

in 2002-2004 before levelling off, new admissions fell sharply in 2006/7 and, having then recovered slightly, fell again in 2008/9. A small proportion of this decline may be due to a demographic shift. The population aged 15-19 is expected to fall from 591 000 in 2005 to 580 000 in 2010, and to fall even more rapidly in the next ten years (United Nations Secretariat, World Population Prospects: The 2008 Revision), but this cannot be the main cause of the 25% drop in admission over four years. The review team was informed that one cause for the decline is the reform associated with the introduction of the Bologna process resulting in modifications to course programmes. This might have led students, who would previously have gone to university, to opt for secondary vocational courses whose admissions have continued to rise. (*Education and Science in the Kyrgyz Republic*, Table 10.13 and Figure 8.2 in Chapter 8). However, the team was unable to verify this hypothesis or to speculate about its underlying causes.

Accompanying the fall in total numbers, there have been both year to year fluctuations in the subject allocation of new students, and long term shifts. The following table and accompanying figure show the relative movements of the different subject categories. In addition to the drop in education and law already mentioned, intakes into faculties of agriculture (understandably) and natural sciences (less so) have also fallen sharply.

Table 10.2. Higher education students by academic major, 2002/3-2008/9
(as of the beginning of the academic year)

	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009
Total (thousands)	199.1	203.0	218.3	231.1	236.9	250.5	243.0
Percent majoring in:							
Natural sciences	4.6	4.8	5.2	4.6	4.0	4.8	3.7
Law	13.1	12.4	6.6	5.5	4.8	4.5	7.8
Economics	18.8	18.5	16.0	19.4	18.9	20.0	19.0
Business	3.4	4.4	4.4	4.8	4.2	4.0	6.1
Other humanities	13.4	13.7	18.3	16.3	17.6	18.3	17.4
Education	25.0	24.0	37.7	36.1	37.6	34.9	20.1
Healthcare	2.7	2.7	2.6	2.9	2.7	2.7	3.6
Technical sciences	17.3	17.6	7.7	8.3	7.9	7.9	18.5
Agricultural sciences	1.1	1.1	0.4	0.4	0.5	0.5	1.0
Services	0.4	0.4	0.7	0.7	0.6	0.8	0.7
Interdisciplinary	0.4	0.4	0.4	1.1	1.2	1.6	2.1

Source: Calculations based on NSC (2008).

Table 10.3. **Admission of students by subjects**

	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009
Total	36 165	48 887	62 861	63 263	53 867	55 412	46 210
Natural sciences	1 635	2 600	2 850	2 372	2 109	2 403	1 445
Law	4 339	4 798	5 551	4 906	3 581	3 885	3 725
Economics	6 569	8 582	10 462	11 481	8 740	9 848	9 143
Business	1 339	2 152	2 553	3 221	2 624	2 313	2 914
Other humanities	5 436	8 488	10 560	10 727	10 702	10 865	7 286
Education	8 868	10 428	17 148	15 244	12 763	11 175	7 094
Healthcare	919	1 264	1 643	2 044	1 327	1 525	1 955
Technical sciences	5 985	9 319	10 591	11 225	10 210	10 693	8 766
Agricultural sciences	555	546	561	629	555	633	467
Services	158	238	328	290	247	551	401
Interdisciplinary	362	472	614	1 124	1 009	1 521	3 014

Source: Calculations based on NSC(2008).

Table 10.4. **Relative change in admissions, by subject, 2002/3-2008/9**

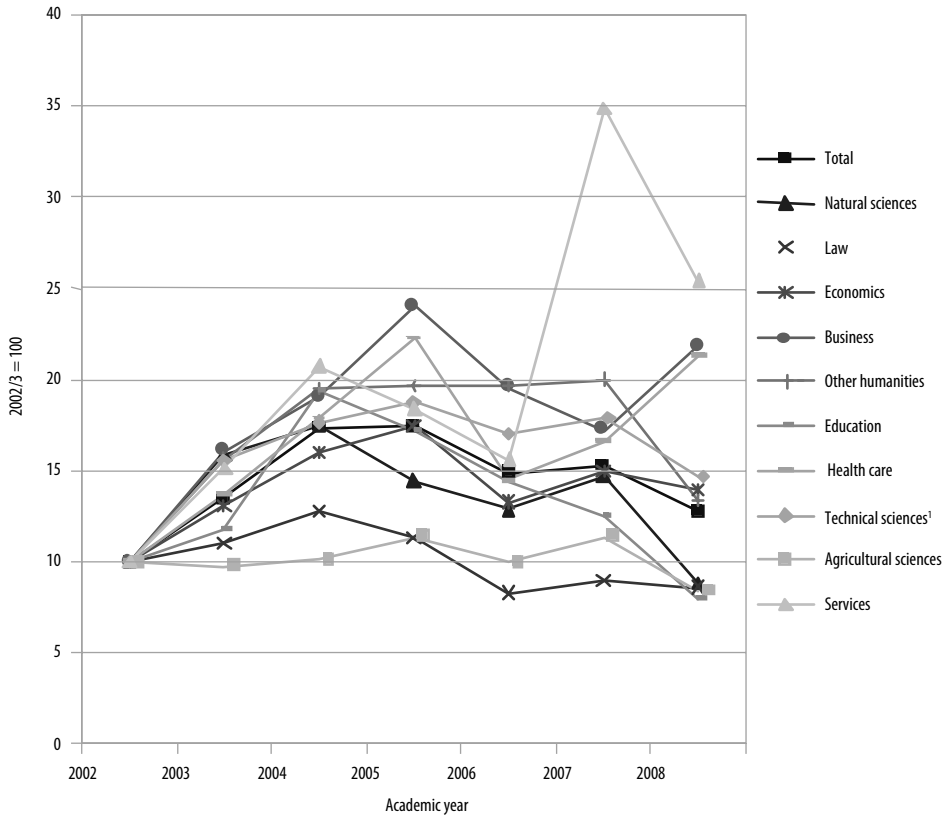
	2002/2003		2003/2004		2004/2005		2005/2006		2006/2007	
Total	100	135	174	175	149	153	128			
Natural sciences	100	159	174	145	129	147	88			
Law	100	111	128	113	83	90	86			
Economics	100	131	159	175	133	150	139			
Business	100	161	191	241	196	173	218			
Other humanities	100	156	194	197	197	200	134			
Education	100	118	193	172	144	126	80			
Health care	100	138	179	222	144	166	213			
Technical sciences	100	156	177	188	171	179	146			
Agricultural science	100	98	101	113	100	114	84			
Services	100	151	208	184	156	349	254			
Interdisciplinary	100	130	170	310	279	420	833			

Note: “Interdisciplinary” admissions, which have recently increased very rapidly indeed, but still remain a relatively small proportion of enrolled students, are omitted from the chart to permit a clearer presentation of the other subjects.

Source: Calculations based on *Education and Science in the Kyrgyz Republic, 2008*.

These shifts in enrolment patterns represent an opportunity for the MOES to review the size of the sector with its multiplicity of small and often weak institutions and to begin to introduce and implement further strategic and policy reforms.

Figure 10.2. Admissions by subject area



Note: 1. Technical sciences include engineering and computer sciences.

Interdisciplinary” admissions, which have recently increased very rapidly indeed, but still remain a relatively small proportion of enrolled students, are omitted from the chart to permit a clearer presentation of the other subjects.

Source: Calculations based on NSC (2008).

Graduation rates

Of the graduates in 2008, 7.3% had the newer Bachelors' degrees, and 2.2% had Masters' degrees. Approximately 90% were in a traditional degree course of five years, which is why in Table 10.5 2008 graduations have been compared with 2003 admissions. Since there are many reasons why students might delay or advance the completion of their degrees, this table can only give a broad indication of graduation and dropout rates. Based on available data, it is not possible to make further judgements about the efficiency of the system.

The rise in the number of students in “interdisciplinary” courses (though still remaining only a relatively small proportion of the total) is a reminder that students may also have switched their major subjects. It is likely that the apparently high retention of students in business and courses classified as “services” may partially reflect students switching to these subject areas.

A fairly clear pattern emerges. Law, economics, education and health care had similar “retention rates” of 70-75%. Natural science, “technical sciences” (e.g. engineering and computer science) and agricultural graduates were a significantly lower proportion (53-56%) of earlier admissions. A slightly lower percentage prevailed in humanities other than law, economics and business (which in OECD countries are generally described as “social science”).

Table 10.5. 2003 Admissions and 2008 graduations, by subject, public HEIs

	Admitted	Graduated	Graduation Rate
	2003	2008	%
Natural sciences	2 600	1 385	53.3
Law	4 798	3 364	70.1
Economics	8 582	6 434	75.0
Business	2 152	1 939	90.1
Other humanities	8 488	4 386	51.7
Education	10 428	7 801	74.8
Health care	1 264	897	71.0
Technical sciences	9 319	5 272	56.6
Agricultural science	546	296	54.2
Services	238	235	98.7
Interdisciplinary	472	1 531	324.4
Total	48 887	33 540	68.6

Source: Calculations based on NSC (2008).

Staff in HEIs

Staff levels in higher education in the Kyrgyz Republic increased steadily up to 2007, but have since returned to 2002 levels, giving an overall student teacher ratio of approximately 18:1. The teaching loads in public institutions are, on average, heavy; for example, 850 hours for lecturers, 800 for senior lecturers and 750 for professors, with about 70% of classroom time. Of the total of 13 025 staff in 2008/9, about one third teaches in more than one institution. Salaries have been historically low; in 2006 teachers in the public HEIs earned approximately USD 82 per month while those working in private HEIs earned USD 112.¹ The review team was informed that many staff in public HEIs supplement their salaries by teaching in private HEIs.

Table 10.6. **HEI staff salaries, in KGS**

	2002	2003	2004	2005	2006
Public	1 841.9	2 113.9	2 383.5	2 904.2	3 392.8
Private	2 347.7	2 712.1	2 855.6	4 258.6	4 624.4

Source: NSC (2008), Table 2.5.

Table 10.7. **Number and qualifications of the faculty in higher education institutions, by location**

(persons, as of the beginning of academic year 2008/2009)

	Total number of teachers	Teachers combining jobs	% of the total	Distribution of degrees and academic status							
				Doctor of science	% of the total	Candidate of science	% of the total	Professor	% of the total	Associate professor	% of the total
Kyrgyz Republic	13 025	4 033	31.0	619	4.8	3052	23.4	604	4.6	2 062	15.8
Batken <i>Oblast</i>	527	54	10.2	14	2.7	69	13.1	16	3.0	52	9.9
Jalalabat <i>Oblast</i>	560	102	18.2	25	4.5	47	8.4	27	4.8	102	18.2
Issyk-Kul <i>Oblast</i>	525	30	5.7	12	2.3	90	17.1	18	3.4	68	13.0
Naryn <i>Oblast</i>	77	8	10.4	4	5.2	32	41.6	5	6.5	31	40.3
Osh <i>Oblast</i>	52	1	1.9	2	3.8	6	11.5	2	3.8	7	13.5
Talas <i>Oblast</i>	135	42	31.1	2	1.5	27	20.0	2	1.5	11	8.1
Chui <i>Oblast</i>	141	44	31.2	7	5.0	23	16.3	10	7.1	24	17.0
Bishkek	8 457	3 478	41.1	474	5.6	2 277	26.9	467	5.5	1 530	18.1
Osh	2 551	274	10.7	79	3.1	411	16.1	57	2.2	237	9.3

Source: Kyrgyz Republic, National Statistical Committee, 2009.

Overall, educational attainment among faculty members is very low. Officially, third level teachers should have a Master's Degree at least. But the *Education Development Strategy* gives the estimated break down of qualifications among staff members in all HEIs as follows: 59% Bachelor or Specialist degree only; 15% Masters, 20% Candidate of Science, 5% Doctor of Science and 1% PhD. This low level of faculty education inevitably has an adverse impact on the quality of scholarship and of the student experience (discussed under Quality of Teaching and Learning below).

Governance

The MOES has responsibility for defining policy, standards and programmes, determining priorities, conducting strategic planning and regulating the operation of the 31 public HEIs, including their branches and institutes at the regional level. The MOES also allocates financial resources, monitors quality through its licensing and attestation department collects statistics and liaises with the Academy of Science for research priorities. The State Examination Board awards professional qualifications or academic degrees and issues a state education certificate based on final examination results. The Council of Rectors links many institutional managers together and co-operates to develop a system-wide quality, internationalisation and research agenda.²

Public HEIs have more limited autonomy than in many OECD countries (Table 10.8). Institutions are accountable to the MOES for programmes which are to be taught according to State standards and for the proper administration of scholarship funds, according to the established criteria. Their operation is governed by the Law on Education under which they can legally establish branches, “transferring to them part of their assets” (Law on Education, 2003, Article 37). Rectors of public “national” HEIs are appointed by the decree of the President. Rectors of “state” HEIs are appointed by the decree of the Prime Minister. There are no limitations to the number of terms served by rectors, until they reach age 65. Rectors of private HEIs are appointed by the founders according to institutional charter. (Law on Education, 2003, Article 38).

Each HEI has a Governing Board which is responsible for human resources policies at institutional level, including staff recruitment. The Law is silent about the composition of the Board and, consequently, it is not possible to determine the amount of employer participation. The Academic Council manages academic and research programmes. The State determines the number of scholarship (budget funded) students while the institution determines the number of fee paying students. The Financial Committee is responsible for institutional budgets together with the management of extra budgetary (private) funds. HEIs evaluate student performance and are responsible for the organisation and delivery of distance education courses.

Table 10.8. **Extent of university autonomy in selected OECD countries and in Kazakhstan and Kyrgyzstan**

Category	Countries								
	Netherlands	Austria	Ireland	UK	Denmark	Sweden	Finland	Kazakhstan	Kyrgyzstan
Own buildings and equipment	X	X	X	X					
Borrow funds	X			X	X				
Spend budgets to achieve objectives	X	X	X	X	X	X	X	X	See below
Set academic structure and courses		X	X	X		X	X		See below
Employ and dismiss staff	X	X	X	X	X	X	X	X	X
Set salaries	X	X		X		X	X		
Decide size of student enrolment	X		X		X				

Note: X means that the university has the power to perform this function autonomously.

Source: These responses come from a survey undertaken in 2003 by members of the OECD's Institutional Management in Higher Education Programme and reported in OECD (2003) Education Policy Analysis. The information for the Kyrgyz Republic is based on interviews conducted during the OECD/World Bank team visit in April 2009.

Specific elements of the Kyrgyz system are:

- State budget finances for higher education are administered according to Treasury rules. However this does not impose an important constraint inasmuch as HEIs get about 75% of their funding from private fees and the selling of services. University management is free to use these private funds, which make up a large proportion of institutional revenue.³
- Although the government owns all buildings and lands, public HEIs do not pay rent for their use. HEIs must charge rent for public property when it is rented to private organisations and any rental income received must be used for educational purposes. (Law on Education, 2003, Article 46)
- Basic salaries are set by the Government but rectors appear to have the discretion to add some incentives.
- While academic structures and courses are determined by the MOES which approves programmes and degrees, there is a growing level of autonomy. HEIs are increasingly able to experiment with electives and with innovative courses, such as courses to meet Bologna requirements.

Issues

The MOES currently has weak capacity to provide the leadership and strategic thinking necessary to ensure the responsiveness of higher education to the economic and social needs of the Kyrgyz Republic. There is an absence of useful information to facilitate policy making, especially in relation to labour market outcomes, including the experience of successful graduates versus those with only partial tertiary level training. Analysis of student experience is not available to explain shifts in discipline choice and differential graduation rates in different disciplines.

Because a small proportion of financing comes from the state, the MOES does not have the leverage to initiate policy reforms and there are few incentives for most HEIs to work with the MOES on the development of a strategy for the development of higher education. Moreover, in a system where HEIs increasingly rely almost entirely on private financing, the accountability of the HEIs to the MOES and to all other stakeholders is unclear.

Another consequence of the overwhelming reliance of the tertiary system on private finance is that some HEIs are led to compete on the basis of price and not on the basis of the quality of course offerings. This price competition may be exacerbated by the absence of an adequate quality assurance system which, in some cases discourages HEIs from competing for students on the basis of quality and reduces the incentives to improve standards.

Recommendations

In order to arrive at optimal governance of HEIs, the capacity of the MOES should be strengthened, including the capacity to generate up to date information to assist with evidence based policy making. A national strategy for higher education should be prepared on a participatory basis. As part of the national strategy, instruments to establish a balance between institutional autonomy and public accountability should be developed and agreed by HEI management. Strategic planning in each HEI should fit in with the national level strategy. The planning process in HEIs should define and agree clear areas and levels of responsibility, including financial accountability. Each HEI should have the capacity to manage its own responsibilities efficiently and transparently while contributing to the goals of Kyrgyz national higher education.

Specific measures to improve the management of the sector include:

- MOE should take leadership in the development of a national strategy for higher education building on the modernisation plans that have been started as part of the alignment with the Bologna process.

- The national strategy should address the size and efficiency of the sector and should ensure optimal use of resources including buildings and equipment, resulting in the reduction of course duplication and achieving economies of scale.
- The development of a heterogeneous system incorporating second level VET colleges and creating pathways through tertiary education should be encouraged as is discussed in the qualifications system section of Chapter 8.
- Education statistics should be compiled by MOES to assist with evidence based policy making.
- Measures to improve institutional accountability should be developed and agreed among the Council of Rectors and HEIs. This could include HEIs strategic and financial management plans according to a reporting format agreed as part of the accreditation process.
- Incentives for HEI management should be put in place to encourage the improvement of quality and relevance as well as the efficient use of resources.

Financing

Resource mobilisation

Over the last decade, expenditure on public institutions of higher education has risen steadily from a low of 0.54% of GDP in 1995 (Higher Education in Central Asia, pg. 122). In 2006, this expenditure was KGS 1.13 billion, approximately 1.0% of GDP, and in 2007, KGS 1.42 billion, also 1.0% of GDP. These figures include private fees collected by state universities, which is treated by the Ministry of Finance as government revenue from non-tax sources. Direct state aid to students was KGS 49 000, 3.4% of total expenditure (review team's calculations).

In the Kyrgyz Republic, as in many other countries, there has been a pronounced shift in the sources of support for higher education. In the case of the Kyrgyz Republic, from a total reliance on public funding in the Soviet era, the shift has been to a massive reliance on private financing. Since 1992, rapidly growing enrolments have been only possible because of an increasing reliance on private sources of financing, most notably from students and their families. In the academic year, 2008/9, 217 000 (87.9%) students in the Kyrgyz Republic were fee-paying and these fees were 75% of the total financial flows to public higher education, approximately KGS 1.07 billion.

Scholarships in the Kyrgyz Republic are based on merit and are not related to financial aid. The proportion of merit scholarship students varies across institutions with some of the larger state universities reporting as many as 30% while other smaller regional HEIs have as few as 7 or 8%. As the largest number of State Universities are in Bishkek, so too are the greatest number of scholarship students (Table 10.9). But almost half of fee paying students in public universities are in the smaller cities. There are no state scholarship students in private HEIs (although prestigious institutions, such as the American University of Central Asia, do award some merit-based scholarships). The review team was informed that admission procedures for fee-paying students are not clear. This, and other aspects of admission policy, is discussed below.

Table 10.9. Number of students learning on grant-aided and fully paid bases in HEIs, by ownership patterns and locations

(persons, as of the beginning of academic year 2008/2009. All amounts in KGS)

	Number of HPE colleges		Enrolment			Average tuition fee per student	Average tuition fee per foreign student
			In public HPE colleges		In private HPE colleges		
	public	private	grant-aided	private			
Kyrgyz Republic	31	19	2 9307	188 096	25 625	12 248	19 870
Batken <i>Oblast</i>	1	-	578	13 465	-	9 958	9 958
Jalalabat <i>Oblast</i>	1	4	1 293	12 869	7 148	8 409	7 558
Issyk-Kul <i>Oblast</i>	1	1	900	5 911	1 443	9 457	15 145
Naryn <i>Oblast</i>	1	-	701	2 813	-	8 267	16 000
Osh <i>Oblast</i>	-	-	9	677	-	10 500	-
Talas <i>Oblast</i>	1	-	339	2 667	-	10 100	13 625
Chui <i>Oblast</i>	-	1	138	1 920	51	15 135	36 000
Bishkek	22	11	1 9439	95 795	14 399	13 980	23 851
Osh	4	2	5 910	51 979	2 584	11 432	14 727

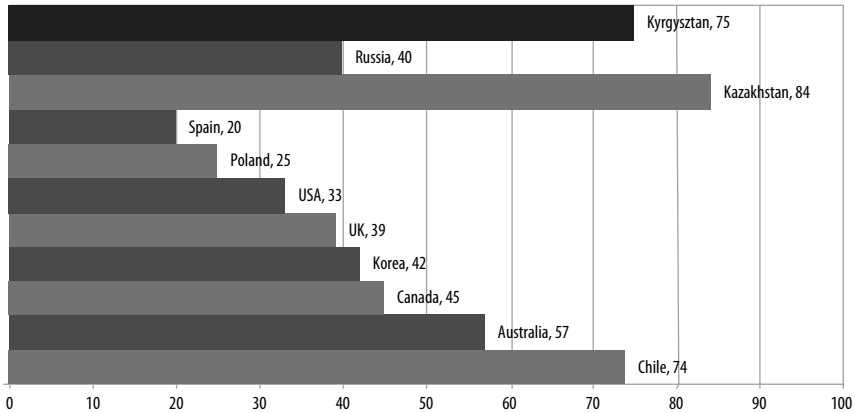
Source: Kyrgyz Republic: National Statistical Committee. 2009.

Resource allocation

Of the 217 000 students in public HEIs, only 13.5% receive state scholarships, although this proportion appears to be rising. In 2008/9, there were 5 705 scholarships which accounted for 17.8% of new admissions. Of these, 5 040 (88%) were awarded through the MOES with half of these going to teacher education (*Education Development Strategy 2011-2020*). So the dominant pattern remains that public institutions receive the greatest amount

of their revenue from fee-paying students. Using OECD data (Education at a Glance 2008) and other sources, it appears that the Kyrgyz Republic has one of the largest proportions of private financial flows in total higher education financing in the world.

Figure 10.3. **Self-generated income as percentage of total financial flows to state universities**



Notes: Russia: World Bank estimates.

Kazakhstan: OECD/World Bank Review of Higher Education.

Kyrgyz Republic: review team's calculations.

Source: *OECD Review of National Policies for Education: Tertiary Education-Chile*, (2009), Table 8.2, p. 280.

Tuition fees in the Kyrgyz Republic vary. The review team was informed that, because some HEIs formerly used low fees to attract students as an additional source of revenue, the MOES has established a base fee threshold of KGS 15 000 per annum for day students and KGS 13 000 for distance students in public institutions. However, individual HEIs appear to have some discretion over their fee structures – for example, we were told that in one regional university, the maximum fee is KGS 15 000 while studying economics in a large Bishkek HEI costs about KGS 29 000. Part-time and distance education are all fee-paying and average less than the costs of full-time education. Tuition fees in private universities are nearly 25% higher than in public ones (KGS 14 300 compared with KGS 11 500). Some of the more prestigious institutions charge higher fees; for example the American University charges USD 2 000 a year (about KGS 80 000) and the Yraim Professional Institute charges about USD 900 – although both these private institutions also have a comprehensive system of bursaries and needs-based grants. International students pay more in all institutions.

Table 10.10. **Average tuition fees in HEIs**
(KGS: academic year 2008/2009)

	Tuition fee per student	Tuition fee per foreign student
in public colleges		
full-time	13 139	23 578
evening	13 248	21 183
part-time	9 619	16 131
in private colleges		
full-time	17 705	25 807
part-time	10 011	11 922
Annual receipts, KGS million ^a	2 976.5	

Note: a. Calculation based on the number of students and average tuition fee per student.

Source: Kyrgyz Republic: National Statistical Committee. 2009.

Scholarship allocation mechanism

Each public Kyrgyz HEI is awarded a number and amount of state scholarships by the MOES based on needs in certain specialties. These state scholarships are awarded on a quota basis; however, universities have the flexibility to award a certain portion of these scholarships at their own discretion. This is important as it gives opportunities to students with high scores who might otherwise be left out of the quota. There is also a system of “50” gold certificates, meaning 50 top ORT scores. Those students get the placement of their choice.⁴ There are some reported cases of city students moving to rural schools in their final year to obtain a status of “rural applicant” to participate in the *Obsherespublikanskoe Testirovanie* (ORT) and thus to be included into the quota. There are no funding support mechanisms for disabled students or for orphans. Those who oppose the inclusion of these categories in the scholarship award system argue that this will “encourage corruption”, as applicants will “prepare” the necessary documents to prove their eligibility to receive the scholarship. There were a very limited number of Presidential scholarships for orphans, but this system has ceased to function.

Some schools, such as the Medical Academy, the Institute of Physical training, the Art School, and the Military Training Academy do administer their specialised admission tests in addition to the ORT.

Private universities and branches of foreign universities are not part of the State scholarship programme. However they are free to take the ORT

results into account in addition to their own entrance examination. For instance, to apply to American University in Central Asia, a student has to take a Test of English as a Foreign Language (TOEFL).

Once a student gains a state scholarship, the award lasts for the duration of the degree course and is not reviewed again based on performance. The overall dropout rate of scholarship students is 24% (*Education Development Strategy 2011-2020*). Previously, a state scholarship/year was KGS 5 700; in 2008/09 that amount was increased up to a range of KGS 12 000-20 000 year/student. If a student fails to graduate, the scholarship funds allocated will be returned to the State.

Furthermore, state scholarship funding has not kept pace with the large numbers of students who have enrolled in higher education since 1992. And what might have been an adequate number of scholarships when the Soviet Union collapsed now falls far short even of financing those professions that the government considers essential.

Issues

Approximately 50% of state scholarships are earmarked for teacher training and are awarded based on a geographic formula that is weighted in favour of rural students, followed by small town students; with city students in last place. A fourth category of scholarships is being considered for students from mountainous regions and from disadvantaged families. However, opposition to this category (mainly on the grounds of potential corruption) means that it has not yet been introduced.

Given the grave concerns about the status of the teaching profession discussed in Chapter 9 of this report, the review team considers that the ring fencing of scarce budgetary resources for the training of young teachers is an understandable measure. However, there is evidence (*Draft Education Strategy 2011-2020*) that only 43% of trainees in Teacher Colleges and 63% in the Pedagogical Faculties in the HEIs survive to finish their diploma or degree. It appears that many of these scholarship teacher trainees change to other careers before they take their degrees. And, of those who do complete their teaching training courses, as many as 20% do not continue to work as teachers. Indeed, the review team was informed that many of these graduate teachers do not consider that it is worthwhile even to collect their diplomas at the end of their studies. So, in practice, these earmarked scholarships are not a reliable financial instrument to ensure a supply of trained teachers.

The conclusion of this analysis is that public financing is neither equitable nor efficient. The overwhelming reliance on private financing is inherently inequitable. Moreover, it leads to inefficient disciplinary allocation of scholarships. In the absence of any other form of student support, many students

appear to apply for a scholarship in a discipline in which they have little or no personal long-term interest because it is easier to gain admission or obtain a scholarship in some disciplines than in others. They appear to do this with the intention of changing their course of study if at all possible, at the earliest opportunity. And, as the amount of each scholarship allocated to HEIs does not cover all the costs of the HEIs for these students, HEIs are forced to reallocate from their fee income to cover students who are enrolled using an inefficient mechanism for courses that many of them do not appear to want.

Recommendations

Two useful policy options to address these issues include:

- The existing scholarship allocation system should be reformed to ensure that students who enter third level education on scholarships for teacher training complete their course in that that subject, as is recommended in Chapter 9.
- The rural and small town weighting should be removed from (a percentage) of existing scholarships schemes. Students who are successful in the ORT should be allowed to choose their own course of study.

Access and equity

For most students, access to higher education in the Kyrgyz Republic is determined by whether or not they or their families can afford to pay fees which, especially in the case of the more prestigious private HEIs, are high. Choice for rural and small city students is inevitably rather constrained unless they win scholarships, and, as has been shown, only about 13% of places in public institutions are available to scholarship students while 87% are obliged to pay fees. Tuition fees are partially rebated by up to 25% for orphans, disabled students, military personnel and the children of regular staff. There appears to be no student financial support available except for those who make it into the top 13% of scholarship places.

Tuition fees in the Kyrgyz Republic are very high in comparison to average incomes. For example, a recent OECD/World Bank study of Chile suggested that fees of 28% of GNI were the highest in the world, and identified no other countries with fees of more than 16% of GNI (OECD/WB 2009 Chile report [OECD, 2009b, p. 228]). Table 10.11 shows that the fees to income ratio in the Kyrgyz Republic are much higher. Such a level of fees must undoubtedly serve as a deterrent to enrolment for students from poorer families, especially since there are no loan schemes specifically designed for tertiary level students. In the absence of relevant data, it is not possible to speculate how

the middle and poorer classes afford to pay for higher education studies. One hypothesis might be that some take jobs either before or during their studies.

The high concentration of state student grants on teacher training limits the capacity of the grants to solve problems of access for academically capable students who are unable to study their subject of choice because they or their families are not capable of paying fees or have not been able to afford extracurricular tutoring. Poorer students often start at a disadvantage because of the low quality of the secondary education which they have received. One instrument which is positively weighted to increase equity of access, at least for rural students, is the National Test which is discussed below.

Corruption is a fundamental concern for the equity of the education system in the Kyrgyz Republic. All stakeholders raised academic integrity with the review team as a system-wide issue that greatly undermines the reputation of Kyrgyz higher education. A 2006 survey suggests that, in general, staff and students perceived or experienced forms of corruption including bribes for admission to a university, higher grades, letters of reference and places in a hostel. (Academic Honesty: 2006. downloaded from <http://www.irex.org/programs/eps/research/05-06/Stetar.pdf>)

Table 10.11. **Tuition fees in HEIs, 2008/09, compared with 2008 gross national income per head**

	KGS	USD	% of GNI per head
in public HPE colleges	11 465	291	37.3
full-time	13 139	333	42.8
evening	13 248	336	43.1
part-time	9 619	244	31.3
in private HPE colleges	14 256	362	46.4
full-time	17 705	449	57.6
part-time	10 011	254	32.6

Note: Exchange rate of 39.4 KGS/USD prevailing on 1 January 2009.

Source: Income Data: World Bank. Fee data: Kyrgyz Statistical Committee. Review team calculations.

The current admission system

People are admitted to higher educational institutions based on the results of the national testing. The state certification of secondary school graduates can be combined with the national testing. (Law on Education, 2003, Art. 40)

The school leaving examinations which are taken at the end of grade 11 are reviewed in Chapter 6 of this report. These examinations are based on rote learning and are not designed to measure ability or to be a predictor of success. They do not enable admission to Higher Education, nor, given the lack of transparency of the marking systems, do they give students a recognised qualification for the labour market.

Individual HEIs have their own admission Commissions which organise and administer student admissions at one pre-determined time. Concern was expressed to the review team by stakeholders that arrangements for the admission of fee paying students are not transparent.

Many (70%) students who wish to gain admission to higher education take the ORT. As the title suggests, the ORT is a nationwide test and is not used exclusively for selecting scholarship students. It is in use in Kyrgyz Republic since 2002, is administered by the Centre for Educational Assessment and Teaching Methods (CEATM) and is designed to provide an objective, independent selection instrument which can be used for determining places at HEIs and for awarding state scholarships.

The ORT promotes new approaches to educational measurement and assessment at the classroom and system levels by focusing on skills and analytical reasoning. The Main Aptitude Test has a total of 150 items, including a mathematical test, a verbal reasoning test, including reading comprehension in the native language, and a practical grammar test (also in the native language). It does not assume common materials and curricula coverage that achievement tests do which is seen as a fair approach in conditions of great diversity in inputs and resources. The subject tests aim to measure achievement in chemistry, biology, English and German. The Test Centres for the ORT are spread throughout rural areas of the Kyrgyz Republic with 82% of participants coming from remote regions. Test participants pay a small examination fee (KGS 200, or approximately USD 5) (Presentation to review team by the Centre for Educational Assessment and Teaching Methods). For more detailed information on the CEATM, see www.testing.kg.

It is government policy that all students to be supported by the state budget should take the ORT. But this test has a much wider application in that it is used also to admit students who, in the absence of gaining a budget funded place, go on to gain admission to fee paying places in HEIs.

Table 10.12. **Results of the national test (ORT)**

Year	Number of participants	Number of enrolled students with grants in Kyrgyz HEIs	% of rural students enrolled	Mean score
2002	13 837	5 000	66.0	100.2
2003	35 247	5 000	63.9	114.2
2004	39 286	5 310	61.5	122.4
2005	32 852	5 380	61.8	112.7
2006	33 336	5 085	69.0	113.9
2007	34 225	4 787	70.8	114.5
2008	33 431	4 933	69.7	114.9
Total	222 214	35 495		

Source: Centre for Educational Assessment and Teaching Methods.

Issues

The Parliamentary Committee on Education informed the review team that there are opposing views among Deputies with some favouring the transparency that the ORT brings to the admission process and others favouring a policy that would allow universities to organise their own admissions. Equally, the review team was told that some universities do not recognise the ORT and that some rectors would prefer to have a system whereby each university is responsible for its own admissions as is the case with private universities.

Experienced professionals consider that the ORT is working well and is a reasonable predictor of success. Moreover, the ORT has had, and is having, a positive effect on the transparency and objectivity of the university selection process (thereby increasing student and public confidence in the system). The review team was told by one group of teachers that if the ORT were to be eliminated “corruption would flourish”. Therefore, there appears to be general stakeholder agreement that the testing instrument in itself is very reliable, fair and secure and is the choice of students and their parents throughout the Kyrgyz Republic.

Many teachers and students raised additional issues about the ORT with the review team which deserve discussion here and which may be summarised as follows:

- The weighting system whereby rural and small town students gain priority over other State financed students is not always fair as it closes off some urban students who might otherwise have gained places.
- Because the majority of budget places are in the teaching profession, many students take the test in order to win a scholarship. This issue has also been raised above and is discussed in Chapter 9.
- As the test is optional some HEIs do not choose to recognise it.
- The design of the Test should be expanded to include more testing of subject knowledge (e.g. SATs II).

Many post socialist countries have faced these dilemmas since the transition and have introduced a range of responses to deal with both the access and the academic issues raised by them. (See Table 6.4 in Chapter 6). The experience of Georgia, discussed below, where a test closely resembling the ORT is used in addition to some subject knowledge testing, might offer some helpful lessons for the Kyrgyz Republic.

In sum, admissions policies in the Kyrgyz Republic lack transparency. What is needed is a clear set of rules so that prospective students, together with their parents and teachers, could have confidence that access to Higher Education is fair. Experience suggests that HEIs should no longer be allowed to set their own entrance examinations except in a few cases where particular aptitudes or knowledge are needed for success in a specific subject of study.

Box 10.1. Experience of the General Admission Test in Georgia

In Georgia, the introduction of a General Admission Test (GAT) in 2005 was an important addition to the reform of the admission examination. In order to gain admission to the university, the score on the GAT, together with the score on the Georgian Language and Literature test and the score on a Modern Foreign Language test are taken into account, plus one or more scores on a subject test. The admitting university determines the subject test.

Students are rank-ordered based on their scores and automatically allocated to study places, taking into account the preferences they (the students) indicated in their registration form.

The GAT results are used as the sole criterion for distributing grants. Each year about 32 000 students apply for 24 000 study places. About 8 000 students receive grants.

All statistics indicate that the introduction of the GAT has increased access for poor and rural students. It also seems that the GAT has improved access for ethnic students, *i.e.* Georgian citizens for whom Georgian is not the first language. The GAT is available in Russian, Armenian and Azeri.

Source: Review team's research and contacts.

Recommendations

Based on international experience, an examination such as the ORT should be the preferred choice for the Kyrgyz Republic at this time because corruption issues are dealt with and public confidence in the fairness of the test is ensured. Moreover, because it is not tied to a school leaving examination, candidates for the ORT are already demonstrating their motivation to progress to higher education. The ORT also represents a second chance for repeat students and older students, thus enhancing equity and life learning opportunities. And the design and administration of one single test leads to economies of scale and lower costs per student as compared to different tests in each institution.

The review team further suggests that improvements to the existing ORT by strengthening its use for selection purposes be explored. One way to do this would be to expand and strengthen the subject component of the test to better reflect student attainment and competencies in relation to national curriculum standards and goals. This would allow students the opportunity to demonstrate their mastery of content in specific subject areas, and would provide HEIs with a dependable, standardised measure of a student's preparation for college-level work in particular subjects. The experience of Georgia could be very helpful in this context.

In the longer term, the option of an improved school leaving examination which would address the issues of fairness, test the knowledge acquired by students and would serve all stakeholders (students, schools, universities and employers) could be explored further. However, the current worries expressed about the security and fairness of such examinations as well as about the considerable resources required both to design and administer them would need to be addressed for this to be a viable option for the Kyrgyz Republic. The experience of Russia and Kazakhstan in the design and implementation of the Unified National Test could be considered as a way forward.

Quality of teaching and learning

This section will briefly review some key quality issues in Kyrgyz higher education including factors affecting the quality of teaching and learning, the teaching experience for students and the availability of adequate equipment and learning resources. The relationship of higher education to the labour market is discussed in the section on relevance below.

One of the main reform objectives for higher education has been to modernise the structure and delivery of degree programmes. To this end, the Kyrgyz Government has embarked on a programme to align higher education with the Bologna Declaration of 1999. So far, most undergraduate programmes still follow the traditional five year specialisation method with only 7% of

Bachelor programmes and 5-6% of Master's programmes introduced to date. Employers have been slow to recognise fully the new Bachelor and Masters programmes and hence problems with the employability of these graduates have been encountered. A credit system has been introduced in a small number of courses: 73 Bachelors programme (10.7%) and 26 Masters programmes (3.8%) and 5 Specialists programmes (0.7%) currently use credit hours system.

Work is in hand to move away from the legacy of the traditional state higher education standards and to develop competence based standards. The Council of Rectors and the larger state HEIs, together with the efforts of some of the newer HEIs, have made determined efforts to engage with standards and modernisation challenges. Institutions such as the American University of Central Asia (AUC), the Kyrgyz-Turkish Manas University (KTMU) and the Kyrgyz-Russian Slavic University (KRSU, which is a member of the Russian Universities Association) have, since their establishment, sought to offer university education of good quality in a range of disciplines.

The Education Network Association (EdNet), an NGO based in Bishkek whose objective is the development and reform of higher education, unites educational institutions, organisations and business companies in Central Asia. In the Kyrgyz Republic, EdNet works through the Council of Rectors and with the majority of HEIs to build a quality enhancement programme based on the Dutch model of self-assessment and internal quality screening, tailored for the current situation in the Kyrgyz Republic. EdNet also works on curriculum modernisation, on staff development in HEIs and on the development of new pilot state education standards. It has set up the Central Asian Network for Quality Assurance and Accreditation (funded by Tempus) in Universities and publishes a journal, *Higher Education in the Kyrgyz Republic* (<http://www.ednet.edu.kg>).

The MOES has plans to develop a National Qualifications Framework which would introduce certification for all accredited programmes in order to improve both quality and progression between different levels of the education system. The proposed NQF would also address the issue of weak linkages between employers and the education system discussed below. It would be implemented by the Department of Higher Education of the MOES and would need an independent National Qualifications Agency to oversee the Qualifications Framework. However, progress has been made in using the Dublin descriptors for short courses. This is a good development as these cover 1st and 2nd level VET programmes and will facilitate the development of a lifelong learning framework.

The MOES also has plans to further develop the credit transfer scheme and to develop a ranking system for all HEIs in the Kyrgyz Republic which will be based on European or United States (US) models.

Quality assurance

The Quality Assurance (QA) framework in the Kyrgyz Republic has not kept pace with the rapid growth in higher education. Large increases in the numbers of students, the need for new degree structures and modernised programme delivery and the emergence of new institutions have all placed strains on the capacity and relevance of the existing centralised licensing and attestation function in the MOES which covers all VET and HEIs.

In the current QA system, a licence is a simple assurance mechanism whereby all teacher qualifications, buildings, equipment and learning resources are reviewed as being fit for purpose. Attestation is a process whereby HEI programmes are checked against State standards using input indicators such as numbers of professors, students; type and amount of equipment. It operates through the MOES which establishes an Attestation Commission composed of one or two MOES staff members and some academic staff from other HEIs. Attestation visits typically last 3-5 days. Ideally, each HEI should work on its own self-assessment exercise before commission visits. Once existing programmes or new courses meet attestation requirements, they can be continued. Otherwise, the programme must be discontinued. Every HEI has to go through the attestation procedure every five years (Law on Education, 2003, Article 40). The review team was informed that, while the licensing process can often throw up a number of weaknesses and failures, the attestation process generally tends to result in fewer institutional and programme failures.

There is agreement that the functions of the existing Department of Licensing and Attestation in the MOES are to be further developed towards a full and independent accreditation service, with an institutional rather than individual course focus. This new accreditation system will be more rigorous than the existing attestation service as it will be based on best practice US and European Quality Standards. Ministry staff estimate that only about 20% of universities are ready for this kind of quality assurance process at the moment. The Department of Licensing and Attestation currently employs 10 individuals, approximately 5 of whom have post graduate qualifications. These staff numbers will not be enough to cope with the needs of so many institutions and programmes and the MOES would require considerable further strengthening in order to implement the proposed new system. This is one area where continued donor support would be immediately very useful.

Issues

The review team discussed quality issues with students and with professors and lecturers during institutional visits and were informed that:

- Students are worried about the quality of course offerings and degrees, their relevance to the labour market; corruption in grade awards; the quality and preparedness of faculty to teach (“sometimes students know more than their teachers”); and the quality of the facilities within the HEIs.
- Professors and lecturers are concerned about the deteriorating quality of school education and the consequent low level of preparedness among students entering third level education. Inadequate resources and the unavailability of modern teaching materials are also creating problems for teachers.

From the review team perspective and based on visits and discussions in the MOES, the following issues should be added:

- Allegations from many stakeholders that degree recognition is seriously impaired by corruption both during the period that students are in an institution and at the point of degree awards. These perceptions bring all levels of the system, up to and including the award of Doctor of Science (*Doctor Nauk*) into disrepute.
- Heavy teaching loads combined with the low level of teachers’ salaries and the consequent needs to work in more than one institution undermine the evolution of a culture of quality assurance at institutional level.
- Teaching and learning methodologies which are in need of modernisation and of an increased time allocation in the curriculum.
- A further exacerbating factor and one which cannot be addressed quickly or easily is the exceptionally low level of HEI teacher qualifications discussed above. These inevitably impact on the learning experience for students.
- Absence of information on education outcomes.
- The lack of finance for the repair and maintenance of buildings and the updating of equipment, including system wide broadband availability. These are having an impact on teaching and learning.

Recommendations

How can realistic quality improvement plans be put in place in a difficult financial climate?

- The establishment by the MOES of the proposed independent National Accreditation Council covering all levels of the post secondary system is the most important immediate step to improve the quality of higher education. The introduction of the Bologna Framework will require an updated accreditation system in order to ensure reciprocity of degrees.
- The review team would also encourage the continuation of the plans to harmonise degree programmes to align with the Bologna Process building on the progress achieved to date as reported in the 2010 Central Asia Regional Report of the European Commission (EC). Key priority actions should be efforts to achieve employer familiarity with and recognition of Bachelor and Masters Degrees.
- The development and introduction of the proposed National Qualification Framework would greatly facilitate degree recognition and career progression. On the other hand, devoting time and resources to a ranking of HEIs does not seem to be a good use of resources.

Relevance

Another measure of the quality of a higher education system is how well its graduates perform in the labour market.

In 2006, 9.6% of graduates were unemployed and seeking work (*Education and Science in the Kyrgyz Republic, 2008, Table 2.1*), of whom, 13.9% were in towns and cities and 5.8% were from rural areas. There was very little difference between the unemployment rates for men and women (9.1% and 10.2% respectively). Unsurprisingly, the figures for graduate unemployment compared favourably with secondary school leavers who total 52.8% of the job-seekers. However, this unemployment data should be approached with some degree of caution for a number of reasons:

- The Kyrgyz Republic has a large informal labour market and getting up to date and reliable data is difficult. Based on anecdotal evidence the actual number of university graduates who are unemployed may be higher in 2009 than the 2006 figures cited here. In the *Education Development Strategy 2008-2011*, the employment rate of university graduates, including self-employed and further education, is given as 30%.

- HEIs do not conduct graduate follow up surveys. Anecdotally, a large proportion of those university graduates who are employed do not work in the professions or occupations for which they have been educated.

The return of workers from Russia in 2009 may be already resulting in higher unemployment numbers.

The education and training of competent staff is an important issue for employers in the Kyrgyz Republic. In 2008, the journal of the International Business Council, *Investment Now* conducted Quarterly Business Surveys in which employers were requested to list the 10 key priorities for investment in the Kyrgyz Republic. The availability of qualified and well trained human resources personnel was listed as No. 2 (summer survey) and No. 1 (autumn survey) (International Business Council of the Kyrgyz Republic, 2008). These surveys also showed that a supply of well trained specialists is important to employers but so also are the so called “soft skills: working with people, communication skills and the ability to work in teams”. Moreover, employers consider that many graduates have little practical experience because university courses are perceived to be too academic and not related to the labour market. A related issue, discussed in Chapter 8, is that there are not enough technical specialists.

The absence of up-to-date career information in schools and also in HEIs is perceived as very important by employers and also by students and their families. HEIs are using the mass media as a means to attract additional students. As there are so many institutions, some HEIs have become very competitive in trying to increase their enrolments, especially as all additional students beyond the scholarship quota will be fee-paying in public HEIs and all private HEIs are, *de facto*, fee-paying. Institutions have developed marketing services to publicise courses and, in some cases, they also pay marketing visits to schools. But, the actual information on institutional websites is quite limited and does not provide the prospective student or his/her family with objective qualitative and quantitative information about career choices and labour market outcomes. The review team thinks that, considering the high level of fees paid, this is the minimum level of information that should be available to the users of these educational services. A distinctly positive initiative, however, is that EdNet has set up Career Centres in almost all Kyrgyz HEIs in order to build linkages between HEIs and employers and to prepare students for the labour market. Some practical results are that career planning handbooks have been developed which are a first step towards filling the information needs of graduates.

Kyrgyz employers’ representatives told the review team that employers are uncomfortable about the absence of comparative and reliable information about the quality of university outcomes or about the employability of graduates from different HEIs. They worry that a university diploma may not be

sufficient evidence of possession of the knowledge and skills required for specific occupations. For this reason the proposed Qualifications Framework would be popular with employers as it would provide them with a means of knowing what competencies could be expected from graduates at each level. This instrument would also greatly assist the recognition of the new Bachelor of Arts (BA) and Masters degrees. Employers welcome the Career Centres as they want to build linkages and create partnerships between business and HEIs. EdNet is also actively working to involve employers into objective setting and curriculum reform.

No specific information was provided to the review team about the flexibility of the curricula taught in Kyrgyz HEIs but discussions with employers' representatives and institutional management indicated a consensus that curricula and courses do not sufficiently reflect the changing work environment. There is minimal input from employers into objective setting and curriculum reform (see also Chapter 8). While more English or other foreign language training would be an asset and might improve job opportunities, Russian continues to be a valuable asset in business as it is so widely used throughout the Central Asia region.

Recommendations

As a priority, the review team recommends the introduction or expansion of the following initiatives to improve the responsiveness of higher education to the labour market:

- MOES should work with the Ministry of Labour and the National Statistical Committee to collect, analyse and disseminate labour market information. This information needs to be easily available to school leavers and their parents.
- An accessible and affordable information system needs to be developed that would include data about student outcomes from all courses run by HEIs, including employment data that could be obtained through Graduate Tracking Surveys.
- The existing Career Centres should be expanded for all HEIs.
- HEIs should systematically involve employers in curriculum design and in the operation of the Career Centre.

Internationalisation

Traditionally, Kyrgyz higher education had a strong network of institutional links throughout the former Soviet Union with many scholars and education managers receiving some or all of their higher education outside the country. Today the system is in a position to benefit from this tradition of co-operation and from the legacy of cross border co-operation and to avail of the opportunities that accrue to internationalisation.⁵

Increasingly during the 1990s, international linkages have been established at institutional and individual levels through the active participation of universities, faculties, departments and individual researchers and students in various EU programmes (Tempus and Erasmus) as well as through the Eurasia Foundation, USAID and numerous other bodies and donors. The work to harmonise Kyrgyz higher education with the Bologna process has already been discussed. In every institution visited by the review team, the team found evidence of strong interest in building international relationships and some examples of very good projects, for example the EdNet project to establish the Central Asian Network for Quality Assurance and Accreditation (Tempus) which is working with 25 universities from Central Asia (Kyrgyz Republic, Kazakhstan and Tajikistan) and five from Central and Western Europe. The Erasmus Mundi Masters programme offers an excellent opportunity for student exchanges among European universities. Other donors have made available fellowships for Kyrgyz Masters and PhDs in a range of international institutions.

Because Russian is already the *lingua franca* of Central Asia and beyond, the Kyrgyz Republic is in a good position in terms of second language acquisition, which is a major challenge for many countries. The review team was not in a position to make judgements about the availability of English language teaching during its limited time in the country. But the acquisition of English would constitute a key objective of an internationalisation strategy.

The presence of foreign students is an important part of a country's higher education system. Foreign students create an additional stream of revenue for HEIs. They can, and do, demand education services of good quality. They bring fresh perspectives and they offer the promise of future linkages and networks when they return to their own countries. As Table 10.13 shows, 8.3% of all student enrolment in higher education in 2008 came from outside the Kyrgyz Republic. Although the numbers from CIS countries show some evidence of decreasing, those from outside the CIS have increased by almost 50% since 2004/5. Ninety-eight per cent of foreign students study full time day courses, primarily medicine, technical subjects and languages. Of the students from CIS countries, 98% pay fees and 73% are in part-time or distance education. 88% of non CIS students pay fees. (National Statistical Committee, 2009)

Table 10.13. **Number of foreign students in HEIs**
(persons, as of the beginning of academic year)

	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009
Number of students from the CIS countries	21 918	25 280	24 863	22 293	17 123
Azerbaijan	15	-	10	7	13
Armenia	1	3	-	1	-
Byelorussia	1	1	2	8	-
Georgia	-	-	8	22	289
Kazakhstan	4 436	4 081	4 298	4 314	3 370
Moldavia	-	2	-	41	1
Russia	362	356	399	635	748
Tajikistan	810	558	784	1040	1495
Turkmenistan	327	409	450	880	1008
Ukraine	11	8	3	16	26
Uzbekistan	15 955	19 862	18 909	15 329	10 173
Number of students from the non-CIS countries	1 647	2 045	2 342	2 713	3 113
Afghanistan	25	34	128	75	62
China	199	214	250	294	507
India	67	262	256	426	406
Iran	10	12	11	18	24
Mongolia	-	-	22	27	30
Nepal	16	13	13	50	48
Syria	12	12	275	624	724
Pakistan	331	360	274	...	12
Turkey	880	1 033	1 003	1 199	1 119
Other ^a	107	105	110	...	181

Note: a. South Korea (25), Iraq (13), Libya (12), South African Republic (7), Jordan (5), Germany (3), USA (3), Israel (1) etc.

Source: Kyrgyz Republic: National Statistical Committee, 2009.

The challenge is for the MOES to design a comprehensive and sustainable internationalisation strategy to take advantage of the extensive existing networks and on the donor goodwill in financing many of the programmes. This should be done by encouraging the HEIs to create internationalisation offices (where they do not currently exist) in order to improve the co-ordination of international activities in co-operation with the MOES.

Moreover, improved quality assurance mechanisms (as discussed above) will enhance the comparability of higher education in the Kyrgyz Republic and serve the needs of international as well as of national students.

Flexible learning

A very large proportion (46%) of the total enrolment is in part-time education most of which may be classified as distance education. These numbers are very high and all HEIs visited by the team wanted to reduce the numbers of distance and increase full time students. All of this is fee-paying but, as noted above, fees are about 40% less than those charged to full time students. Most universities provide a range of correspondence courses with face-to-face contact at predetermined intervals for examination and practical and laboratory work. For example, in one university visited by the review team, students spend a total of 8 weeks (two periods of 4 weeks each) in the university. During that time, practical and laboratory work can be facilitated and tests can also be administered. On average, it appears that the largest part-time and distance enrolment is in engineering, economics and pedagogical studies.

The review team considers that, given the need to safeguard access to education for the rural population in the Kyrgyz Republic, it is important to improve the quality of the distance education system by harnessing the power of digital technology to support new systems of teaching and learning. However, currently not all HEIs have access to internet and the non-availability of broadband in rural areas constitutes a stumbling block to the use of ICT for teaching and learning. Computer availability in HEIs is also rather low; for example, there is 1 computer for every 38 students in one of the bigger and better resourced public HEIs. (Institute of Strategic Informational Technologies in Education).

The initiative, funded by the EU Tempus programme, to link university libraries through Kyrgyznet could be used as a means of introducing some flexible learning into the existing distance and part-time learning environment. Three universities are already digitally linked, with another six joining soon. Initially, the project will improve access to learning materials for the staff and students within the universities. All first year students take an obligatory course in internet search techniques (in Kyrgyz and Russian) during their first semester, accessing information on the web and training in basic library procedures. All staff members have access to this digital data base and are also being trained. But the project could have much wider benefits for the future of distance education programmes thereby enhancing not just higher education but also creating opportunities for adult and further education. In addition to equipment and to reliable internet connections, what would be required would be flexible learning materials and digital learning resources as well as the electronic tools necessary for full participation in a knowledge society. These would promote active and independent student learning and encourage the flexible organisation of learning. The review team would encourage the Kyrgyz Government to seek partnerships with other countries in the region that have already engaged in the development of

learning materials most notably with the Russian Federation where considerable expertise already exists in the design of flexible learning materials, for distance and open education.

Postgraduate education

Postgraduate education in the Kyrgyz Republic includes Masters Degrees which were recently introduced, and the traditional further research degrees of *Kandidat Nauk* and Doctor of Science. In 2006, slightly under 40% of postgraduate students were studying for these research degrees.

Table 10.14 describes the evolution of post-graduate education between 2002 and 2006. Although the numbers show an increase of 22% between these dates, this is misleading, because to a very large extent it represented a rise of over 200 in the number of postgraduate law students at the end of 2005 compared with previous years. The enrolment figures for undergraduate law students show a decline in those years, so this may reflect a change redefinition of degrees, courses, entry requirements though the numbers of postgraduate law students is very small compared with the number of undergraduates studying law – about 400 compared to 24 000 in 2004/5 – which has most recently fallen further to about 19 000 in 2007/8.

Table 10.14. **Postgraduate and doctoral study**

at end of year	2002	2003	2004	2005	2006
Science and research institutions					
Number	16	18	17	17	17
Post-graduate students	372	348	359	341	340
Doctoral students	7	13	15	12	14
Graduates of doctoral studies	2	2	4	3	2
of whom defended doctoral thesis	2	1	-	-	-
Higher professional educational institutions					
Number	25	27	25	25	25
Post-graduate students	1 632	1 848	1 828	2 027	2 111
Number of doctoral students	55	53	45	51	50
Graduates of doctoral studies	16	22	19	13	13
of whom defended doctoral thesis	7	10	6	5	2
Studying for <i>Kandidat Nauk</i> degree	946	938	1 057	1 060	966
<i>Kandidat Nauk</i> theses defended	208	204	280	176	157

Source: Review team calculations based on NSC (2008).

Other than law, there were relatively few changes in the distribution of students among major fields. The declining share of the natural and technical sciences is possibly a matter for concern, but it was not possible for the review team to examine this matter.

Table 10.15. Percentage distribution of postgraduate students, by field

at end of year	2002	2003	2004	2005	2006
Total	2 004	2 222	2 187	2 368	2 451
percentage distribution					
Natural sciences	15.2	16.1	14.9	12.8	12.2
Technical sciences	13.1	13.5	13.3	10.6	10.4
Agricultural sciences	1.0	1.9	1.3	1.3	1.6
Humanities	19.6	20.0	20.3	20.7	21.4
Law	7.6	7.7	8.3	17.5	15.2
Education	6.9	6.3	7.9	7.2	8.7
Medical and veterinary	10.1	9.6	8.5	7.0	7.9
Arts and architecture	2.6	2.5	2.1	2.0	2.4
Social sciences	5.7	5.2	5.2	5.3	5.2
Economics	18.2	17.2	18.2	15.6	15.1

Source: Review team's calculations based on NSC (2008).

The number of postgraduate students is small compared with the number of undergraduates. Moreover, fewer than half of those enrolled as postgraduate students study full-time and the length of time taken to complete postgraduate studies varies widely. In 2006, about half of the postgraduate students in science and research institutions worked as well as studied (but this may well have been on other research projects in their own field). Only about 40% of the much larger number in higher educational institutions were full-time students.

It is striking to find that in spite of such low enrolment; roughly half of all higher educational institutions offer postgraduate courses. It was not possible for the review team to review postgraduate education, but such a thin spread among a very large number of institutions suggests that concentrating these in fewer HEIs would probably improve quality.

Research and innovation

The legacy

Today, in the Kyrgyz Republic, the organisation of Research and Development (R&D) continues to operate much as in Soviet times although with the additional constraint of very scarce resources. In the Union of Soviet Socialist Republics (USSR), the funding of basic research was mostly allocated to the institutes of the Academy of Science of the USSR and to national academies in the former republics on a central planning model. The funding for applied research and technological development was concentrated in the vast networks of institutes under the former branch ministries. Individual laboratories or researchers could not participate in grant competitions. Funding per researcher was low compared to the developed countries. However, there was a tradition of co-operation between scientists from the different Soviet republics which contributed to raising the standards of research in all former republics, including the countries of Central Asia. Some research was conducted in the science departments of the HEIs; however, except for a few prestigious universities in the European part of Soviet Union, HEIs were regarded as second-rate research organisations (OECD, 2007, Chapter 8).

The current situation

Since 1992, the three types of organisations which form the research sector in the Kyrgyz Republic, the institutes of the National Academy of Science, the applied research institutes under sector ministries and the HEIs have been doubly handicapped because of the inefficiency of the allocation of very scarce funding and because the inherited system is not responsive to the global realities of applied scientific research.

The National Academy of Science of the Kyrgyz Republic (NAS) reports to the Office of the Prime Minister. The primary function of the NAS is to foster economic development through basic research. It has three disciplinary oriented divisions, Technology, Health and Agricultural Sciences and Humanities. It also has one regional branch in the south of Kyrgyz Republic. Country wide, there are 26 institutes which form part of the Academy. There are, in addition, a number of institutes which are part of sector Ministries and which also receive funding for scientific research. One new Techno Park sponsors technology transfer and encourages applied research. In 2006, there were 3 287 researchers, technicians and assistants engaged in scientific research and development scattered throughout these institutes.

Financing of research

The share of expenditures for research and development has remained constant since 2004 at 0.12% of GDP. In 2008, that amounted to about USD 5 million.

Table 10.16. **Expenditure on science, in percent of GDP**

1990	1991	1995	2002	2004	2008
0.7	0.33	0.22	0.17	0.12	0.12

Source: Higher Education in Central Asia: W B p 126 and review team's calculation.

This research budget is spread very thinly: 65% goes to NAS, 24% to science board in MOES and 9% to the sector institutes.

Physics, chemistry and technology are priorities for research funding, followed by agriculture, health and biosciences and then humanities. Priority sectors are mining; hydro-electric power industries; forestry science and environment science. Co-operation with industry comes through “orders” for research. In 2008 NAS institutes received KGS 9.37 million from industry funded research.

Research activities in HEIs

Under the general management of the MOES and within the HEIs, are numerous Faculties of Science where research is carried out by academic staff and technicians. Scientists on the MOES payroll number approximately 5 000, of whom 650 are Doctors of Science and 3 000 are *Kandidat Nauk*. The Scientific Board in the MOES has established research priorities and funds about 20 areas of national importance. In 2005/06, EdNet in co-operation with other international organisations implemented the Central Asian Applied Research Network (CAARN) linking private /public sector with the research potential of university faculty and financed applied research projects of individual/group fellows. In 2008, some 500 projects were funded but by 2009, attempts have been made to concentrate funding in about 100 topics with better project monitoring. Agreed areas of research in HEIs are: energy efficiency; geothermal studies; healthcare; language research; nanotechnology and biotechnology.

Issues

- Low investment in science and research has resulted in poor and deteriorating equipment and instrumentation in research institutes and university laboratories. Current funding is not enough even to replace existing equipment.
- Career paths for scientists and researchers are virtually non-existent. Salaries are low and there are very small additional bonuses (if any) for research. The consequences are “brain drain” among the younger staff and the consequent aging of existing staff. In turn, fewer are choosing science as a career.
- There is a lack of co-ordination and a dissipation of activities among NAS, the HEIs and the various institutes that conduct research throughout the Kyrgyz Republic. Since 2006, intensive efforts are underway to improve the liaison between NAS and HEIs and to integrate their research activities. However, joint project work is often difficult because of the way that research funding is allocated in the Kyrgyz Republic. There are different streams of finance for HEIs and for NAS which often mean that one portion of the funding might be used for salaries and another for laboratory equipment. Serious inefficiencies ensue with inevitable consequences for the volume and usefulness of research activities.

Policy options

The function of the NAS has recently been the subject of a government review which resulted in suggestions that NAS should be abolished and its role and function be absorbed by the HEIs. The review team was informed that this proposal was rejected because of the fluid situation with many HEIs in the country which might have resulted in a less sustainable use of scarce research funds. It is also likely that it was rejected because of the institutional and personnel changes that would ensue.

In 2008, a restructuring process was initiated that resulted in mergers among some laboratories and institutes with the loss of 5 institutes overall. The evolution of NAS is still in progress with a focus now on greater flexibility in research activity in the institutes to ensure that projects can be initiated quickly and can also be terminated efficiently once the desired results have been attained.

Fundamental questions need to be answered about how research priorities are set with such small and dispersed funds for science and research coupled with the large and expensive infrastructure. Prioritisation both of

postgraduate studies and of research activities to meet the strategic economic needs of the small country is needed as is the rationalisation of the institutions. Experiences of other small countries such as Estonia and Ireland could be useful in this respect.

An inter-ministerial approach is needed to:

- Concentrate funding in a small number of institutes where well qualified staff could be located.
- Select projects which would yield national benefits in spite of meagre resources.
- Place emphasis on applied research rather than on basic research. High quality applied research which addresses real problems, while much more complex and more challenging than a lot of basic research, is usually educationally more valuable than conducting basic research without reference to any real-world applications. Basic research is usually freely available via the normal publication channels.
- As a priority, establish international linkages with universities where basic and applied research that is relevant to Kyrgyz priorities is being conducted.

Conclusion

The review team recognises that the MOES and institutional leaders are confronted with a series of profoundly difficult challenges that go to the heart of teaching, learning and research in Kyrgyz HEIs. The problems are urgent and complex. The task facing policy makers is to prioritise interventions that would be realistic in such difficult budgetary circumstances. This chapter concludes by suggesting some priority policy directions.

There is a pressing need to modernise higher education so that it can respond to the needs of a small economy for educated human capital while also meeting the needs of individuals and of Kyrgyz society. In order to do that, the capacity of the MOES to steer the higher education system must be strengthened. Hard choices will need to be made about the purpose and number of existing HEIs, many of which are unsustainable. A universal admission test that can be trusted by all stakeholders is required; the existing testing system (the ORT) can fulfil that task with some additional modifications. Robust accountability and quality assurance mechanisms whereby HEIs can reassure students and their families about the value of the education process will go a long way to address current widespread worries about corruption in the admissions and degree granting process. The review team recognises that it will be exceptionally difficult to improve conditions for

teachers and researchers given their current low salary. Nonetheless, savings could be made from a rationalisation of the existing resources (including administrative staff and overheads) and used to improve conditions for academic staff.

At the same time as a vision and a strategy for higher education are developed, a policy is needed to recognise heterogeneity and multiple pathways through the system and to improve the responsiveness of third level education to the economic strategy of the country. This policy should be developed with second level vocational education to encourage the emergence of a strong binary tertiary level.

Given the problems with funding science and research, one choice might be to concentrate scholarship and research on selected professions of national importance such as education, history and language and to use donor support for international fellowships in science and technology. However, the development of such a policy goes beyond the scope of this chapter as it requires input from a wider group of stakeholders and government.

Summary of recommendations

Strategy and governance

- MOE should take leadership in the development of a national strategy for higher education building on the modernisation plans that have been started as part of the alignment with the Bologna process.
- The national strategy should address the size and efficiency of the sector and should ensure optimal use of resources including buildings and equipment, resulting in the reduction of course duplication and achieving economies of scale.
- The development of a heterogeneous system incorporating second level VET colleges and creating pathways through tertiary education should be encouraged
- Education statistics should be compiled by MOES to assist with evidence-based policy making.
- Measures to improve institutional accountability should be developed and agreed among the Council of Rectors and HEIs. This could include HEIs strategic and financial management plans according to a reporting format agreed as part of the accreditation process.
- Incentives for HEI management should be put in place to encourage the improvement of quality and relevance as well as the efficient use of resources.

Financing

- The existing scholarship allocation system should be reformed to ensure that students who enter third level education for teacher training complete their course in that subject.
- The rural and small town weighting should be removed from (a percentage) of existing scholarships schemes. Students who are successful in the ORT should be allowed to choose their own course of study.

Admissions and equity

- The **existing** testing system (the ORT) should be retained for selection purposes as it is both transparent and fair. The ORT could be further strengthened by expanding the Subject component of the test to better reflect student attainment and competencies in relation to national curriculum standards and goals. This would allow students the opportunity to demonstrate their mastery of content in specific subject areas, and would provide HEIs with a dependable, standardised measure of a student's preparation for college-level work in particular subjects.
- In the longer term, the option of an improved school leaving examination which would address the issues of fairness, test the knowledge acquired by students and would serve all stakeholders (students, schools, universities and employers) could be explored further. However, the current worries expressed about the security and fairness of such examinations, as well as about the considerable resources required both to design and administer them, would need to be addressed for this to be a viable option for the Kyrgyz Republic

Quality

- The establishment by the MOES of the proposed independent National Accreditation Council covering all levels of the post secondary system is the most important immediate step to improve the quality of higher education.
- The review team would also encourage the continuation of the plans to harmonise degree programmes to align with the Bologna Process. Key priority actions should be efforts to achieve employer familiarity with and recognition of Bachelor and Masters Degrees.
- The development and introduction of the proposed National Qualification Framework would greatly facilitate degree recognition and career progression.

Relevance

- MOES should work with the Ministry of Labour to collect, analyse and disseminate labour market information. This information needs to be easily available to school leavers and their parents.
- An accessible and affordable information system needs to be developed that would include data about student outcomes from all courses run by HEIs, including employment data that could be obtained through Graduate Tracking Surveys.
- The existing Career Centres should be expanded for all HEIs.
- HEIs should systematically involve employers in curriculum design and in the operation of the Career Centre.

Science and research

- An Inter-Ministerial approach is needed to:
 - Concentrate funding in a small number of institutes where well qualified staff could be located.
 - Select projects which would yield national benefits in spite of meagre resources.
 - Place emphasis on applied research rather than on basic research. High quality applied research which addresses real problems, while much more complex and more challenging than a lot of basic research, is usually educationally more valuable than conducting basic research without reference to any real-world applications. Basic research is usually freely available via the normal publication channels.
 - As a priority, establish international linkages with universities where basic and applied research that is relevant to Kyrgyz priorities is being conducted.

Notes

1. Using an average exchange rate of USD 1 = KGS 40.
2. The MOES is regulated by the Resolution of the Kyrgyz Government No. 10, 11 January 2006. For a full list of MOES functions, see also the Law on Education, 2003, Article 35.
3. All other revenues of the educational organisation shall be controlled by the board and social institutes” (Law on Education, 2003, Article 44).
4. Usually, about 46 or 47 students are from Bishkek city (High Schools No. 13 and No. 61); one from Osh; while sometimes (rarely) one or two very talented students from rural areas success in getting one of the “50” top places and consequently their choice of courses.
5. There are 8 branches of foreign universities in Kyrgyzstan, all of which are Russian. Some of these universities issue Kyrgyz diplomas and degrees and must comply with the attestation and accreditation requirements of the MOES. Those which issue Russian standardised diplomas are not monitored and controlled by the Kyrgyz Ministry of Education.

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Chapter 11

Conclusions and strategic recommendations for action

This chapter summarises the main findings of the report and the factors that the team considers to have led to the unsatisfactory PISA performance of Kyrgyz students. The chapter lists discreet recommendations with the aim of highlighting a number of overarching, strategic directions for reformative action. The focus should be on improving the quality of the education provided, and on ensuring that administrators and practitioners have the capacity to meet their responsibilities.

Since independence (1991) the Kyrgyz Republic has faced significant challenges in establishing a new political structure, coping with a greatly changed economic environment, and building a new civic and social order. Its population of about 5.2 million is comprised of mixed ethnic origin, mixed linguistic traditions and mixed religious allegiance. The country is a land-locked one in Central Asia endowed with spectacular natural features, but with limited arable land. Unlike some of its neighbours, the Kyrgyz Republic does not benefit from natural resources such as oil or gas. However, it does have reserves of hydro-power and gold which, with agriculture and services, have been the main driving forces of the economy. In facing its challenges, the Kyrgyz Republic has established itself as a respected member of the international family of nations, with links to international agencies such as the UN and the World Bank. It has established links with, and benefited from relationships with donor countries and agencies in addressing some of its socio-economic problems. It retains co-operative links with Russia. Migration is a traditional feature of Kyrgyz society, many workers emigrate, at least temporarily, to countries such as Russia and Kazakhstan.

The education system of Kyrgyzstan was moulded in the Soviet model of education and this has cast long shadows over an education system in transition since the early nineties. To achieve major educational reform in any country has been shown to be a complex and time-consuming process. Education attitudes, patterns, and behaviours tend to become deeply rooted and habituated. To re-orient them successfully on radically different tracks calls for sophisticated policy, good resources, competent leadership and time.

The Kyrgyz Republic has set its sights high for educational reform throughout the life cycle from early childhood to higher and adult education. It seeks to drive the education process in new directions for all aspects of the education system.

In recent years, its aspirations have been set out in a number of documents such as the *Country Development Strategy (CDS) 2007-2010* and the draft *Education Development Strategy (EDS) 2011-2020*. To date, there has been a gap between policy aspirations and the achievement of major reform. The state has made admirable strides in the quantificatory provision of educational opportunities for a large proportion of the population. Significant lacunae still exist in this context, particularly in areas such as early childhood education, and educational provision for special needs children. However, the biggest challenge remaining is to ensure that the education provided is of good quality and in keeping with the high desire of the general public for worthwhile education.

From their policy documents it is clear that the Kyrgyz authorities view the achievement of their reform plans as a gradual process. What is crucial is the quality of the policy process that guides the way forward, and the

maintenance of a sustained consistency in the implementation process. If the policy is subject to the vagaries of a fast-changing succession of administrations then the prospects of success became greatly imperilled. Modification or adaptability of policy lines, in the light of changing circumstances forms part of good policy-implementation, but that is a very different thing from policy being driven off-course by initiatives which are not thought through, or not in alignment with the agreed thrust of policy. When policy is arrived at following a good deal of consultation and consensus-building with key stakeholders then it can have in-built stabilisers which cope with periodic buffeting. There is no “quick fix” in educational reform, and sustaining the long-term view is important for ultimate success.

Educational policy for the future in Kyrgyzstan needs, in the first instance, to be based on accurate facts, data and statistics. The establishment of an accurate data base is a pre-requisite for insightful analysis of the issues and problems which exist. The analysis needs to bear in mind a host of cognate aspects of the cultural, social and economic environment. This helps to make informed and targeted recommendations for action. These are the processes in which the review team has been engaged. The team sees itself working very much in association and co-operation with the Kyrgyzstan authorities. It hopes that its work may be of worthwhile assistance to the authorities at this time, as they are re-shaping educational policy. It seeks to set out a road-map to guide them in their work. The team hopes that the content from Chapter 2 to Chapter 10, which deal with many aspects of the educational system, will be of direct value to them. The team recognises that financial resources available are not sufficient to allow for simultaneous action on all recommendations. The Kyrgyz authorities will establish their own priorities for implementation. However, the review team would hope that the review would provide a continuous framework of reference for the on-going reform process. In this way, the reforms could be seen as forming a holistic plan for the renewal and development of the overall education system.

The review team is conscious of its limitations in understanding all the contextual factors and cultural issues involved in a country of which almost of them is a citizen. While the team has been painstaking in its site visits, its many interviews and discussions and its study of extensive documentation, its view is that of external observers. But a strength of this is that the reviewers examine the issues without preconceptions or over-familiarisation, and can view them in the light of their international experience. This international perspective should provide added value to the appraisal of issues for the Kyrgyz authorities.

The team is aware that some of its recommendations are in close alignment with policy perspectives of the Republic’s authorities. Where this occurs, the external view may help to collaborate and consolidate the internal policy lines, and may assist in their realisation. Other recommendations may have

a more novel dimension, or may be indicative of new approaches which, it is hoped, may enrich the policy deliberations of the authorities. The various chapters have examined different aspects of the education system and make recommendations with regard to them. The context, analysis and rationale for the recommendations are located within the individual chapter. The recommendations are clustered at the end of the relevant chapter and are best understood in relation to that chapter's content.

This chapter summarises the lists of discrete recommendations with the aim of highlighting a number of overarching, strategic directions for reformative action. Some proposals, if accepted, could be put into practice in the near future, while others will require a longer timeframe. There are two underpinning themes in the recommendations: a concentrated focus on improving the quality of the education provided, and ensuring that administrators and practitioners have the capacity to deliver on their responsibilities.

Governance, financing and management of the system

To its credit the Kyrgyz Republic has increased its expenditure on education from 3.9% of GDP in 2001 to 6.5% in 2007. As a share of total public expenditure, it has been well over 20% throughout that period. One of the key concerns of the review team was to try to ascertain where the money was going, and why a greater return in terms of quality education was not being achieved. A significant factor is the high proportion of the population, at 37%, that is under 18 years of age and hence, puts a heavy burden on the schooling system. The per-capita expenditure per student as a fraction of GDP is below the international average. The Kyrgyz Republic has inherited a tradition of employing large numbers of teachers at relatively low salary scales. Pupil teacher ratios and teacher contracted hours are generous by the standards of developed countries. A range of problems has arisen affecting the teaching career which calls for a radical re-appraisal of current policy.

In principle, the MOES, as the central governmental agency for education, is the focal point of educational policies and system management. The *rayons* and municipalities have direct responsibility for all the educational institutions on their territory. In 2002, budgetary responsibility for almost all educational institutions was devolved to the newly-created *aiyl-okmotus* (local government administrations), but these do not have responsibility for the education process, in the institutions. While the EDS 2011 and the draft EDS 2020 set out an ambitious education reform agenda, there are serious concerns about the lack of capacity within the MOES to assess the systems' needs and to monitor reform implementation. The decentralisation process of recent years has added to the problem. It is the Ministry of Finance which has responsibility for the education budget and which distributes it to the

aiyl-okmotus. There are no provisions allowing the MOES to have insight into the overall education spending and/or exercise internal control of this. The financial reports for the entire education sector are collected by the Treasury. MOES is lacking accurate and up-to-date information on the execution of parts of its own budget as well, namely on donor supported education spending, which is quite significant. There are also concerns about the reliability and quality of the vast amounts of information on education spending kept by the Treasury / the MOF.

The planning process follows an explicit top-down approach, facilitated by the dependence on external expertise and funding, but with limited stakeholder involvement. None of the indicators used in formulating the budget has a qualitative dimension, focusing on educational outcomes. The budget's role as a governance instrument is weakened at the implementation stage by considerable departures from the programmed budget. Schools have very limited possibilities and incentives to use resources in a flexible, cost-efficient way.

An important reform regarding the allocation of public funding in education was the introduction of per-capita financing (PCF) in 2006-07, which is being extended to other areas. Under this scheme schools receive their resources as a function of the service they provide, and not on inputs used. The PCF promotes savings on unnecessary expenditures and more cost-effective use of resources, as well as promoting other efficiency gains.

The following is a summary of the review team's recommendations.

- The capacity of the MOES must be strengthened so that it can be responsible for the definition, allocation and monitoring of all educational transferences and be enabled to integrate pedagogical with administrative policies. Analytical capacities should be expanded through access to information from all relevant institutions, in particular the MOF, and through a better mobilisation of the analytical resources currently resting with the KAE for reform planning processes.
- The per capita funding scheme for schools should be scaled-up gradually to cover the whole system and the capacity of school personnel and Ministry staff should be developed to secure maximum benefit from the scheme.
- It is important to politically support the rationalisation of the school network and the financing system must give more resources to the most vulnerable and disadvantaged pupils.
- A new process of identification of priorities and timing would help to produce a strategic report more suitable for budget programming purposes than recent approaches.

- Goals and indicators should be integrated in the budget process from the initial phase of discussing priorities and formulating the budget all the way through the evaluation phases.
- The development of the system of internal monitoring, control and evaluation and the integration with budgetary planning are essential for improving efficiency. The control, monitoring and auditing system must be adapted to the new funding mechanism.
- All investment projects should pass a technical and economic evaluation, the first to ensure the project's adequacy and conformity to educational standards and population needs, and the second to check its desirability in terms of social return. These evaluations must be formal and compulsory.
- The Ministry of Finance should give advance notice on the availability of funds to the agency in charge of the final decision as to which development projects should be financed among those that have been passed by the evaluations.

Early childhood care and pre-school education

For a variety of reasons there has been a decline in the provision of early childhood education in the Kyrgyz Republic since the Soviet era. The Republic is keen to reverse this trend, and a notable indication of this has been the approval by Parliament of the new Law on Pre-School Education, on 30 April 2009. Over recent years, Kyrgyzstan has liaised effectively with a number of donor agencies and NGOs in promoting good international practice in relation to early childhood education. Significant guidelines and standards for the education and care of young children have been set forth in documents such as the “Code of the Kyrgyz Republic on Children” (2006) and the State Standard on Pre-School Education (2007). The key challenge now is the implementation of the policy so that, over time, new generations of young children in Kyrgyzstan may benefit from the improved quality of care and education that is envisaged. To help bring this about, the review team recommends:

- The designation of one “lead” Ministry or agency to oversee and coordinate the currently fragmented services for young children.
- The introduction of a properly planned and financed “Zero Year” for all children of pre-primary age should be seriously considered.
- Specific care should be taken so that young children in remote areas, of poor parents, or with special needs are not left behind with regard to ECEC.

- With the assistance of international organisations and NGOs, revisit the pre-school curriculum, set up under the state standard, with a view to making it more flexible for individualised teaching and learning.
- Strengthen and modernise pre-and in-service training for pre-school teachers and strengthen the capacity at *rayon* level to monitor and improve teaching quality.

Curriculum, textbooks and learning materials

Despite some attempts at reform, the conceptual basis and the structure of the curriculum in operation remain, largely, those inherited from Soviet times, as are the ways in which the curriculum is taught and assessed. Among problems which exist are the overcrowded character of the curriculum; the narrow subject-based and academically oriented conceptual framework; the lack of balance, with a heavy load of languages; insufficient time for practical, creative, or integrated learning; and limited student choice. There is a major problem in the inadequacy of textbooks to support the curriculum. There are not enough textbooks in schools, and those that are there, are often out-of-date, in poor condition and out of line with the curriculum. These problems highlight core concerns relating to the quality of the education available to pupils in schools. To help remedy such problems, the review team recommends:

- A National Curriculum Framework that provides a coherent view of overall educational objectives for each major stage of education should be designed and agreed as soon as possible. It should incorporate a “minimum” national core curriculum that is compulsory for all, and a school-based curriculum with “variants” that is determined by the school within certain guidelines.
- The curriculum should incorporate fewer subjects, but studied in more depth. Standards and indicators should be aligned with international standards.
- A feasible multi-year plan for textbook renewal should be agreed, and the textbook rental scheme should be revived.
- An agency should be clearly identified which has the responsibility for each stage in textbook and learning materials development, and the authority for approval and procurement, with the objective of simplifying and speeding up the entire process.
- A basic “library package” should be made available for all schools with reference books and general readers. Simple story books should be made available for pre-school and early primary grades.

Assessment and examinations

While pupil assessment is an in-built, regular feature of schooling in the Kyrgyz Republic, it tends to be based on accurate recall of the textbook content or teacher input rather than on how well the pupil is able to apply or analyse the material, based on an understanding of it. There is a heavy emphasis on the accurate reproduction of factual data. Undue emphasis is placed on coaching the small percentage of high-ability students for success at the “Olympiads”, with insufficient attention to the needs of the average and the low-achievers. The review team considers that it is crucial for the Kyrgyz Republic to establish standardised educational goals and a standardised assessment system. Formative assessment should be used to build pupils’ self-confidence based on realistic levels of achievement. Many problems exist with the current national examinations which are taken at grades 9 and 11.

- The promotion examinations at the end of grades 5, 6, 7 and 8 should be abolished.
- The exit examinations at grades 9 and 11 should be fundamentally changed along suggested lines.
- The Kyrgyz Republic should continue to take part in international comparative studies such as PISA, in addition to its own national sample-based assessments (NSBAs).
- A close link should be established between the outcomes of assessment and educational policy and practice.
- All teachers should be trained in the use of formative classroom assessment.

Access and equity

While the access of children to schooling provision is very good in the Kyrgyz Republic, the key problem is the inadequate quality of the education to which they have access. While parents’ concern to ensure the education of their children is admirable, it is also calculated that about 4% of school age children (approximately 35 000) are not attending school at all, or not attending regularly. It is also estimated that about 30 000 young people leave school completely after basic school, with inadequate skills to cope in the labour market. The categories of children which face most difficulties with regard to participation in the education system are the children at risk, children with special educational needs, and those with disabilities. At policy-making level in the Kyrgyz Republic there is a concern to cater for such children but, in practice, inclusive education is not a priority in terms of government funding. There is lack of funding for SEN/CWD. The processes for dealing with these

children are complex and bureaucratic. Furthermore, the various ministries and agencies responsible for special needs and disabled children do not co-ordinate their work, or share information in an efficient manner. The safeguards to prevent what may result in irreversible referrals of children, based on inadequate evidence, are weak. The need for special education places far outstrips supply.

- The quality and availability of data on pupil attendance, transition and drop-out needs to be improved, and labour market oriented training needs to be provided for early school leavers.
- The Kyrgyz Republic needs to plan for improved provision for the educational needs of children with SEN/CWD so as to meet its national and international legal commitments in this regard. This will require increased funding.
- Assessment and registration procedures need to be simplified, and unnecessary bureaucratic barriers should be eliminated.
- Health, education and welfare policies need to be better co-ordinated at national, *rayon* and *aiyl-okmotu* levels.
- Placing a child in a special school or an institution should be only as a last resort. The aim should be to keep children with their families and to provide support services that are affordable, accessible, inclusive and community-based.

Vocational education and training (VET) and adult education

There are two stages of vocational education and training in the Kyrgyz Republic. Initial professional education (VET I) is administered by the State Agency for Professional-Technical Education (SAPTE), and Secondary and higher professional education (VET II), is administered by the MOES. This institutional separation reflects a conceptual separation of the purposes of each; VET is not seen as a seamless, sequential process. There was a decline in the numbers engaged in VET during the transition era from the early 1990s, but there is evidence of increasing participation over recent years. However, the fact that about 30 000 pupils leave school after basic education signals that there is a greater role for VET I schools. VET I schools need to cater for the needs of a wide range of users, which poses challenges for their traditional provision. While only a minority of places in VET II schools are financed by public budget, there has been a significant growth in students entering VET II, although this has not been matched by the numbers graduating. The predominant subjects undertaken by students in VET II are in healthcare, economics and management.

The review team formed the impression the VET is at a crossroads in the Kyrgyz Republic. Key strategic policy decisions are required to ensure

that the country benefits to the optimum from its VET provision. The recommendations of the review team are aimed at supporting the efforts already underway for the improvement of VET.

The broader area of adult education also requires focussed attention. A particular problem relates to the age group 15 to 29 years, who form half of the unemployed, while accounting for only 37% of the active population. The transition to a market economy has meant the decline of state-owned enterprises and the loss of traditional jobs, and gives rise to a major re-training challenge. The law and other educational policy documents in the Kyrgyz Republic recognise the importance of lifelong learning, and the country is a signatory to international agreements related to adult education. However, sustained efforts are needed to build the capacity to provide adult education through appropriate methodologies, and to disseminate good practice to all licensed providers.

- VET should focus on the lifelong development of citizens whereby basic and social skills and competences are developed in combination with technical-professional skills.
- The introduction of modular learning, a credit system for vocational education, recognition and certification of learning, and a national qualification framework should be policy initiatives for VET and lifelong learning.
- The VET sector strategy needs to incorporate reliable monitoring, transparent reviews, political support, stakeholder consultation, and be linked to mid-term macro-economic and expenditure frameworks.
- An operational platform should be established for co-operation and co-ordination of reforms, and for new technical developments that are relevant for both initial and secondary VET.
- Career information and guidance need to be given much more attention in education and employment policies, coupled with reforms of information data on the labour market.
- The establishment of a comprehensive qualifications framework would provide valuable linkages between VET I and VET II, as well as improving student mobility within a lifelong learning policy.
- To revitalise the adult learning agenda, sustained efforts are needed to help public VET providers adopt suitable adult education methods and to support the dissemination of good practice.
- Partnership should be the *leitmotif* for policy: private – public, and public – private partnerships at macro, intermediate and local levels that create synergies of scarce resources and share responsibility and inputs.

The teaching career and teacher education

Teaching as a career in the Kyrgyz Republic is experiencing major problems which, if they are not addressed, will undermine other efforts at educational reform. Following political independence, the remuneration and conditions of employment of teachers deteriorated significantly. Despite good percentage salary increases in recent years, teacher's salaries only amount to about 60% of the average wage. A number of pilot projects, undertaken with donor assistance, hold promise for improving teacher conditions, but they need to be mainstreamed. Teacher contract hours and pupil teacher ratios are more favourable in the Kyrgyz Republic than in many richer, developed countries. Recruitment of high-quality candidates into teaching is very inadequate, and the retention of good teachers in the career is proving very difficult. Women provide the vast majority of the teaching force, which is also an ageing profession. The review team noted that while older teachers with whom they met expressed their commitment to teaching, they also considered that their role was under-valued by society and they would not recommend teaching as a career for ambitious young people.

Pre-service teacher education is provided by a diverse range of institutions and varies greatly in quality. Furthermore, about 60% of teachers obtain this pre-service training through distance education, involving attenuated links with the institutional providers. In-service teacher education had been a more structured part of the teachers' careers in the soviet era. Efforts are being made to re-establish such provision, but there needs to be a re-appraisal in terms of its content, methodology, evaluation and staffing.

- A comprehensive, co-ordinated policy on the teaching career, based on a consultative approach, should be drawn up, with teacher remuneration as a core issue.
- The teaching career should be re-structured resulting in a smaller teaching force, but a better paid one, with greater accountability.
- The role of school principals should be newly defined, and they should be better trained and remunerated for the role.
- The licensing and accreditation of teacher education institutions should be conducted by an independent agency, in a more rigorous manner.
- A new framework for pre-service teacher education should be introduced, together with a raising of entry standards to teacher education.
- The Teacher Training Institutes (TTIs) should undergo periodic quality assurance processes, and in-service courses provided should be close to the contemporary needs of schools and delivered by expert practitioners.

Higher education and research

One of the striking features of higher education in the Kyrgyz Republic, over recent years, has been the large increase in student numbers, almost half of them studying a distance education model. Enrolments increased from 10% of the age cohort in 1992/93 to about 48% in 2006/07. Higher education has become hugely dependent on private fees. Despite this, the state exercises tight controls on most aspects of the provision of higher education in public HEIs. There are over 50 higher education institutions, many of them with “structural subdivisions”.

The overall staff student ratio is approximately 18:1. Staff tend to have heavy teaching loads, but salaries have been traditionally low. About a quarter of staff have doctoral degrees.

State expenditure on higher education only amounts to about 1.0% of GDP. In 2008-09, 17.8% of student entrants to higher education benefited from state scholarships, with the majority going to teacher education students. Thus, the participation of the majority of students depends on their ability to pay the fees.

While the government has embarked on a programme to align higher education with the Bologna Declaration, so far, the vast majority of undergraduate programmes still follow the traditional five year specialisation model. The government also plans to establish a full and independent licensing and accreditation service from the current one exercised by the MOES, which is under strain. However, it is estimated that only about 20% of universities are ready for such a form of quality assurance at present.

Investment in research is low and there is a lack of co-ordination among the institutions which engage in research. Equipment and instrumentation in research institutes and university laboratories have been deteriorating and resources do not exist to replace equipment. The salaries for scientists and researchers are low, with very inadequate career paths. The proportion of the overall student body who engage in postgraduate study and research is very small, at about 1%.

There is a pressing need to modernise higher education so that it can respond to the needs of a small economy for educated human capital, while also meeting the needs of individuals and Kyrgyz society. The review team recognises the difficult challenges involved, and which go to the heart of teaching, learning and research in the Kyrgyz HEIs. The following are key recommendations for the way forward.

- The MOES should take a leadership role in the development of a national strategy for higher education building on the modernisation plans that have been started as part of the alignment with the Bologna

process. This strategy should address the size and efficiency of the sector and ensure optimal use of resources, including buildings and equipment.

- Measures to improve institutional accountability should be developed and agreed among the Council of Rectors and the HEIs, with incentives for HEI management to improve quality and the efficient use of resources.
- The existing testing system (the ORT) for selection into higher education should be retained. It should be further strengthened by expanding the subject component of the test to better reflect student attainment and competences in relation to national curriculum standards and goals.
- The establishment by the MOES of the proposed National Accreditation Council, covering all areas of the post secondary system, is the most important immediate step towards improving the quality of higher education.
- The development and introduction of the proposed National Qualifications Framework would greatly facilitate degree recognition and career progression.
- The MOES and the Ministry of Labour should collect, analyse and disseminate labour market information, and the HEIs should expand their Career Centres and involve employer input.
- An Inter-Ministerial approach should be undertaken to concentrate research funding in a small number of institutes where well qualified staff could be located.
- Research projects should be selected in line with national priorities, and with an emphasis on applied rather than basic research.

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

The OECD is a unique forum where governments work together to address the economic, social and environmental challenges of globalisation. The OECD is also at the forefront of efforts to understand and to help governments respond to new developments and concerns, such as corporate governance, the information economy and the challenges of an ageing population. The Organisation provides a setting where governments can compare policy experiences, seek answers to common problems, identify good practice and work to co-ordinate domestic and international policies.

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THE WORLD BANK

The World Bank is one of the world's largest sources of funding and knowledge for developing countries. The World Bank is not a bank in the common sense, but a group of 5 development institutions, owned by 185 member countries, playing a different but collaborative role to help developing countries reduce poverty, increase economic growth and improve their quality of life.

In particular, the International Bank for Reconstruction and Development (IBRD) focuses on middle income and creditworthy poor countries, while the International Development Association (IDA) focuses on the poorest countries in the world. Together they provide low interest loans, interest-free credits and grants in support of education, health, public administration, infrastructure, financial and private sector development, agriculture, and environmental and natural resource management. Since its establishment IDA has provided credits and grants totaling \$161 billion. In fiscal year 2008, IBRD provided loans equivalent to \$13.4 billion and IDA credits equivalent to \$11.2 billion.

Reviews of National Policies for Education

Kyrgyz Republic 2010

LESSONS FROM PISA

The Programme for International Student Assessment (PISA) is a highly influential instrument for monitoring the quality of education systems and provides a strong evidence base for informed policy making and education research. PISA also has a proven potential to trigger reforms and stimulate stakeholder involvement in the process.

Notwithstanding the importance of its ranking, the full strength of PISA unfolds when data it delivers is utilised in the national policy domain. Linking PISA outcomes and policy choices, and monitoring the impact on education quality is thereby a demanding task, which requires sound analytical capacity, and also knowledge of the strengths and weaknesses of the respective education system. The OECD Directorate for Education addresses the demand of non-member economies for policy support in understanding and analysing PISA data in the broader context of education system management and policy formulation.

The present report was prepared to help the authorities of the Kyrgyz Republic better understand the reasons for the dramatically low performance of Kyrgyz students in the 2006 PISA survey, despite significant resources and efforts invested in education by schools, parents and government. The report reveals that a number of policy areas are in need of urgent attention and recommends ways to close the currently existing gap between aspirations and education reform achievement.

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