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AN OVERVIEW: SCHOOL EDUCATION IN KYRGYZSTAN: WHAT IS TO BE DONE?

This Overview was prepared based on analysis of open statistical data (both national and international), government documents defining strategic directions for the development of education sector in the Kyrgyz Republic, school education programmes, legal and regulatory acts, and research studies (as per attached list). In addition, this Overview took into account the results of discussions of the main issues raised herein with experts, specialists and persons interested in improving the quality of school education in Kyrgyzstan.

The purpose of this Overview is to demonstrate that:

- The state of the economy and poverty in Kyrgyzstan are attributable, among other factors, to the low level of functional literacy of the vast majority of the adult population of the country;

Minimum literacy is the ability to read, write and count. Functional literacy is the ability to apply knowledge, skills, and abilities to solve a wide range of life problems.
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- The low level of functional literacy of the adult population is largely due to the poor quality of school education;
- The poor quality of school education in Kyrgyzstan is attributable to a number of factors, the key ones being: teacher quality and teaching quality; weak management capacity at all levels of education; a lack of modern approaches to school management and financing;
- The entry points for launching systemic changes on the way to better quality of school education must be as follows: a) changing approaches to school management and financing, including the introduction of school voucher mechanisms b) changing the teacher training and professional development system;
- Better quality of school education has a direct impact on adult literacy level, increases in worker productivity, and economic growth.

1. KYRGYZSTAN

DEMOGRAPHY, POVERTY, ECONOMY

- i. The current population of Kyrgyzstan is 6.6 million, two-thirds of whom live in rural areas. 30% of the population are under age 15. The average age of a Kyrgyz citizen is 27.5 years. By 2030, the total population may reach 7.5 million. The share of the young population will increase.
- ii. About 2.2 million people live in poverty and extreme poverty. About 1 million people are involved in labor migration. The vast majority of migrant workers are occupied in low-skilled jobs.
- iii. In 2020, Kyrgyzstan's economy ranked 151st out of 181 in per capita income. GDP per capita in Kyrgyzstan (\$1,173) is almost 8 times less than in Kazakhstan, 9 times less than in Russia, and 20 times less than in Estonia.

2. WHY ARE WE POOR?

LOW LEVEL OF FUNCTIONAL LITERACY, LOW LABOR PRODUCTIVITY

- i. As shown by the findings from the 2018 skill survey for the adult Kyrgyz population (the Programme for the International Assessment of Adult Competencies, PIAAC), almost 60 percent of adults scored *"at or below level 1"* in literacy and numeracy (there being three levels in total, with level 2 being considered the minimal proficiency level). This means that 60% of adults in Kyrgyzstan have, at best, ***"knowledge of and are able to recognize basic vocabulary, determine the meaning of sentences, and read paragraphs of short texts,"*** and are, at best, able to engage in ***"simple processes involving counting, sorting, performing basic arithmetic operations"***. In comparison, only 25 percent of adults in Europe and Central Asian countries score at or below level 1.

<p>The Programme for the International Assessment of Adult Competencies (PIAAC) assesses professional skills and competencies of working-age adults in countries around the world. Competencies are understood as a combination of skills, knowledge and attitudes which are applied by people of working age in the real-life situations in order to achieve certain individual and/or collective goals.</p>

- ii. Almost 98% of adults in Kyrgyzstan scored in *"problem solving in a technology-rich environment"* (information and communication technology skills) *"at or below level 1"* (there being three levels in total, with level 2 being considered the minimal proficiency level). This means that 98% of adults in Kyrgyzstan have only ***"basic skills involving the use of widely available and familiar technology applications, such as email software or web browsers"***.
- iii. Labor productivity of workers in Kyrgyzstan (output per worker per unit of time) is the lowest among European and Central Asian countries. For example, labor productivity is 4 times lower in Kyrgyzstan than in Russia and Kazakhstan, and 5 times lower than in Estonia.
- iv. The human capital index of Kyrgyzstan is 0.58, which means that a child born in Kyrgyzstan today will be 58 percent as productive when she grows up as she could be if she enjoyed complete

education and full health.

- v. In Kyrgyzstan, the difference in earnings between adults with tertiary and secondary education is only 9%, while in OECD countries this difference, in average, ranges from 50 to 100 percent. (OECD is the Organization for Economic Cooperation and Development with 37 member countries in Europe, Asia and Latin America). One of the reasons for this may be the poor quality of tertiary education.

Every year about 50,000 young people enter the labor market, with employers experiencing a great shortage of qualified personnel. According to experts' estimates, the most effective and shortest way to improve the skills of young people entering the market is to improve the quality of education.

3. WHY ARE FUNCTIONAL LITERACY AND LABOR PRODUCTIVITY LEVELS AMONG ADULTS LOW?

Despite certain achievements in the school system (increase in school enrollment, increase in number of kindergartens and schools, increase in government spending on education, increase in teacher pay, increase in provision of textbooks, computers, Internet access, etc.), the quality of school education remains low.

LOW LEVEL OF SCHOOLING

- i. There are 1 million 350 thousand school students in Kyrgyzstan, i.e. almost every fifth resident of our country is a school student. About 6 percent of school-age children do not attend school due to health or financial problems, many of them are children of labor migrants.
- ii. According to international and national student assessment systems, an average of 60 percent of school students do not achieve the basic reading, mathematical and scientific literacy level. This means that ***students can read, write, count, but may not understand what they have read and may not apply what they have learned.***

For example, for students who underwent literacy tests, drawing conclusions, reasoning and problem solving were the most challenging tasks. Students struggled with formulating their own thoughts, providing evidence and examples, and drawing conclusions when answering open-ended questions. The lowest results were achieved by school students in natural sciences - physics, chemistry, geography and biology. 15-year-olds in Kyrgyzstan are about 4.5 grades behind their peers in OECD countries.

Kyrgyzstan was 65th out of 65 participating countries in PISA 2009, with a score of 314 points. Kyrgyzstan plans to participate in PISA 2025.

According to the Education Development Program of the Kyrgyz Republic (approved by the Cabinet of Ministers of the Kyrgyz Republic in May 2021), Kyrgyzstan is expected to improve its average PISA score by 15 points by 2040. Thus, this means that Kyrgyzstan's ranking will scale up to 50th rank by 2040 as compared to the 65th position in 2009. In the PISA 2009 ranking, the 50th position was taken by Thailand (421 points)

(Kyrgyzstan then ranked 65th with a score of 314 points). In 2018, the 50th position was taken by Cyprus (424 points) (Kyrgyzstan did not participate in PISA 2018). Respectively, it is assumed that Kyrgyzstan's goal is to achieve a score of 420 points.

Estonia, which improved its rank from 13th in 2009 (501 points) to 5th in 2018 (523 points), makes an interesting case.

- iii. Teaching quality in rural schools significantly lags behind teaching quality in urban schools. According to the National Assessments of Educational Achievement of Students, in 2017, in rural schools, about 70 percent of fourth-grade students did not achieve the basic proficiency level, in Bishkek schools, this percentage is 43.
- iv. The backlog of children in schools is directly influenced by the low pre-school enrolment. Thus, only 22.2 percent of children aged between 3 and 5 attend kindergartens.

4. WHY IS THE LEVEL OF SCHOOLING LOW?

4.1. Teachers

«The quality of an education system cannot exceed the quality of its teachers»

- i. There are 82,000 teachers in Kyrgyzstan, two-thirds of whom work in rural areas. About 85 percent of teachers are female. Almost half of teachers are approaching or have reached the retirement age (50 years and older), and may leave the system in the next decade.
- ii. Studies in many countries show that the decent salary for a teacher must be at least equivalent to the national average salary.

In Kyrgyzstan, the average monthly salary in the education sector (this includes salaries of teaching and non-teaching staff of public and private educational institutions, as well as academic institutions), is about 20 percent below the national average salary and almost 40 percent below the average monthly salary in the public administration sector. For example, in 2020, the average monthly salary in the education sector was 14,764 soms, the national average monthly salary was 18,940 soms, the average monthly salary in the public administration sector was 22,879 soms.

- iii. Every year the country falls short of about 2,000 teachers. There is a particularly acute shortage of elementary school, Russian language, mathematics, and physics teachers. The teaching profession is not seen prestigious in Kyrgyzstan. The number of teachers aged under 30 hardly exceeds 10 percent.
- iv. In countries with the best school education systems, pedagogical institutes attract the best school graduates. For example, pedagogical institutes in South Korea attract 5 percent, in Finland 10 percent, in Singapore and Hong Kong 30 percent of the best school leavers. In Kyrgyzstan, as a rule, pedagogical institutes attract graduates with poor academic performance.

Teacher education in Kyrgyzstan is funded from public budgets. The annual public spending on educating future teachers amounts to at least 100 million soms. Every year, more than 2 thousand

students fill budget-funded places in pedagogical institutes with the annual tuition fee ranging from 25 to 45 thousand soms. In the course of studying, a number of students of pedagogical faculties change their specialty choices. After graduation, about 25 percent of graduates do not pursue a career in teaching. Within three years of being hired, about 60 percent of young teachers leave their jobs. As a result, only 20 percent of graduates of pedagogical institutes stay working as teachers. The existing system results in annual multimillion losses due to unreasonable waste of public funds.

- v. Teachers have a heavy workload due to the various types of reporting. Despite the elimination of some mandatory reporting in December 2020, teachers are still required to maintain paper records for more than 10 types of reports.
- vi. Today, about 35 percent of teachers do not achieve minimum proficiency levels in reading and mathematics (which is higher than the national average level of adults' proficiency). The ICT skills of teachers are significantly lower than the national average level of adults' proficiency. Transition to online learning in 2020 showed that even in Bishkek, teachers had no emails to use, had weak computer literacy skills, and taught lessons using WhatsApp.
- vii. The country faces big shortage of qualified teachers. According to the principal surveys, only 40 percent of vacancies are filled with qualified teachers; candidates for the remaining 60 percent of vacant positions do not meet the qualification requirements.
- viii. Countries with high-performing school systems pay great attention to continuing education, professional development, and teaching performance assessment.
- ix. In Kyrgyzstan, all teachers must take at least 72 hours of continuing education every five years. Continuing education for teachers falls within the responsibility of the Ministry of Education and Science of the KR (the MoES), in particular, the Republican Institute of Continuing Education and Retraining for Teachers under the MoES, the Issyk-Kul and the Osh Institutes of Education. Public spending on continuing education for teachers is estimated at about 80-90 million soms in the annual budget. The continuing education system is actually a government monopoly.
- x. At the same time, the existing system does not satisfy the continuing education needs of teachers in terms of both quantity and quality. There being 82,000 teachers in the country, the MoES would be able to ensure continuing education for one teacher every 10 years instead of 5 years required under the law. According to studies, the content of continuing education courses provided through publicly funded programs is mostly formal, outdated, and ineffective. Their performance and effect on the professional development of teachers is not assessed as a rule.

The existing government monopoly over continuing education for teachers poses a barrier to professional development of teachers and, consequently, to improving the quality of teaching in schools. Many countries have long abandoned this system. In many countries (including Russia and Ukraine) continuing education for teachers can be provided by any educational institutions, regardless of type of ownership, properly licensed and accredited to provide continuing education courses for teachers. Teachers have the right to take continuing education courses at any institution so accredited. Such system promotes competition among service providers, which

leads to a better quality of their continuing education services.

- xi. The performance of the system of continuing education for teachers must be assessed by an objective and unbiased assessment of teaching performance appraisal, which should be based on the assessment of the teachers' ability to develop student competencies.

According to the current legislation, in the country there should be teacher performance appraisal, based on which they can be assigned a category - the second, first and the highest, for which premiums should be accrued - 1 thousand soms, 1.5 thousand soms and 2 thousand soms respectively. In practice, despite the existence of the Teacher Performance Appraisal Regulation, since 2012 teacher performance appraisal was suspended and, accordingly, categories are not assigned. According to some teachers, these allowances are not stimulating, the amount of allowance should be not less than 30 percent of the salary.

For example, in Kazakhstan, teachers are tested in two stages: the first is the National Qualification Testing for teachers; the second stage is a comprehensive analytical synthesis of teachers' activities, which includes compiling a portfolio of teachers with a summary of accumulated experience.

- xii. In Kyrgyzstan there is no system of retraining of teachers, i.e. training of pedagogical staff from specialists with non-pedagogical higher education (or getting a second pedagogical education). Legislation in Kyrgyzstan establishes a system of retraining, but in practice it is absent. The system of teacher retraining works in many countries, including Russia and Kazakhstan. Its goal is to increase the flow of those willing to go into teaching through short-term teacher training courses from specialists with higher education.
- xiii. Kyrgyzstan is the only country in the CIS that does not have qualification requirements for teachers. The absence of qualification requirements negatively affects the system of selection, the system of professional development and professional growth of teachers.

4.2. Educational process

Tutorials

- i. There are serious problems with the lack and quality of textbooks in the country. The provision of textbooks in Kyrgyz-speaking schools is 80%, in Russian-speaking schools - 70%.
- ii. Some textbooks are produced with spelling, grammatical, and semantic errors. Many textbooks do not meet the requirement that students develop competencies as required by the State Educational Standard for School Education. Despite the shortage and the quality of textbooks, teachers are required to use only those textbooks that are on the list of textbooks recommended by the MES.

Study load

- iii. The teaching load of students in Kyrgyzstan is high. Thus, an average student in Kyrgyzstan studies 1,060 hours a year, while in Estonia 820, in Finland 808, in Russia 803 hours a year. Obviously, the

high teaching load does not guarantee high learning outcomes. In the international ratings Kyrgyzstan ranks last, while all the above countries are ranked among the countries with significantly better quality of school education.

- iv. During the Soviet era, schools in Kyrgyzstan studied 17 subjects, but today there are 25, which is much higher than the generally accepted standards. The average number of subjects studied in the world varies from 8 to 15. The number and content of the subjects studied in the schools of Kyrgyzstan needs to be reduced and revised for more in-depth study.

The learning process - development of competencies

- v. The learning process is not restructured to develop competencies (that is, the development of abilities to independently apply knowledge, skills, and abilities in everyday life) as required by modern life and the State Educational Standard (2014). Learning in schools, as in the old days, is 87% based on reading, memorizing, and retelling, i.e., teachers give information and students memorize.

According to the State Educational Standard for School Education of the Kyrgyz Republic (2014), learning should be based on the development of students' competencies, which means the development of abilities to independently apply knowledge, skills and abilities in everyday life. According to the Education Development Program in the Kyrgyz Republic (2021), schools should develop students' information and socio-communication competencies, as well as self-organization and problem solving competencies:

1. *Information competence* - students' readiness and ability to independently search, analyze, select and process information, form reasoned conclusions, evaluate its reliability, critically reflect and make informed decisions on planning and carrying out their activities, including the use of information and communication technologies.

2. *Social and communicative competence* - readiness to correlate one's aspirations with the interests of other people and social groups, to defend one's point of view on the basis of recognition of diversity of positions and respectful attitude towards values (religious, ethnic, gender, professional, personal) of other people; ability to build a dialogue, receiving necessary information and present it in oral and written forms to solve problems; ability to use and develop one's emotional intellect in communication.

3. *Competence of self-organization and problem solving* - ability to detect problems and contradictions in information, learning and life situations, to plan their solution and solve them, independently or in cooperation with others, using critical thinking and analysis skills.

- i. Many of the subject standards required of teachers also do not focus on the development of competencies. The simple transfer of knowledge for the purpose of memorization is still the primary method of instruction. Consequently, in subject lessons, students engage in lower-order thinking activities much more often than higher-order thinking activities.
- ii. Little use is made of information and communication technology (ICT) for subject instruction. The ICT curriculum is provided only for grades 5–9. ICT training in grades 1-4 and grades 10-11 is not stipulated. The number of computers available at schools is 1 computer per 61 students; many computers are obsolete and do not work.

- iii. The main shortcoming of the subject standards is the lack of a measurable end result of learning. Without measuring the quality of learning, it is impossible to improve it.
- iv. Schools are obliged to follow the basic curriculum approved annually by the MES. Schools are free to determine the subjects and curricula only within 5%. Control over compliance with the basic curriculum is carried out by district and city departments of education. The MES annually makes changes to the basic curriculum by canceling, adding, or merging subjects. Such decisions of the MES have a negative impact on the planning and quality of the educational process in schools.
- v. The assessment system in both schools and universities is still focused on assessing the content of the curriculum and is not conducive to assessing the level of acquired competencies, that is, the skills and abilities to use, analyze, and understand the studied material.

4.3. School infrastructure

- i. There are 2,296 schools, of which 152 are private (with 38,000 students or about 3% of the country's school population).
- ii. 245 public schools are in an emergency condition (i.e. not to be repaired, but require demolition and new construction), education in emergency schools threatens the life and health of students. 457 schools of the republic require major repairs of roofs, foundations, walls, water supply, and sewage systems. According to the estimates of the Ministry of Education and Science, the country lacks about 670 schools.
- iii. Many schools are overcrowded. Today 151 schools work in three shifts. 90 schools in Bishkek are designed for 75 thousand students, but in fact there are 170 thousand students.
- iv. 25% of schools do not have access to clean drinking water. 74% of schools do not have indoor toilets. 68% of schools are not connected to hot water supply.
- v. Disposal of both the financial and administrative resources of schools, in particular the procurement of goods and services for schools and human resources policies are the responsibility of centralized accounting departments, district/city and MES does not lead to efficiency in school management.
- vi. There is no definition of municipal schools in the legislation. The role of local government in school development is limited.

4.4. State Spending on School Education

- i. Kyrgyzstan's spending on education in 2017 (including preschool, school, vocational and higher education) amounted to 7% of GDP (Gross Domestic Product), which is more than in other countries (Kazakhstan 3%, Russia and Mongolia about 4%, European Union countries average 5%).

Expenditures on education are increasing annually. Thus, in 2001, they were 3 billion soms, in 2007 - 9 billion soms, in 2012 - 21 billion soms, and in 2020 - 39.9 billion soms (of which 34.3 billion soms from the national budget and 5.6 billion soms from the local budget). About 60% of

all expenditures for education go to school education. However, the impressive growth of spending on education does not lead to an increase in the quality of education.

- ii. Despite the approved state budget for education (in 2020 39.9 billion soms in 2020, of which about 60% are expenditures on school education), schools have received about 1.1 billion soms under the budget. However, based on the real needs, the funding gap is about 4 billion soms. For example, each of the 90 public schools in Bishkek receives about 10 million soms.

According to research, the current system of funding is aimed at maintaining the school system, but not at its development. The state budget is not able to fully fund even the minimum needs.

For the full functioning of the school it is necessary to finance about 50 items of expenditures. In practice, expenditures from the national budget finance only 5 expenditure items - payroll (96.1%), nutrition (2.7%), professional development (0.4%), educational expenses (0.4%) and maintenance (0.4%) (2020 data). The last two items are chronically underfunded.

- iii. In 2017, state spending per school student per year was \$826, compared to, for example, \$1,937 in Moldova, \$1,711 in Mongolia, \$6,432 in Kazakhstan, and \$10,292 in the European Union.
- iv. In 2017, state spending per school student in Kyrgyzstan (\$826) while spending per higher education student was \$1,480 and per TVET student \$1,574.
- v. Most of the state spending on school education is financed from donor funds (World Bank, Asian Development Bank, USAID, GIZ), some of which are provided in the form of grants and some in the form of loans.
- vi. Annually about 600 million KGS is allocated from the state budget for nutrition of students from 1 to 4 grades, that is 7 KGS per student per day. At the same time, the funds allocated for nutrition are spent inefficiently and corruptly, it is necessary to switch to the targeted distribution of these funds for socially vulnerable children.

3. SOLUTIONS

In the school system, the first and most important level is the needs of the students, for whom the whole system exists. The main need of students is a quality education. Accordingly, the main goal is to improve the quality of school education, which, based on SMART parameters (measurability, significance, specificity, feasibility and achievability within a certain period of time), we propose to formulate as follows:

IMPROVE THE QUALITY OF SCHOOL EDUCATION IN KYRGYZSTAN by having 60% of school students reach a basic level of functional literacy by 2025

Taking into account the current situation in school education in the Kyrgyz Republic (as well as the results of numerous studies on the improvement of school systems around the world), we believe that **systemic changes to improve the quality of school education must begin with radical changes (reforms) in two areas:**

- 1. Financing the school system** - It is necessary to switch to a system of targeted funding - voucher system based on the principle of per capita funding (the need to implement which is also noted in the Address of Sadyr Japarov to the people of Kyrgyzstan from May 5, 2021).

The voucher system (or a system of funding in which "money follows the student") is based on the assignment of a personal (electronic) certificate to each student of the school, confirming the following of budgetary funds, within which the student has the right to receive a state-guaranteed amount of educational services. Students/parents get the right to choose their own school (regardless of the form of ownership (state, municipal, private), and the money will follow the student. The right to choose stimulates the growth of competition among schools for the quality of education, increases the transparency of funding and spending of funds. Vouchers also help to provide targeted support to socially vulnerable groups of students.

The introduction of the voucher system can be effective if:

- Adoption of the standard of mandatory, state-guaranteed, amount of educational services to the student of the school;
- financial and administrative independence of schools in the disposal of received funding, including the procurement of inventories and determining the staff, including determining the amount of additional payments to prime rates; with increasing independence should increase transparency and accountability of the school administration;
- introduction of compulsory and regular testing of educational achievements of students, which is the result of school work; at the same time monitoring of testing indicators should be conducted by independent organizations.

2. Teacher training and professional development

(based on the thesis proved by numerous cases from around the world: the quality of a school depends on the quality of its teachers and the quality of teaching), which should include:

- to revise the system of preparation of future teachers (including financial, organizational, and academic requirements);
- to give teachers the right to upgrade their qualifications in various educational organizations (regardless of ownership) that provide professional development services, whose certificates should be recognized by the MES;
- to provide the right to persons with higher education to receive a second higher pedagogical education.

We believe that the proposed solutions are feasible in the current environment. In addition, the proposed solutions do not require an increase in funding, but are aimed at the efficient allocation of already available funds and will probably lead to budget savings. Most importantly, the proposed solutions have a direct impact on increasing the quality of school education.

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