

**Exploring school-based education stakeholders' perspectives  
on quality of education in Kyrgyzstan in the context of  
Schools2030**

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**July, 2024**

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## **Abstract**

This research study explores the perspectives of stakeholders (teachers, students, school leaders, and parents) regarding quality education, the challenges it faces, and potential responses to these challenges. Employing a mixed-methods research design, the study integrates quantitative and qualitative approaches. Data collection methods encompassed surveys, observations, semi-structured interviews, and document analysis, aiming to comprehensively grasp how key stakeholders perceive education quality. UNESCO's "Education Quality Framework" (2005) served as a lens to understand perceptions of education quality and its challenges in Kyrgyzstan. Data were gathered from secondary schools in Kyrgyzstan's Chui, Naryn, and Osh regions, with five schools selected from each region. Quantitative surveys were administered to 253 parents, 293 teachers, and 324 students, while 61 qualitative interviews (involving 22 individuals and 39 focus groups) were conducted. Interview participants included school principals, vice principals, teachers, students, parents, regional and district education managers, and representatives of international organizations working in education in Kyrgyzstan. The study's primary findings underscored a significant emphasis on academic performance over the holistic development of students, including the cultivation of non-academic skills. Additionally, schools receiving support from international organizations exhibited improvements in quality, skill promotion, and increased opportunities, resources, and support. Across all visited schools, a common challenge to quality education was the need for more resources (human, financial, and material). Moreover, the results highlighted a widening gap between rural and urban schools in terms of quality, skill promotion, opportunities, resources, and support. Beyond implications for human, material, and technical resources, the findings suggest that social equity, quality, and cohesion may be compromised, as quality education becomes accessible to fewer students, locations, and communities.

## **Introduction**

This report presents the findings of a mixed methods study on the stakeholders' perspectives about quality education in schools in Kyrgyzstan. Initially, this research project was planned to be conducted in both Kyrgyzstan and Tajikistan by employing a mixed-method research design to collect empirical data from 15 schools in each country.

Due to some unforeseen situations, the research design and method for Tajikistan had to be changed to desk-based study only. We could not get access to schools in Tajikistan due to security and other political situations, we did a comprehensive review of available literature and desk-based analysis of stakeholders' conceptions, views, and aspirations of quality education and associated challenges faced by teachers, students, and others in schools in Tajikistan. Thus, a separate report was developed on the desk-based study.

This report on Kyrgyzstan outlines the empirical study conducted in 15 schools located in three regions (Chuy, Naryn, Osh) of Kyrgyzstan. The study took a school-based focus on identifying local stakeholders' (teachers, students, school leaders, and parents) perspectives towards quality education, challenges to quality, and responses to these challenges, which could be shared with other educators and researchers, and inform policy and practices of improving holistic learning outcomes. Holistic learning aims to not just improve learners' academic skills but also to promote a more comprehensive view of learning, living and personal development. It focuses on three important things: balance, inclusion, and connection (Miller, 1999).

This study sought to understand the meanings and values the local stakeholders attach to the concept of quality, as well as identify effective, sustainable, culturally relevant, and contextually workable solutions that are taking place in the classrooms, which, in turn, might be replicable in Kyrgyzstan and the region. The study explored the stakeholders' views, aspirations, practices, challenges, and suggestions for improving the quality of education in their schools.

We focused on students, parents, teachers, and school leaders from 15 sites (public primary and secondary schools), where 8 of them have been participating in the Schools2030 project in Kyrgyzstan. Data were gathered through focus groups and interviews, observations, survey questionnaires, and documents. The method of the study was itself geared towards equity and inclusion, treating all stakeholders as significant partners in the education process, and engaging them in reflection and dialogue on their visions for quality in education for their schools and communities.

### **Research Questions**

#### ***Central Research Question:***

How is quality education understood and practiced by stakeholders in schools of Kyrgyzstan?

#### ***Sub-Questions:***

1. What are the school leaders, teachers, students, and parents' conceptions of quality of education?
2. What teaching and learning strategies are used to achieve the quality of education?
3. What opportunities, resources, and support do these school leaders and teachers have to achieve the perceived quality of education in their schools?

4. What issues and challenges do these school leaders, teachers, and students face in achieving the perceived quality of education in their schools? How do they address these challenges?
5. How has the pandemic affected the delivery of quality education in schools of Kyrgyzstan?
6. What recommendations can be made to enhance quality in Kyrgyzstan's schools?

### **Background information**

Kyrgyzstan was part of the former USSR till 1991. The Soviets held that the pace of societal progress depended on the development of science and education, and Kyrgyzstan achieved considerable progress in education during the Soviet era (Holmes et.al.,1995). With massive campaigns for basic education, the literacy rate in Kyrgyzstan jumped from 16.5% in 1926 to 99.8% in 1979 (Ibraimov, 2001), and schools were built in remote mountain villages (Tabyshaliev, 1979).

From its outset, education in the USSR was free from nursery to post-doctoral levels. During the former USSR, all students were exposed to the same centrally designed curriculum, with minor local adaptations to accommodate each Soviet republic (De Young, 2002). Though Soviet education espoused equality and uniformity, contrary to official doctrine, Soviet schooling was never really monolithic or egalitarian (Niyozov, 2001; Sutherland, 1999). While Soviet education overtly promoted internationalism above nationalist and ethnic identities, in practice, it promoted Russian identity over other national identities within the USSR (Belkanov, 1997).

Schools in Soviet Kyrgyzstan, in particular rural settings, experienced serious challenges in terms of quality provision, which, in a sense, was symptomatic to all rural areas of the USSR (Kondakov, 1974). The rural schools lagged behind urban schools, and they lacked “equipment for rooms devoted to various subjects in the curriculum, visual aids, technical teaching devices, education literature, and fiction [literature texts not adapted to schools]” (Morozov & Ptitsyn, 1975, p. 65). Rural schools also experienced serious teacher shortages because many young teachers failed to report to their job placements (Anisimov, 1991).

The 1980s saw the beginning of many reforms in education. In Kyrgyzstan, since the adoption of Kyrgyz as the state language in 1989, the number of Kyrgyz schools has steadily increased (Korth, 2004); by 1998, the number of Kyrgyz schools had increased by 17.3%, while the number of Russian schools had decreased by 39.3% in the same period (Shamatov, 2005, p.107). In addition, due to perestroika, innovative teachers pushed hard to have more say in their practices, in contrast to previous years. Many progressive teachers expressed concern that Soviet schooling did not encourage their pupils' creative thinking and those pupils and teachers alike were more worried about inspectors' judgments than learning (Sutherland, 1992). Progressive educators advocated “netradissionnye” (non-traditional) teaching approaches (Anisimov, 1991), and the term “pedagogy of cooperation” became widely endorsed by progressive educators (Lysenkova et.al., 1986).

The Soviet Union broke up in 1991, and Kyrgyzstan began experiencing problems in the field of education, with both enrolment and graduation rates declining (DeYoung, 2004). Pre-school enrolment declined catastrophically; out of 1,604 pre-school institutions existing in

1991, only 416 remained by 2000 (DeYoung, 2004, p.2005). Significant declines in enrolment in pre-school institutions across the region are related to the increased costs of education, reduced state subsidies for transport and food, and lower family incomes (Eversman, 2000). About 83.6% of the population of Kyrgyzstan completed secondary education in 1993; this decreased to 76.4% in 1996 and further to 69% in 1999 (DeYoung, 2004, p.205). However, unofficial reports suggest that the actual number far exceeds this figure (DeYoung & Santos, 2004). These dropout rates are a by-product of economic collapse and declining support for the social sector, which has resulted in poverty, insufficient food, lack of adequate clothing, inability to afford learning materials, and the increasing cost of education. The declining prestige and perceived value of education have also contributed to drop-out rates (Shamatov, 2005).

The government of Kyrgyzstan has been working to improve the quality of education and to align it with international standards. The Ministry of Education and Science and the Kyrgyz Academy of Education have developed many documents in support of these goals. For example, education standards were developed in 1996, then revised in 2004; and A Concept of Education in Kyrgyzstan paper in 2002, and Education Development Strategy 2012-2020 developed in 2012 (MOES, 2012). A new national curriculum framework has also been developed with assistance from the Soros Foundation (National Curriculum Framework, 2010), Kyrgyzstan. The Asian Development Bank's Second Education Project (ADB SEP) had independently worked on the development of subject-based curricula in the same period. Subject-based curricula of ADB SEP for primary grades one to four are already developed and approved, and subject curricula for grades five to nine are still being developed. These curriculum reform initiatives aim to shift from a content-based to a competency-based curriculum. Competency is defined as the integrated ability of a person to apply different elements of knowledge, skills, and abilities in real-life situations. The main goal of this approach is for children to be able to use their school knowledge in real or close to real-life situations (National Curriculum Framework, 2010). These curricula aim to develop student competencies and include innovative teaching methods (ADB SEP Specialist, Interview, April 3, 2010).

In the 2000s, Kyrgyzstan continued to modernize its education system to meet international standards, and for example, the competency-based approach to education, emphasizing nurturing students' skills, knowledge, and abilities to tackle real-life tasks and situations effectively was promoted. In 2014, the State educational standard (curriculum) of secondary general education in the Kyrgyz Republic specified key competencies for students: (1) Informational (obtaining information and making informed decisions based on critically informed information); (2) Social-communicative (ability to consider the interests of others and diversity of points of view, expressing one's position with respect for different values, and the ability to communicate effectively to solve various problems using society's resources); (3) Self-organization and problem-solving (the ability to identify inconsistencies in information or life circumstances and then seek a variety of ways and solutions to resolve them, either independently or in collaboration with others, and make informed decisions about subsequent actions), and (4) competencies related to educational fields and subjects (language, history, STEM subjects). These competencies are measurable educational outcomes aligned with

societal, state, and professional demands, crossing disciplinary boundaries and drawing from students' social experiences.

The Ministry of Education and Science (MOES) in the Kyrgyz Republic has implemented two key education programs. The Education Development Strategy in the Kyrgyz Republic for 2012-2020 (Ministry of Justice of the Kyrgyz Republic, 2012) was based on the country's vision and development goals. It was also aimed at achieving the purposes of the global program "Millennium Development" and "Education for All." Innovations in the education system planned to be achieved by 2020 included school readiness programs for children not attending preschool, the integration of inclusive education at all levels alongside specialized schools for children with special needs, and the introduction of vocational education for grades 10 and 11 and multi-level professional education programs.

Kyrgyzstan took part in international comparative student assessments called PISA in 2006 and 2009. PISA measures the educational achievements of 15-year-old students which is carried out by the Organization for Economic Cooperation and Development (OECD). It measures the ability of students to use their reading, mathematics, and science knowledge and skills to meet real-life challenges.

PISA 2009 results revealed that Kyrgyzstan's mean reading score was significantly below the OECD average. The nation had shallow reading literacy levels, with only 0.1% of students achieving level 5 reading literacy capable of handling complex reading tasks. Moreover, only 1.0% achieved reading proficiency at level 4. A mere 11.5% achieved reading literacy at level 2, considered basic literacy. Most students (almost 60%) performed below level 1a, with half below level 1b, the lowest difficulty level. Interestingly, the PISA 2009 assessment showed that girls outperformed boys in reading literacy in Kyrgyzstan by 53 points.

The situation was similarly low in mathematical literacy compared to OECD countries and among CIS countries. Kyrgyzstan had the highest percentage of students who failed to reach even level 1 on the mathematical literacy scale, with Kazakhstan following closely behind. Girls also had an advantage over boys in mathematical literacy of 6-points. Regarding natural sciences knowledge, only 4.7% of Kyrgyz students achieved proficiency at level 3 or higher, demonstrating their ability to explain and apply scientific concepts from various disciplines. In contrast, 29% scored at the lowest level 1, while approximately 53% did not reach this level. In the field of science, girls exhibit an advantage ranging from 10 to 35 score points.

Kyrgyzstan did not take part in PISA since 2009, however, it was decided the students of Kyrgyzstan will participate in PISA 2025. In preparation for the 2025 PISA study, the Kyrgyz Academy of Education has published a methodological manual in Russian and Kyrgyz languages titled "Preparing for the International PISA Study." This manual is designed to acquaint teachers with the study's concept and provide sample tests to better prepare for the upcoming assessment.

Inspired by the PISA test items, the National Sample-Based Assessment (NSBA) is conducted at a national level. It is conducted based on a carefully selected representative sample of students. According to the Center for Educational Assessment and Teaching Methods (2023), which has been conducting research, the primary aim of the assessment is to provide an unbiased and evidence-driven assessment of students' knowledge and abilities. These periodic assessments serve as a valuable resource for the Ministry of Education and



Science, educators, and the general public, portraying educational achievements among students at specific grade levels and within various subject areas. The results of these assessments are compiled into comprehensive reports encompassing essential data, conclusions, and recommendations. These findings play a crucial role in identifying areas of concern within the education system, facilitating informed decision-making regarding measures to enhance the quality of education and implement necessary reforms.

For the first time in 2007 and second in 2009, the Ministry of Education and Science of the Kyrgyz Republic (MOES), within the framework of the World Bank's Rural Education project, targeted two levels of educational schools for assessment: Grades 4 and 8. This assessment covered the entire territory of the Kyrgyz Republic, including all regions, and was conducted in the three primary languages of instruction: Kyrgyz, Russian, and Uzbek. Each grade underwent evaluation in three subject areas: Mathematics, reading comprehension, and natural sciences (including chemistry, physics, biology, and physical geography) for 8th grade, and Mathematics, reading comprehension, and Homeland Studies for 4th grade (Center for Educational Assessment and Teaching Methods). In the NSBA assessment practices, scores are related to student achievement levels. There are four levels of educational achievement: (1) a below-basic level (level 1); (2) a basic level (level 2); (3) an above-basic level (level 3); and (4) an advanced level (level 4) of student achievement. These levels were established in 2007 for each grade and subject area, aligning with the standards and programs in effect within the country (Center for Educational Assessment and Teaching Methods, 2007).

In 2014, the third round of the NSBA was conducted under the directive of the MOES as part of the READ Project. This time, the focus was solely on students of Grade 4. The subject domains assessed included Reading Comprehension, Mathematics, and Homeland Studies (basic natural sciences). The NSBA 2014 included 204 secondary schools, with 5,871 participating students (Center for Educational Assessment and Teaching Methods, 2014).

In 2017, the NSBA included students of 4th and 8th grades from all regions of the Kyrgyz Republic. A sample of 203 schools participated in the study for 4th graders, involving 6,244 participating students. Of these, 3346 were taught in Kyrgyz, 2368 in Russian, and 530 in Uzbek as the medium of instruction. The geographical focus was on Bishkek city, oblast/region centers, small towns, rural schools, and administrative regions of Kyrgyzstan. This survey was conducted as part of the World Bank project to support education sector reforms (Ministry of Education and Science of the Kyrgyz Republic & Centre for Educational Assessment and Teaching Methods, 2018). While the assessment for 8th graders was conducted within the framework of the European Union project titled "Strengthening the Assessment of Educational Achievement to Influence Decisions about Training Needs, Educational Standards, and Funding." The analysis included 186 schools with 5,110 participating students. 3145 students studied in Kyrgyz, 1698 in Russian, and 267 in Uzbek. Schools from the city of Bishkek, regional centers, small towns, and rural areas participated. Among them were both state and private schools from all 7 regions of Kyrgyzstan. (Ministry of Education and Science of the Kyrgyz Republic & Centre for Educational Assessment and Teaching Methods, 2017). Overall, the results of the study of 2017 showed that students showed an increase in development in all three subject areas.

The Center for Educational Assessment and Teaching Methods (CEATM), commissioned by the Ministry of Education and Science of the Kyrgyz Republic (MoES),

conducted the fifth round of the National Sample-Based Assessment (NSBA) in 2021. Initially planned for spring 2020, this assessment faced delays due to the COVID-19 pandemic and subsequent lockdowns, with the study finally taking place in September 2021 for 5th and 9th graders.

Despite testing in these grades, the evaluation focused on achievements corresponding to the four-year and eight-year learning programs (4th and 8th grades). Students adapted to school conditions in September, and their achievements were assessed in October, excluding material from the beginning of the academic year. The study considered variations in learning processes among sampled schools, including online and in-person education disruptions. The research covers reading comprehension, mathematics, and natural sciences, assessing students, school administrators, and teachers through surveys, tests, and questionnaires.

The results of the study for 4th grade. In 2021, the overall national results revealed improvements in the achievements of 4th-grade students in reading comprehension and homeland studies, while mathematics performance remained unchanged compared to the 2017 assessment. The growth was observed in homeland studies, with achievements at level 1 with 39.1%, which is 14% less than in the previous round, and cumulative levels 3 and 4 at 18.2%, which is 8.6% more than in 2017. 2021 results show a stable upward trend in reading comprehension, especially at the below-basic level (1), with a 10.6% decrease from 2017. In contrast, mathematics performance showed no observable growth, with a concerning 61.2% of students at level 1 indicating a need for additional support.

The report highlights variations among school categories and regions. In Bishkek, reading and comprehension show a lead. Students in Russian-language schools are most successful in reading, even though results in Russian have grown less than in Kyrgyz. However, there needs to be more achievements in mathematics. Russian-language schools also excel, though with a decline since 2017. Uzbek schools have the lowest results in mathematics, but a positive shift is observed compared to previous years.

In homeland studies, improvements are seen across all schools, notably at level 1. The best results are in Russian-language schools. Girls and boys demonstrate similar results. Bishkek excels in homeland studies, while the Naryn and Talas regions show success in all three areas, and Bishkek and the Chui regions exhibit a negative trend.

The results of the study for 8th grade. According to the report, the performance of 8th-grade students in reading and understanding texts improved significantly from 2007 to 2021. In the initial NSBA surveys, over 70% scored below the basic level, but in 2021, only 39% were at level 1. Positive trends were evident in the higher achievement levels, reaching a combined 44.4% for above basic and advanced level results, compared to 10.7% in 2007. The mathematics test also indicated progress, with a 12% decrease in students below the basic level since 2017.

In natural sciences, there were improvements, particularly at level 1, but challenges persist, with only 31.3% achieving level 2 or higher in 2021. Positive changes were noted across all three subject areas, with reading comprehension skills exhibiting the most noticeable improvement. Russian-language schools outperformed others in reading and mathematics, and girls consistently outperformed boys in reading and comprehension. In 2021, Bishkek maintained its leading position, with notable achievements in the Talas and Naryn regions. Positive dynamics were also observed in the Chui and Jalal-Abad regions. Overall, the data

indicate stable positive trends in reading comprehension skills in the 8th grade, with improvements in mathematics, although challenges remain in natural sciences.

Kyrgyzstan's National Scholarship Testing (NST) reveals persistent educational disparities despite improved access to higher education. Notably, urban Bishkek schools consistently outperform others, while Russian-medium schools, largely urban, demonstrate higher scores than Kyrgyz-medium schools, mainly in rural areas. These findings underscore the impact of location and language on educational outcomes, with urban schools benefiting from superior resources, exacerbating disparities in skills development. The study emphasizes the need for targeted interventions to address these disparities, urging policymakers and educators to consider nuanced solutions for a more equitable education system in Kyrgyzstan. (Shamatov & Bahry, 2020)

In August 2023, a new Law on Education of Kyrgyzstan was approved. It aims to introduce many changes including a voucher system. The Law describes a voucher financing mechanism as a method of state financing in which budget funds follow students to educational organizations. According to education experts, per capita financing or a voucher system will allow parents to choose which school to send their child to, and the MOES will transfer the money to the chosen educational institution. In this way, the system intends to stimulate competition among educational institutions, reduce corruption risks, and increase freedom of choice of educational institutions (Sputnik Kyrgyzstan, Zholdoshev, 2023).

Kyrgyzstan's education system has seen many developments. Efforts to ensure equal access to education for all, supported by national laws and global partnerships, are evident. Evaluations like the National Sample-Based Assessment and participation in PISA showcase the country's drive towards international standards. Noteworthy strides have been made in competency-based learning, early-grade instruction, and teacher enhancement, aided by entities like USAID. Yet, regional disparities persist. New initiatives like the voucher system offer hope, but consistency is critical. While progress is undeniable, the quest for a world-class education system in Kyrgyzstan continues, underpinned by a commitment to cultivating human potential.

## **Literature Review**

Quality education features desired qualities, that is, characteristics, or activities that produce or embody such characteristics. Many education systems, International NGOs, and researchers see quality in education as “fitness for purpose” (Barrett et al, 2006; Leu, 2005). This definition sees a quality education as one that achieves what it sets out to do; in other words, it achieves its purposes. When quality is defined mainly in this way, its definition is secondary in that it passes over the selection of the purposes themselves, leaving them unexpressed, and perhaps even assumed without awareness.

Understanding of the aims of education (and the other stages of the cycle) varies considerably based on one's standpoint. Beeby (1966), for example, says that different perspectives on quality are confused: the classroom inspector looks at students' characteristics, such as dispositions and factual knowledge, while the economist looks for the fit between educational outputs and the economy, the efficient production of “outputs”, and the rate of return on educational investment (10-12). At the social level, “each of us judges the school

system in terms of the final goals we set for ourselves, our children, our tribe, our country” (12). Thus, perspectives on quality involve values. Hoy et al. (2000) argue “stakeholders may set their own ‘quality standard’ against which to arrive at a judgment. Parents, children, governors, industry and business, the government may each have a different perspective (p.13)”. Yet some scholars view considering multiple perspectives, including those of local stakeholders, as essential to understanding quality in education.

The worth of an educational program is based not only on the perceptions of those who fund or administer the program, but on those who participate in it on a day-to-day basis, those who send their children to engage in it, and those who live with the program in their communities long after the program originators have moved on. (Chapman & Carrier, 1990, p. 14)

The World Bank similarly defined quality in education in developing countries in 1995 as based on achievement scores, and local participation:

School governing bodies, principals, and teachers with their intimate knowledge of local conditions, are best able to select the most appropriate package of inputs. Under the right circumstances, making schools and higher education institutions accountable to parents, communities, and students helps bring about more effective learning and hence improves educational quality. (World Bank, 1995, p. 8)

World Bank (1999) also argued that criteria for quality must be decided with partners, with “the knowledge and understanding of local values, culture and traditions that are an essential feature of sustainable development” (p. 16), who include local communities, parents and students, whose participation in school activities and governance is “crucial” for quality education (p. 18).

UNESCO has also been concerned with articulating the changing notion of quality of education for decades. In 2004, UNESCO presented behaviourist, humanist, critical and indigenous perspectives on quality (pp. 33-35), arguing for dialogue among all four perspectives aimed at broad agreement on aims, objectives and dimensions of quality in education (p. 36). UNESCO has also defined educational quality as “learning the right things to lead a decent life in a fast-changing world” for “future adult roles as creative, thinking citizens who can sustain themselves and contribute to the well-being of their families, communities and societies” (Pigozzi, 2006, p. 40), without specifying who decides what a ‘decent life’ consists of. UNESCO’s Millennium Development Goals (MDGs) for Development defined quality in worldwide education quantitatively as achieving universal primary education and eliminating gender disparities by 2015 (UNESCO, 2004) but also argued that quality depends on local relevance:

imported or inherited curricula have often been judged insufficiently sensitive to the local context and to learners’ socio-cultural circumstances. The Convention on the Rights of the Child stresses a child-centred approach to teaching and learning. This in turn emphasizes the importance of curricula that as far as possible respond to the needs and priorities of the learners, their families and communities. (31)

More recently, quality education has been taken up as competencies-based education. Competencies have been defined as a combination of knowledge, skills, abilities, and dispositions, applied to solving problems and making decisions in ones’ various domains and

environments. A Teacher Competency Framework document, drafted by Buchberger for the Quality Education Support Programme I for UNESCO and EU, defines competencies of multiple types (e.g., general and specific) and for various levels of education (general education, higher education, teacher education etc.). Competencies are: “complex combinations of knowledge, skills and abilities, values and attitudes, which lead to effective embodied action in the world in particular domain” (Buchberger, n.d., p. 3). Competencies are visible through learning outcomes, which in turn imply what a learner can perform exactly in terms of knowledge, skills, and attitudes.

Buchberger mentions that at European level 8, competencies are proposed as follows: (i) Communication in mother tongue; (ii) Communication in foreign language; (iii) Mathematical competence and basic competencies in science and technology; (iv) Digital competence; (v) Learning to learn; (vi) Social and civic competence; (vii) Sense of initiative and entrepreneurship; and (viii) Cultural awareness and expression. These key competencies were augmented with more transversal competencies such as: (i) Critical thinking; (ii) Creativity; (iii) Initiative; (iv) Individual and collaborative problem solving; (iv) Risk management; (v) Decision Making; and (vi) Constructive management and emotions.

The above competencies are deemed basic needs for learners from ECE to the postgraduate level, while additional competencies are added for higher education (Buchberger, n.d., pp. 4-5). As such, competency-based education has become a central focus of global education reform and a key element in UNESCO’s recent Sustainable Development Goals (SDGs); and is implicit in the assessment items of international assessment approaches such as PISA, TIMSS etc. and increasingly of national assessments.

Thus, UNESCO and World Bank views suit a strong form of school-based curriculum development (SCBD) (Marsh et al., 1990; OECD, 1979) in which principals and teachers make school curriculum, with students (Skilbeck, 1984), “parents and other citizens” (Marsh et al., 1990, p. 199), or “the parties involved in daily schoolwork: teachers, parents, pupils, and school administrators” (OECD, 1979, p. 11).

Similarly, integration of local knowledge perspectives, cultural content and languages with centralized curriculum and official language as a means of increasing learning and satisfaction with the educational experience has a basis in considerable evidence in international literature, which shows that such an approach to curricular enrichment is associated with improved educational achievement, attainment and satisfaction of learners with educational experience (Coste et al, 2009; Cummins, 2001, 2014; Hovens, 2002; Piccardo, 2018). Such an approach supplements several perspectives on increasing the quality of education, such as place-based education (Gruenewald & Smith, 2014), and community schooling (Farrell, 2008). Importantly, these approaches meet the requirements of Rights-based education: not only Availability and Access of education which governments often focus on, but also too often-overlooked aspects of rights-based education, Acceptability of education from and Adaptability to local stakeholders’ perspectives (Tomaševski, 2004).

Clearly, understandings of quality in education among scholars, and educational planners have evolved beyond notions of increasing access, attendance, achievement, and national income. The understanding has also expanded beyond the centrality of goals and purposes, to include process, resources, contexts, diversity, relevance, assessment, and stakeholder perspectives. A significant role is now granted by many to the judgments of local

stakeholders on quality in education, and to their participation in establishing the content and processes of education at the school level, which is seen as a necessary condition for educational effectiveness. This review will examine what is known about perspectives on education of stakeholder groups and on how their assumptions of the aims of education, what qualities education should develop in the young, and interaction of these assumptions among stakeholders may affect perspectives on quality and the process, experience and outcomes of education.

Quality of education has been a contested concept within the wider literature. As there is no universally accepted standard definition of education quality, discussing the concept is even more problematic (Barrett et al., 2006, as cited in Tikly, 2011). The two principal approaches that have dominated the current understanding of education quality are based on the human capital theory and the human rights theory (Tikly, 2011; Tikly & Barrett, 2011). The human capital approach concentrates on economic growth, whereas the human rights approach focuses on safeguarding basic rights to education as a potential outcome of quality education (Tikly, 2004; Tikly & Barrett, 2007). Arguably, human rights are an integral part of human development and, therefore, the purpose of education (Unterhalter, 2007). However, both the human capital and human rights approaches have limitations. For example, the human capital approach has been criticized for its over-reliance on assessing education quality through standardized test scores, which indicate outcomes without referring to the education, teaching, learning, and assessment processes (Tikly & Barrett, 2007). Similarly, the human rights approach is criticized for its over-emphasis on legal rights, which are determined at an international or a state level, without considering the ground realities in rural, disadvantaged communities (Robeyns, 2006).

Considering these limitations, Tikly (2011) and Tikly and Barrett (2011) propose a social justice approach to understanding education quality – the framework used as a theoretical lens for this study. A social justice approach to education quality is based on encouraging the participation, hearing the voices, and listening the aspirations of all stakeholders in defining what they perceive as good quality education (Tikly, 2011). Fraser (2008) explains three dimensions of education quality from a social justice perspective: (i) redistribute resources to help everyone have access to equally good quality education; (ii) recognize and respect for the voices and rights of the disadvantaged or marginalized – women, children, rural settlers, the poor, among others – for the provision and quality of education; (iii) involve all stakeholders as participants in decision-making at all levels of education governance, leadership, and management. Tikly and Barrett discuss these three dimensions in terms of inclusion, relevance, and democracy. Inclusion entails providing differently abled, often disadvantaged individuals and groups with access to quality education and resources.

Relevance is ‘concerned with the extent to which learning outcomes are meaningful for all learners, valued by their communities and consistent with national priorities in the changing global context’ (Tikly, 2011, p. 10). Democracy deals with the active participation of all stakeholders and all groups in decision-making about education quality.

## Research Methodology

The study employed a mixed-methods, convergent parallel design (Creswell, 2014), utilizing quantitative surveys, qualitative semi-structured individual interviews, focus group interviews, observations (Onwuegbuzie & Collins, 2007). Among the probability sampling methods, a cluster sampling strategy was employed in this study. Three regions were randomly selected from the nine regions of Kyrgyzstan, and subsequently, 15 secondary schools were chosen at random (5 from each region). Eight out of these schools participated in the Schools2030 project, while the remaining seven were non-participating schools. Of the total, seven schools were in urban areas, whereas eight were situated in rural areas. Most of the schools were from the public sector, with only two being private/community-based institutions. The following tables provide an overview of the research sites, participants, and data collection.

Figure 1. *Research sites*



For quantitative survey-based data collection, 25 teachers, 25 students, and 25 parents were randomly selected from each of the 15 schools, totaling 375 participants in each group. Response rates were 85.6% for students, 65.8% for parents, and 74.9% for teachers. The questionnaires, developed based on the quality framework suggested by Tikly (2011), Tikly and Barrett (2011), and UNESCO (2005), were administered through paper and pencil forms. Analysis was performed on the 322 students, 247 parents, and 280 teacher responses.

Figure 2. *Survey Responses*

Participants	Number
Parents	253
Students	324
Teachers	293

<b>TOTAL:</b>	<b>870</b>
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Figure 3. *Interview responses*

	<b>Individual interviews</b>	<b>FGD</b>	<b>Total</b>
<b>Quantity</b>	<b>22</b>	<b>39</b>	<b>61</b>
<b>Minutes</b>	<b>609</b>	<b>891</b>	<b>1500</b>

In addition to surveys, qualitative methods were employed. 22 individual interviews with 3 MOES representatives, 4 heads of education/ coordinators of the Schools2030 Program, a representative each from the Kyrgyz Academy of Education, the City Education Department, the District Education Department Head, also representatives of Asian Development Bank, UNESCO, and 10 school directors and vice-principles. Furthermore, 39 focus group discussions were implemented with students, parents, and teachers in 15 schools in three regions. The total number of participants is 229, where 75 parents, 65 teachers, and 89 students. Interviews and FGDs were conducted in Kyrgyz, Russian, and English, depending on the respondents' choice, transcribed, and translated into English. In addition to individual interviews and focused group interviews, observations were conducted. With participants' consent, interviews, focus-group discussions, and observations were recorded for later analysis (Frankel & Wallen, 1993).

Data analysis involved the following. Quantitative survey data was analyzed using SPSS, providing descriptive statistics. Hierarchical multiple linear regression was employed to predict participants' quality perceptions across four dimensions. Initial steps assessed background variables, followed by introducing school-promoted skills for students and parents in Step 2 and opportunities, resources, and support for teachers in Step 3. Regression assumptions were checked, including autocorrelation, multicollinearity, linearity, homoscedasticity, and multivariate normality. The data satisfied these assumptions.

Qualitative data was entered into NVIVO and coded according to response types concerning quality in education, the strength of attitude expressed, and several other characteristics. Thematic analysis was employed to identify and analysis themes and patterns within a dataset. After becoming familiar with the data, initial codes were generated. These codes were then organized into potential themes. The themes included: stakeholders' conceptions of the quality of education, associated issues and challenges faced by schools, the effects of the COVID-19 pandemic, the teaching and learning strategies used by teachers to achieve the desired quality of education, opportunities, resources, and support available to school leaders and teachers to achieve the perceived quality of education in their schools, recommendations to enhance quality, and the synthesis of the quantitative and qualitative findings, followed by a concluding section.

Once the themes were finalized, the next step involved defining and describing each theme. Each theme was given a title that reflected its content and essence. Selected quotes were



used to illustrate and support each theme with empirical evidence. Furthermore, the analyzed themes were organized in relation to the research questions. Ethics approval was obtained from the Nazarbayev University Institutional Research Ethics Committee (NU-IREC) before starting the project.

Overall, this study employed a comprehensive approach, combining quantitative and qualitative methods to examine education quality perceptions and challenges in Kyrgyzstan's secondary schools. The rigorous sampling and analysis methods ensured the study's validity and reliability.

### **Results of Quantitative Data**

The hierarchical multiple linear regression method was utilized to analyze the quantitative data. Different sets of variables were entered into the equation in each step to test each block's contribution to the overall model predicting the participants' perceptions of quality in four dimensions.

#### ***Research Framework***

We developed a questionnaire employing a theoretical framework, primarily drawn from Tikly (2011), Tikly and Barrett (2011), and UNESCO (2005), to understand students', parents', and teachers' conceptions of education quality and associated challenges in schools in Kyrgyzstan. The research questions are answered through using the 'Education Quality Framework' by UNESCO (2005) which includes the following:

##### **1. The Contexts / Environments**

While learning can happen anytime, anywhere and under any circumstances, a quality learning often occurs in environments conducive to learning and enabling for learners. The context involves the geo-political location, community, demographic tendencies, cultural aspects, and socio-economic background of students. Learning environments consist of physical, psychological and academic atmospheres in schools. To explore the research questions mentioned above, this study will look into how the school leaders, teachers, students, parents, and education managers perceive and articulate quality of the physical, psychological, and academic environments in which the rural schools operate; how they perceive quality in the physical environment (school buildings, classrooms, class size, computer labs, libraries, cafeteria, washrooms), psychological environment (non-violent, peaceful and safe), and academic environment (stimulating, attractive, and nurturing) and challenges and issues associated with the context of schools.

##### **2. Inputs**

The input indicators consist of the content / curriculum delivered at schools, financial, material, and human resources provided to schools, background conditions of students quality and background of students coming to schools. To address the question concerning stakeholders' conceptions of quality of education and educational resources, this study will investigate into how the key stakeholders construe quality of teachers, curriculum, teaching methods, assessment, school leadership, resources, other related areas and associated challenges faced by schools.

##### **3. Processes**

To address the research questions, this study explored how the key stakeholders perceive the processes related to teaching and learning activities, interactions between teachers and students,

access, participation, and progression of students, overall learning spaces and environments, teachers ongoing learning and professional development, team work, students support system, teacher-parent relationship, school-community relations, and challenges in achieving all these.

#### 4. Outputs

The study also explored the key stakeholders' conceptions and views about students' learning outcomes measured by various tests, assessment and examinations conducted by schools; students' completion and progression from one grade to another and from one section to another; parents' satisfaction about their children's learning, other related outcomes, and challenges associated with all these.

These four elements together provide a comprehensive framework to study the quality of education and the various factors that contribute to it. All research questions were developed so as to provide insights representing the voices, experiences, and aspirations of teachers, school leaders, students, and other key stakeholders of school education as well as the policy makers and key decision makers in the provinces and the Centre (i.e., the Ministry of Education and Science). Through a comprehensive exploration and in-depth analysis, the study provides useful insights into some of the most critical issues, challenges, and possibilities / opportunities regarding the quality of education in schools.

The summary of the validity and reliability analyses is provided in Table 1. The items of the quality perception survey were similar for the samples of students, teachers, and parents. The results of the exploratory factor analyses confirmed the four-dimensional structure (environments, inputs, processes, and outcomes) for all three versions of the survey. The results are indicative of good validity and reliability for all three versions of the survey with a four-dimensional factorial structure. Therefore, the sums of all dimensions were used in the regression analyses.

Table 1. *Summary of the validity and reliability analyses*

	Dimensions	NOI	NFI	Cronbach's alpha	KMO	Bartlett's test	Eigenvalue	% of VE	Range of FL
Parents	Environment	7	6	.870	-	-	3.188	22.05	.80 - .53
	Inputs	7	5	.892	-	-	1.632	15.33	.77 - .60
	Processes	6	5	.850	-	-	1.261	14.83	.79 - .54
	Outcomes	3	3	.785	-	-	1.148	12.47	.75 - .56
	Overall scale	23	19	.949	.923	2430.323*	-	64.68	.80 - .53
Students	Environment	7	6	.832	-	-	2.435	18.64	.77 - .55
	Inputs	7	6	.880	-	-	1.718	17.08	.76 - .50
	Processes	6	5	.779	-	-	1.114	11.33	.78 - .52
	Outcomes	3	3	.752	-	-	1.032	10.76	.79 - .56
	Overall scale	23	20	.933	.935	2673.801*	-	57.82	.79 - .50
Teachers	Environment	8	7	.826	-	-	3.227	16.98	.80 - .57
	Inputs	7	6	.816	-	-	2.189	14.36	.77 - .52
	Processes	7	6	.829	-	-	1.375	12.97	.69 - .54
	Outcomes	4	4	.763	-	-	1.138	11.73	.77 - .63
	Overall scale	26	23	.921	.912	2330.622*	-	56.04	.80 - .52

Note. \* $p < .001$ ; NOI: number of items in the initial questionnaire; NFI: number of final items after the reliability and validity analyses; KMO: Kaiser-Meyer-Olkin Measure of Sampling Adequacy; VE: variance explained; FL: factor loadings.

### Summary of the Quantitative Survey Results

Table 2. Results of hierarchical multiple regression analyses of parents' quality perceptions

		Dependent variables							
		Environment		Inputs		Processes		Outcomes	
	Independent variables	B	T	B	T	B	t	B	t
Step 1	Constant	-	2.050*	-	2.396*	-	4.113***	-	3.940***
	Medium	-.210	-2.298*	-.304	-3.307**	-.294	-3.167**	-.266	-2.860**
	Gender	-.185	-1.910	-	-	-	-	-	-
	Age	.330	2.188*	-	-	-	-	-	-
	Qualificatio	.213	2.268*	-	-	-	-	-	-
	Schools203	-	-	-.192	-2.033*	-	-	-	-
	$F_{model} (R^2_{moc})$	2.636** (.167)		2.338* (.150)		1.965* (.129)		1.922 (.127)	
Step 2	Constant	-	1.996*	-	2.033*	-	2.490*	-	2.271*
	Medium	-.136	.087	-.211	-2.972**	-.224	-3.194**	-.178	-2.368*
	Gender	-.228	-2.677**	-	-	-	-	-	-
	Age	.310	2.274*	-	-	-	-	-	-
	Qualificatio	.196	2.356*	-	-	-	-	-	-
	Schools203	-	-	-.085	-1.111	-	-	-	-
	Critical thinking	-	-	.192	2.121*	-	-	.350	3.657***
	Teamwork	-	-	.212	2.055*	-	-	-	-
	Diversity	-	-	.310	2.948**	-	-	-	-
	Problem-solving	-	-	-	-	.250	2.260*	-	-
	$F_{model} (R^2_{moc})$	4.901*** (.463)		7.333*** (.561)		7.716*** (.574)		5.929*** (.508)	
$F_{change} (R^2_{change})$	5.946*** (.296)		10.200*** (.411)		11.353*** (.444)		8.452*** (.381)		

Notes. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ . Step 1: Background variables. Step 2: Background variables + the skills to be promoted at school. Diversity: Awareness and acceptance of issues of diversity. Teamwork: Teamwork and collaboration. Schools2030: Participation in the Schools2030 program (0=yes; 1=no). Medium: Medium of instruction (0=Kyrgyz; 1=Kyrgyz-Russian; 2=Russian). Gender: 0=female; 1=male. Father's qualification: Father's highest educational qualification. Father's employment: My father earns money working (0=yes; 1=no). Mother's employment: My mother earns money working (0=yes; 1=no).

The significant results of the hierarchical regression analyses about parents' perceptions of quality are reported in Table 2 in two steps. According to the results, the parents whose children study at Kyrgyz medium schools have more positive perceptions of quality in all dimensions (Figure 4). Females, the older ones, and those with higher educational qualifications have better perceptions of the quality of the "environment". The parents whose children study at schools participating in the Schools2030 program have better perceptions of quality at the "inputs" dimension. Parents have better perceptions of quality at the "inputs" and "outcomes" dimensions if "critical thinking" skills are promoted at school, "teamwork and collaboration" and "awareness and acceptance of issues of diversity" lead to better perceptions at the "inputs" dimension, and the

promotions of “problem-solving” skills lead to better quality perceptions at the “processes” dimension.

Figure 4. *Parents’ perceptions of quality education*

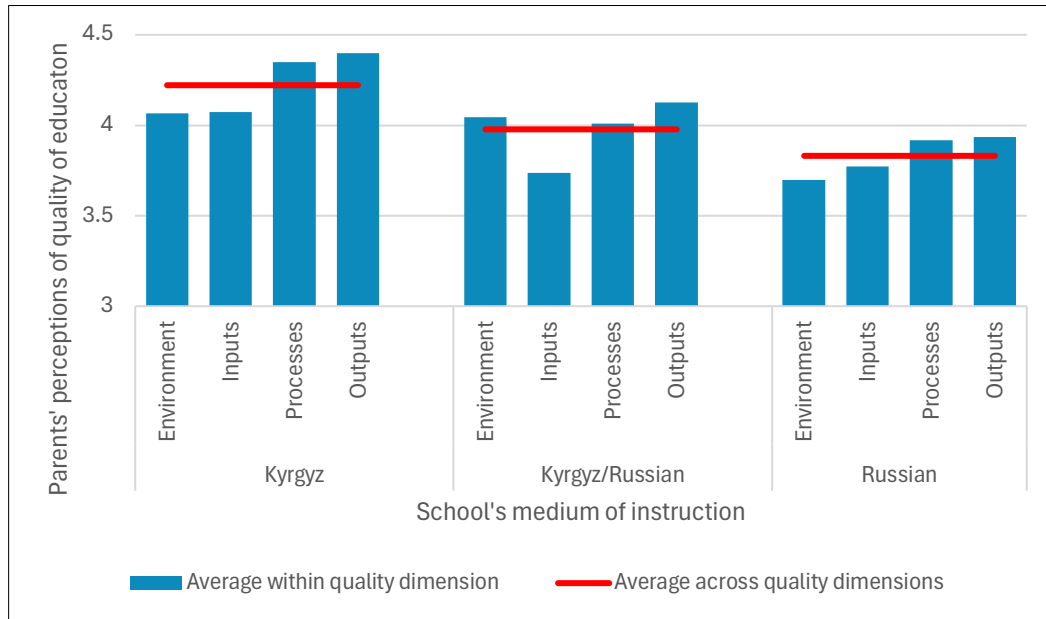


Table 3. *Results of hierarchical multiple regression analyses of students’ quality perceptions*

		<i>Dependent variables</i>							
		<i>Environment</i>		<i>Inputs</i>		<i>Processes</i>		<i>Outcomes</i>	
<i>Independent variables</i>		$\beta$	<i>T</i>	<i>B</i>	<i>T</i>	<i>B</i>	<i>t</i>	$\beta$	<i>t</i>
<i>Step 1</i>	Constant	-	2.727**	-	2.684**	-	4.273***	-	2.884**
	Schools2030	-.294	-3.975**	-.190	-2.503*	-.211	-2.826**	-.211	-3.003**
	Medium	-.302	-4.008**	-.241	-3.130**	-.266	-3.511***	-.297	-4.157***
	Gender	-	-	-	-	-.170	-2.342*	-	-
	Grade	-	-	-	-	-	-	-.146	-1.278
	Father’s employment	-	-	-	-	-.182	-2.419*	-	-
	Mother’s employment	-	-	-	-	-	-	-.195	-2.734**
	Father’s qualification	-	-	-	-	.166	1.987*	.190	2.410*
	<i>F<sub>model</sub> (R<sup>2</sup>)</i>	3.523*** (.192)		2.681** (.153)		3.395*** (.187)		5.583*** (.273)	
<i>Step 2</i>	Constant	-	2.097*	-	1.986*	-	2.748**	-	2.110*
	Schools2030	-.181	-2.710**	-.056	-.920	-.064	-.962	-.105	-1.646
	Medium	-.142	-1.920	-.008	-.126	-.064	-.887	-.085	-1.203
	Gender	-	-	-	-	-.124	-2.008*	-	-
	Grade	-	-	-	-	-	-	-.204	-2.015*
	Father’s employment	-	-	-	-	-.128	-2.007*	-	-
	Mother’s employment	-	-	-	-	-	-	-.124	-2.049*

Father's qualification	-	-	-	-	.076	1.053	.134	1.911
Critical thinking	.170	2.148*	.238	3.313**	.155	2.004*	-	-
Teamwork	.238	3.037**	.154	2.153*	.173	2.250*	-	-
Diversity	-	-	.173	2.017*	-	-	-	-
Ecological literacy	-	-	-	-	.254	3.407***	.170	2.358*
Intercultural competencies	-	-	-	-	-	-	.230	2.909**
$F_{model} (R^2)$	6.038*** (.442)		8.876*** (.538)		6.575*** (.464)		7.518*** (.496)	
$F_{change} (R^2_{change})$	7.511*** (.250)		13.966*** (.384)		8.634*** (.277)		7.422*** (.223)	

Note. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ . Step 1: background variables. Step 2: background variables + the skills to be promoted at school. Diversity: Awareness and acceptance of issues of diversity. Teamwork: Teamwork and collaboration. Schools2030: Participation in the Schools2030 program. Qualification: Highest educational qualification. Medium: Medium of instruction (0=Kyrgyz; 1=Kyrgyz-Russian; 2=Russian). Gender: 0=female; 1=male.

The findings of the regression analyses concerning students' perceptions of quality in all four dimensions are shown in Table 3. According to the results, the students studying at the schools participating in the Schools2030 programme and those studying at Kyrgyz medium schools have better perceptions of quality in all dimensions (Figure 5, Figure 6).

Figure 5. Student's perceptions of quality of education

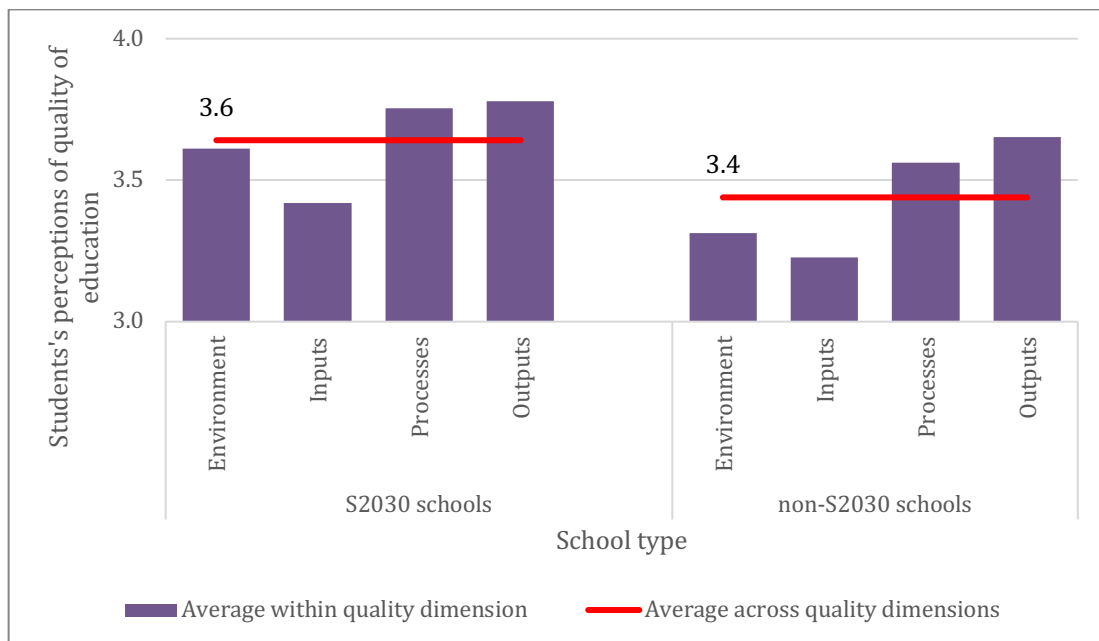
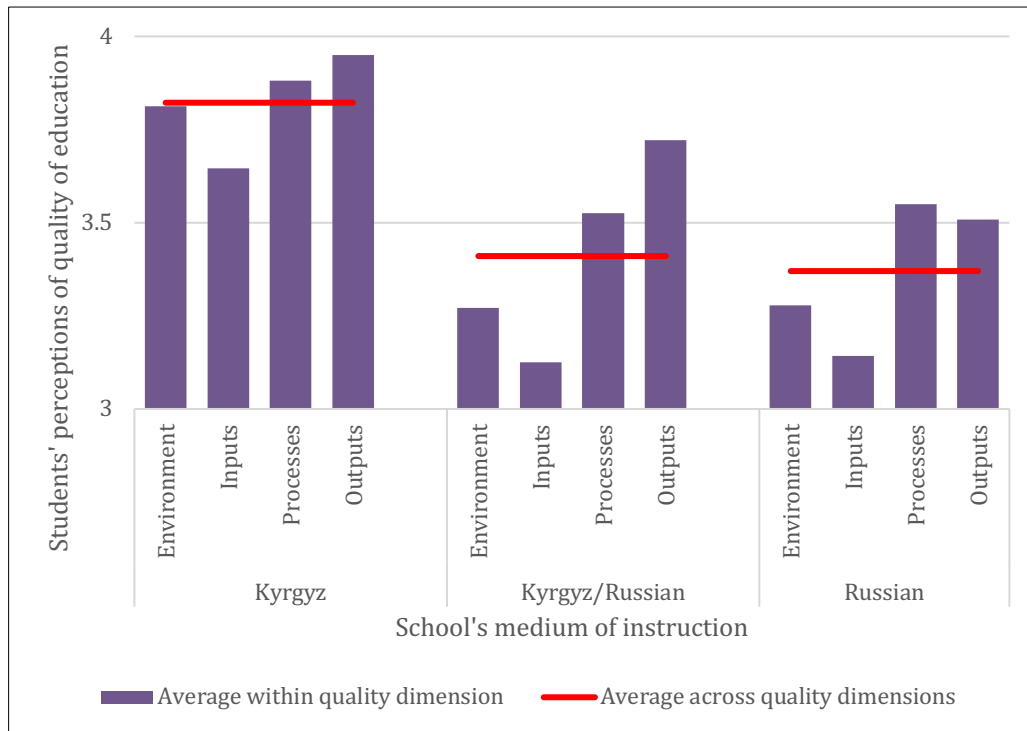


Figure 6. Student's perceptions of quality of education



Female students have more positive perceptions of the quality of the “processes”. The students in lower grades have encouraging perceptions of the quality of the “outcomes”. The students whose fathers have higher educational qualifications have positive quality perceptions in the dimensions of “processes” and “outcomes”. The students whose fathers earn money working have positive perceptions in the “processes” dimension”, while the ones whose mothers work also have more positive perceptions in the “outcomes” dimension.

Among the skills to be promoted at schools, “critical thinking” and “teamwork and collaboration” skills have positive effects in all dimensions except for the “outcomes” dimension. In other terms, students studying at schools that promote those skills have more positive perceptions of the quality of “environment”, “inputs”, and “processes. Students studying at schools where the skill of “awareness and acceptance of issues of diversity” have been promoted have more positive perceptions of the quality of “inputs”. Finally, the ones studying at schools fostering “ecological literacy” skill have more favorable perceptions of the quality of the “processes” and “outcomes”.

Table 4. Results of hierarchical multiple regression analyses of teachers’ quality perceptions

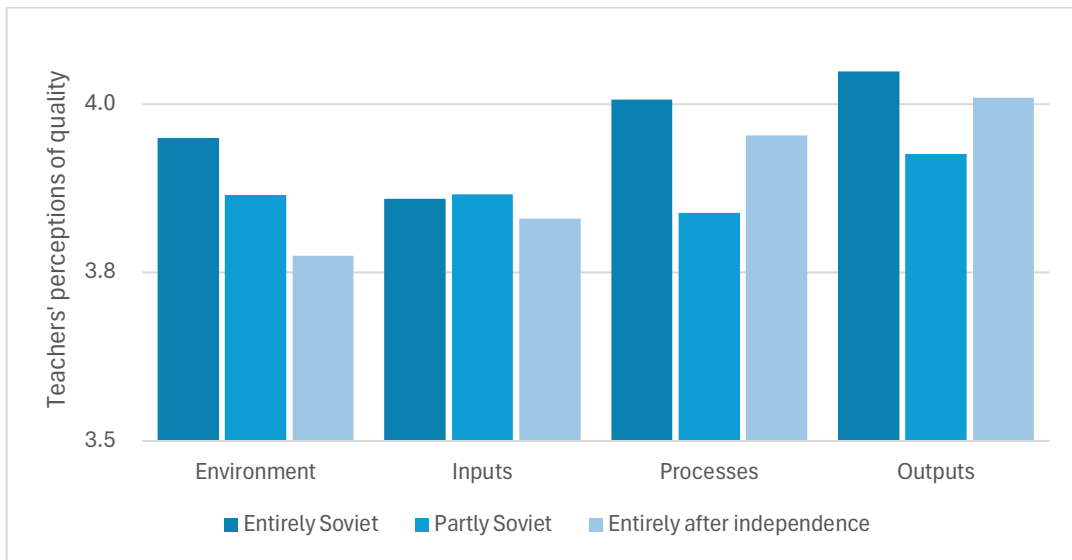
		<i>Dependent variables</i>							
		<i>Environment</i>		<i>Inputs</i>		<i>Processes</i>		<i>Outcomes</i>	
<i>Independent variables</i>		$\beta$	<i>T</i>	B	<i>T</i>	B	<i>T</i>	B	<i>T</i>
<i>Step 1</i>	Constant	-	4.388***	-	3.468***	-	6.511***	-	6.923***
	Gender	-.139	-2.031*	-	-	-	-	-	-
	TQual	.367	3.284**	.229	1.997*	-	-	-	-
	Qualification	-	-	-	-	-	-	.152	2.043*
	Schooling	-	-	-	-	-.307	-2.262*	-.257	-1.998*
	Medium	-	-	-	-	-	-	-.232	-2.785**

	$F_{model} (R^2)$	1.851* (.118)		1.097 (.073)		1.046 (.070)		2.649** (.161)	
Step 2	Constant	-	2.775**	-	2.801**	-	5.116***	-	5.415***
	Gender	-.145	2.121*	-	-	-	-	-	-
	TQual	.266	2.675**	.095	1.036	-	-	-	-
	Qualification	-	-	-	-	-	-	.078	1.174
	Schooling	-	-	-	-	-.224	-2.05*	-.188	-1.659
	Medium	-	-	-	-	-	-	-.123	-1.644
	Policy support	.349	4.013***	.338	4.189***	.395	4.574***	.365	4.318***
	Ministry support	-	-	.241	2.825**	-	-	-	-
	Resources	-	-	.202	2.310*	.208	2.217*	-	-
	$F_{model} (R^2)$	5.118*** (.336)		7.614*** (.429)		5.350*** (.346)		5.999*** (.372)	
$F_{change} (R^2_{change})$	13.278*** (.218)		25.242*** (.356)		17.049*** (.275)		13.630*** (.211)		
Step 3	Constant	-	2.098*	-	1.976*	-	3.734***	-	4.471***
	Gender	-.158	-2.432*	-	-	-	-	-	-
	TQual	.251	2.604*	.118	1.368	-	-	-	-
	Qualification	-	-	-	-	-	-	.097	1.582
	Schooling	-	-	-	-	-.228	-2.145*	-.154	-1.434
	Medium	-	-	-	-	-	-	-.121	-1.613
	Policy support	.223	2.404*	.181	2.172*	.183	2.115*	.240	2.735**
	Ministry support	-	-	.197	2.422*	-	-	-	-
	Resources	-	-	.071	.830	.057	.642	-	-
	Ecological literacy	.201	2.168*	-	-	-	-	-	-
	Problem-solving	-	-	.211	2.376*	.190	2.045*	.248	2.645**
	Analytical thinking	-	-	-	-	-	-	.209	2.332*
	$F_{model} (R^2)$	4.826*** (.452)		7.356*** (.557)		6.312*** (.519)		6.045*** (.508)	
$F_{change} (R^2_{change})$	3.231*** (.116)		4.392*** (.128)		5.482*** (.173)		4.214*** (.136)		

Note. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ . Step 1: background variables. Step 2: background variables + the set of opportunities, resources, and support. Step 3: background variables + the set of opportunities, resources, and support + the skills to be promoted at school. Gender: 0=female; 1=male. TQual: Highest teaching qualification. Qualification: Highest educational qualification. Schooling: My schooling was in (0=soviet times; 1=partially independence times, 2=completely independence times). Medium: Medium of instruction. (0=Kyrgyz; 1=Kyrgyz-Russian; 2=Russian). Policy support: The national education policy supports the provision of quality education in schools. Ministry support: The support from the Ministry of Education and Regional Education Offices to improve their quality of education meets the expectations of the schools/teachers. Resources: Schools get adequate financial, material and human resources required to enhance the quality of education.

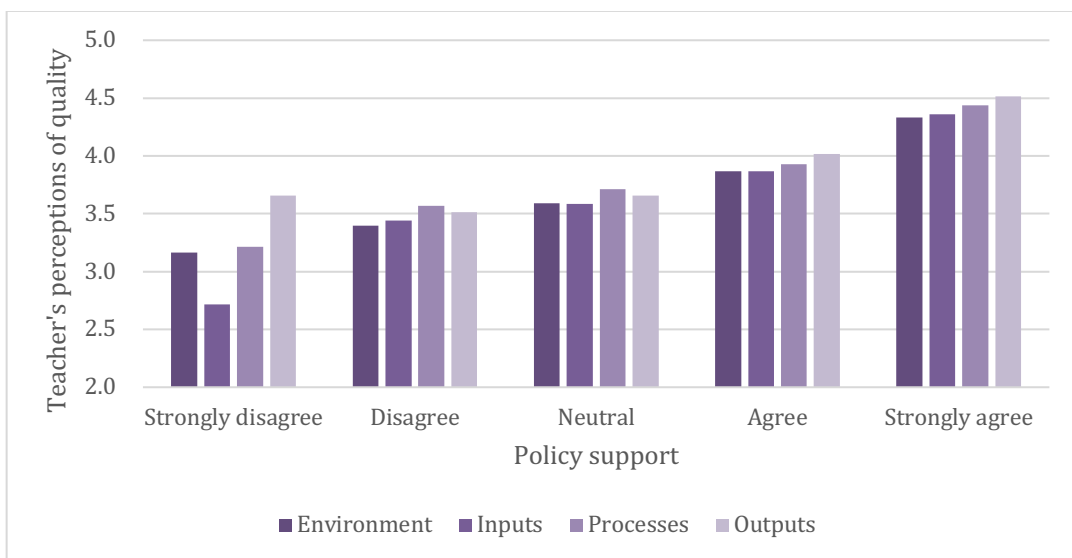
The results of the hierarchical regression analyses about teachers' perceptions of quality are displayed in Table 4 in three steps. According to the results, female teachers have better perceptions of the quality of the "environment". The ones with higher teaching qualifications have better perceptions of the quality of the "environment" and "inputs". The ones with higher educational qualifications have better perceptions of the quality of "outcomes". The teachers whose "schooling" was during Soviet times have more positive evaluations of quality at the dimensions of "processes" and "outcomes" (Figure 7). The teachers working at Kyrgyz medium schools have better perceptions of the quality of "outcomes".

Figure 7. *Teachers' perception of quality*



Among the set of opportunities, resources, and support which were added to the equation in Step 2, “policy support” has a consistently positive effect on teachers’ perceptions of quality in all four dimensions (Figure 8). “Ministry support” has a positive effect on teachers’ perceptions of the quality of “inputs”. Teachers’ views on getting adequate financial, material, and human “resources” enhance their perceptions of the quality of the “inputs” and “processes”.

Figure 8. *Teachers' perception of quality of education*



Among the skills to be promoted at school which were added to the equation in Step 3, “ecological literacy” has a positive effect on teachers’ perceptions of the quality of the “environment”. Teachers have better quality perceptions of the “inputs”, “processes”, and “outcomes” if “problem-solving” skill is promoted at their schools. Finally, teachers have enhanced perceptions of the quality of “outcomes” if “analytical thinking” skill is promoted at their schools.



### *Summary of the Statistics*

- a) Gender is a significant indicator of quality perceptions in all samples (parents, students, and teachers) in favor of females. Female teachers and parents have better quality perceptions in the “environment” dimension of quality, while female students have better perceptions in the “processes” dimension of quality.
- b) Having higher educational qualifications has a positive effect on quality perceptions in all samples (teachers’ and parents’ educational qualifications and father’s qualification in the student sample). In addition, teachers who have higher teaching qualifications also have better quality perceptions.
- c) The medium of instruction is a significant antecedent of quality perceptions in the first steps of all models (although this effect became insignificant in the further steps of students’ and teachers’ models). Students studying at Kyrgyz medium schools and their teachers and parents have better quality perceptions than the ones at Russian and Kyrgyz-Russian medium schools.
- d) The teachers whose “schooling” was during Soviet times have better perceptions of the quality of the “processes” and “outcomes”.
- e) Older parents have better quality perceptions than younger ones. However, age is not a significant predictor of quality perceptions of students and teachers. The students in lower grades have better quality perceptions in the “outcomes” dimension.
- f) The students whose mothers earn money working have better perceptions of the quality of the “outcomes”, while the ones whose fathers work have better perceptions of the quality of the “processes”.
- g) Among the skills to be promoted at school; ecological literacy (teachers and students), problem-solving (teachers and parents), analytical thinking (teachers), critical thinking (student and parents), teamwork (students and parents), diversity (students and parents), and intercultural competencies (students) have a positive influence on quality perceptions of teachers (T), students (S), and parents (P). Those education stakeholders have better quality perceptions if the above-mentioned skills are promoted at school. This implies that the inclusion of problem-solving, critical thinking, teamwork, and intercultural competencies—components of 2030 school competencies— in education would result in elevated quality.
- h) Teachers have better quality perceptions if the national education policy and public organizations support the provision of quality education in schools, and they are provided with adequate financial, material and human resources required to enhance the quality of education.

### **Descriptive Analyses**

The results of the descriptive analyses are provided in this section. After the mean scores of important items were given, t-test results were provided. This is the summary of the findings for each subsection:

1. **Descriptives:** Using mean scores, simple descriptive analyses of the continuous variables were provided. Overall, these results indicate positive perceptions of quality and positive evaluations of the promotion of certain skills at school. Additionally, in the teacher’s

survey, the findings indicate positive perceptions of the opportunities, resources, and support.

2. **The differences between participating and non-participating schools (in the Schools2030 program):** We performed t-tests to understand the differences between the schools participating in the Schools2030 program and the ones that did not participate. Overall, the results show the benefits of participating in this program in terms of better quality, promotion of certain skills at school, and more opportunities, resources, and support.
3. **Urban-rural differences:** We performed t-tests to understand the differences between rural and urban schools. Overall, the results imply equality issues between rural and urban schools in favor of urban schools in terms of better quality, promotion of certain skills at school, and more opportunities, resources, and support.

## 1. Descriptives

### Students:

The students', teachers', and parents' responses in the four dimensions of quality are at the "agree" level (4), which indicates positive perceptions of quality in all dimensions.

Teachers and parents "agree (4)" that all the skills asked in the survey are promoted well at school. However, students' responses varied between certain items. Students think that creative thinking, analytical thinking, teamwork and collaboration, intercultural competencies, and ecological literacy skill are promoted at a satisfactory level (agree – 4). However, they think that critical thinking, problem-solving, IT skills, awareness and acceptance of issues of diversity, and financial literacy skills are promoted at a lower level (true to some extent – 3).

In terms of the opportunities, resources, and support, teachers think that they receive satisfactory (agree – 4) policy and ministry support but the financial, material, and human resources support and the support from parents or local communities are relatively at a lower level (true to some extent – 3).

As we used five-point Likert-type scale in the survey, the findings in this section are interpreted according to the scale below:

1. From 1 to 1.80 represents (strongly disagree – 1).
2. From 1.81 until 2.60 represents (disagree – 2).
3. From 2.61 until 3.40 represents (true to some extent – 3).
4. From 3.41 until 4.20 represents (agree – 4).
5. From 4.21 until 5.00 represents (strongly agree – 5).

### Students

The students' responses in the quality dimensions align with the "agree" level (4), with means ranging between 3.49 – 3.72, signaling positive perceptions of quality in all dimensions except for the quality of inputs. Students perceive a lower level of quality in the dimension of the quality of inputs (true to some extent – 3; M=3.34). Students believe that creative thinking, analytical thinking, teamwork, collaboration, intercultural competencies, and ecological literacy skills are promoted at a satisfactory level (agree – 4). However, they perceive that critical thinking, problem-solving, IT skills, awareness, and acceptance of issues of diversity,

and financial literacy skills are promoted at a lower level (true to some extent – 3). On the contrary, these skills are at the heart of the curricular and co-curricular activities in schools supported by the Schools2030 program (S2030). For example, during our visit to a S2030 project school, a teacher voluntarily invited us to her classroom and showed us materials such as puzzles, pictures, games, and charts, etc. that she uses to teach critical thinking and problem-solving skills in students. She also did an activity with the ‘why’, ‘how’ and ‘so what’ questions. Similarly, in other S2030 project schools, we observed students working in groups to solve various problems the teachers had assigned them.

### Statistics

		Mean_Q_Environment	Mean_Q_Inputs	Mean_Q_Processes	Mean_Q_Outputs
N	Valid	287	287	286	287
	Missing	0	0	1	0
Mean		3.4942	3.3441	3.6793	3.7294

### Teachers

Teachers' feedback across the four quality dimensions falls within the "agree" level (4), with means ranging from 3.84 to 3.99, reflecting positive perceptions of quality in each dimension. Teachers generally express agreement (4), with means ranging from 3.64 to 3.99, regarding the effective promotion of all surveyed skills in school, except for financial literacy skills. Teachers perceive that financial literacy skills are promoted to a somewhat lower extent (agree to some extent – 3; M=3.35). Regarding opportunities, resources, and support, teachers believe they receive satisfactory (agree – 4) policy and ministry support, while financial, material, and human resources support, as well as support from parents or local communities, are perceived to be somewhat lower (true to some extent – 3).

### Statistics

		Mean_Q_Environment	Mean_Q_Inputs	Mean_Q_Processes	Mean_Q_Outputs
N	Valid	256	257	255	257
	Missing	1	0	2	0
Mean		3.8474	3.8418	3.9398	3.9964

### Parents

Parents express positive perceptions of quality in all four dimensions, with responses consistently at the "agree level (4)". Parents express a consensus (agree level – 4) that all the skills outlined in the survey are effectively promoted at the school.

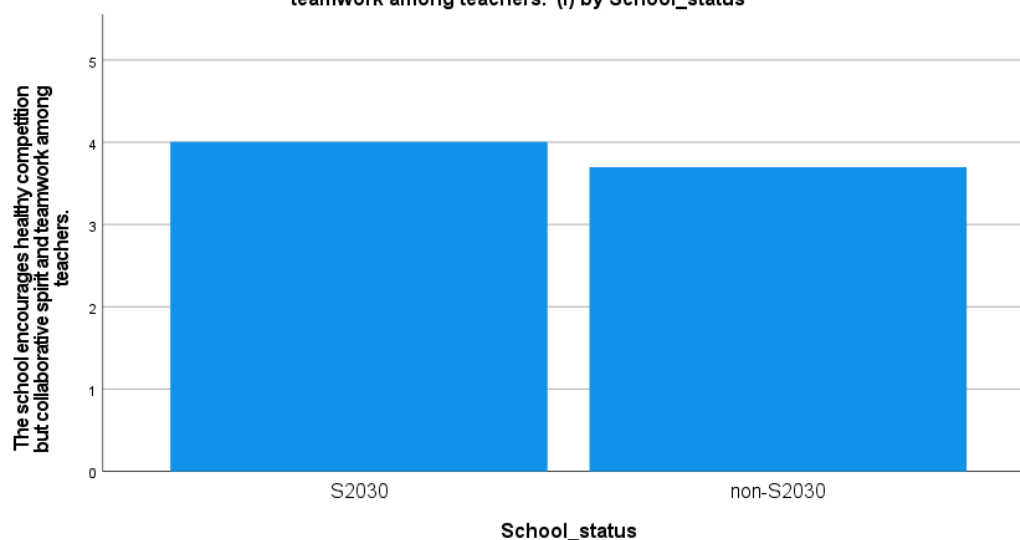
		Statistics			
		Mean_Q_Environment	Mean_Q_Inputs	Mean_Q_Processes	Mean_Q_Outputs
N	Valid	214	216	216	215
	Missing	2	0	0	1
Mean		3.9384	3.9042	4.1333	4.1876

## 2. The differences between participating and non-participating schools (in the Schools2030 program)

### T-test results:

**Teachers:** There is not any significant difference between participating and non-participating schools regarding the mean scores of the dimensions of quality and the skills to be promoted at school. However, there is a significant difference in one of the items of the “quality of the environment”. The teachers from participating schools have better perceptions of quality than the ones in the non-participating schools: “The school encourages healthy competition but collaborative spirit and teamwork among teachers”.

Simple Bar Mean of Teachers' conceptions of the quality of the physical, psychological, and academic environment at their schools - The school encourages healthy competition but collaborative spirit and teamwork among teachers. (f) by School\_status



**Students:** There are significant differences in the dimensions of environment and processes. The students from participating schools have better perceptions of quality in the dimensions of environment and processes (regarding the general mean scores of the dimensions and most of the items in each dimension). In addition, among the skills to be promoted at school, the participating schools promote “teamwork and collaboration skills” better than the non-participating schools.

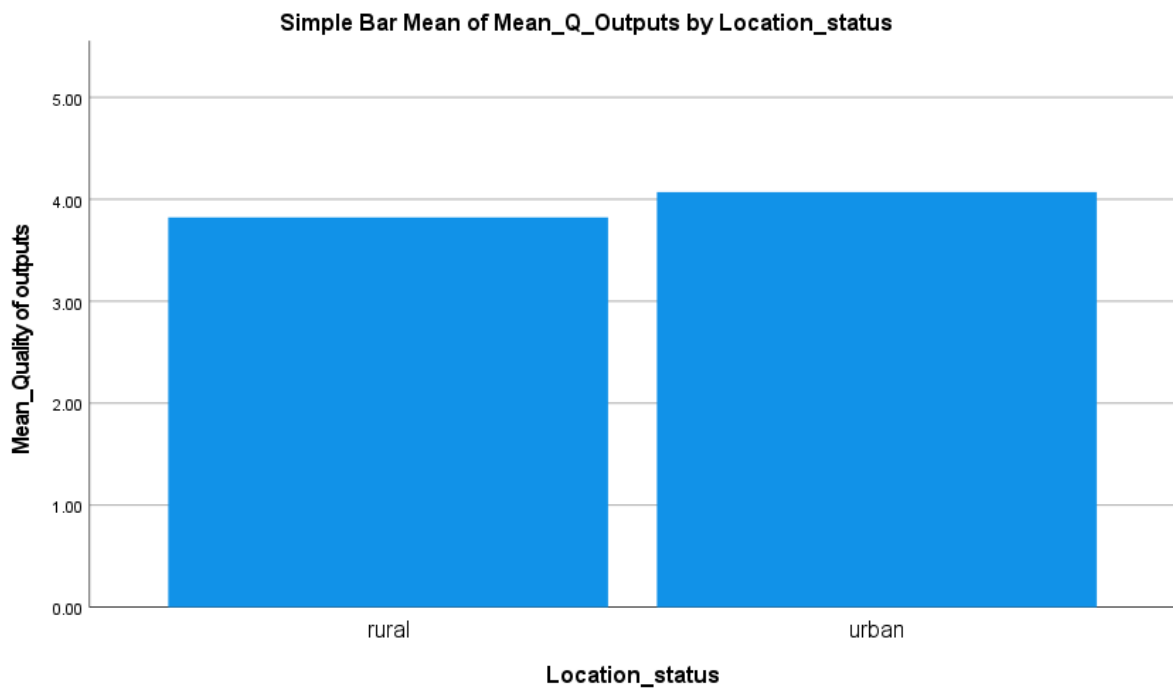
**Parents:** Although there was not any significant difference in the mean scores of the dimensions of quality, there are significant differences in three individual items and one item regarding the skills to be promoted at school: Parents in the participating schools think that

analytical thinking skills are better promoted at the participating schools than in the non-participating school.

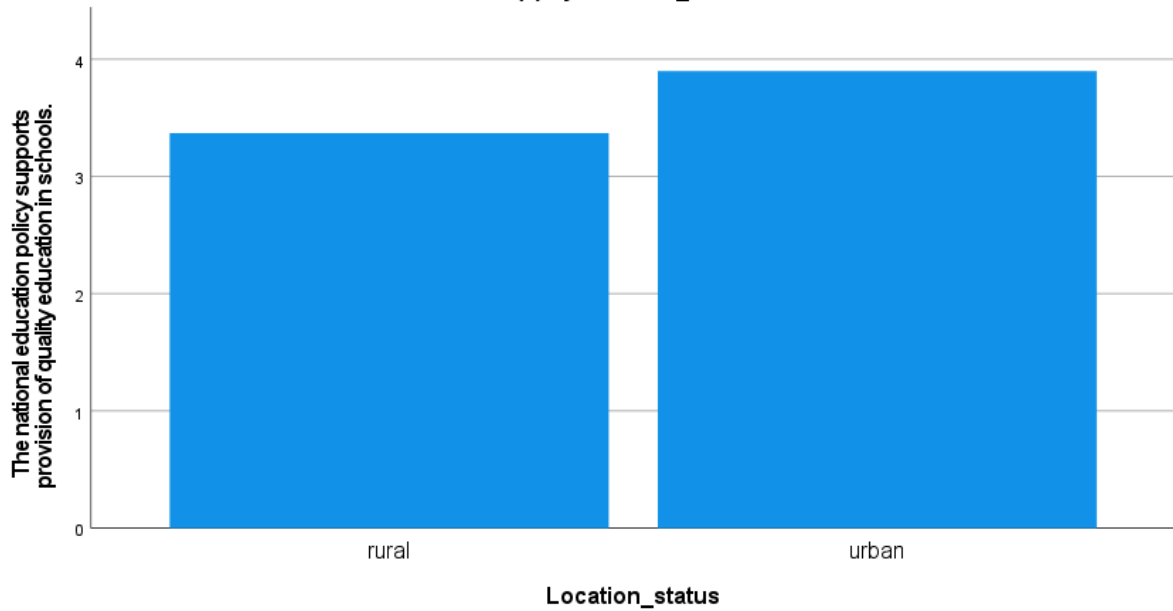
### 3. Urban-rural differences

**Students:** T-test results show that there are significant differences between the views of students studying in urban and rural areas. Students who study in urban areas have better perceptions of the quality of outputs. Students studying in urban areas think that their schools better promote problem-solving, IT, awareness, and acceptance of issues of diversity, ecological literacy, and financial literacy skills.

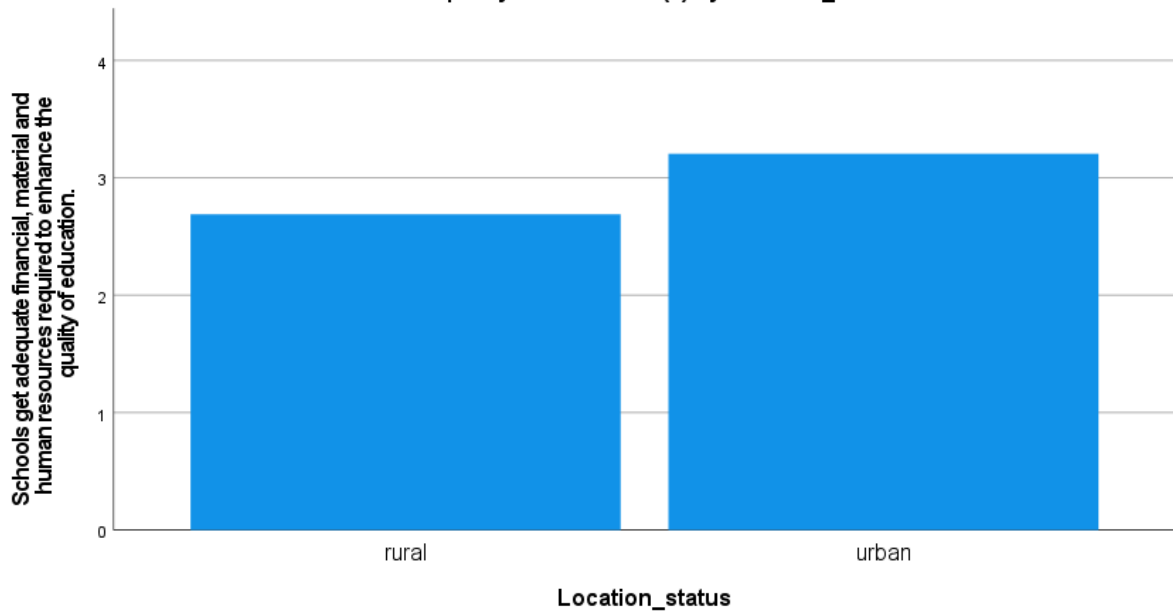
**Teachers:** T-test results show that there are significant differences between the views of teachers working in urban and rural areas. Teachers who work in urban areas have better perceptions of the quality of processes and outputs. Teachers working in urban areas also think they receive more “policy support” and “financial, material, and human resources support”.



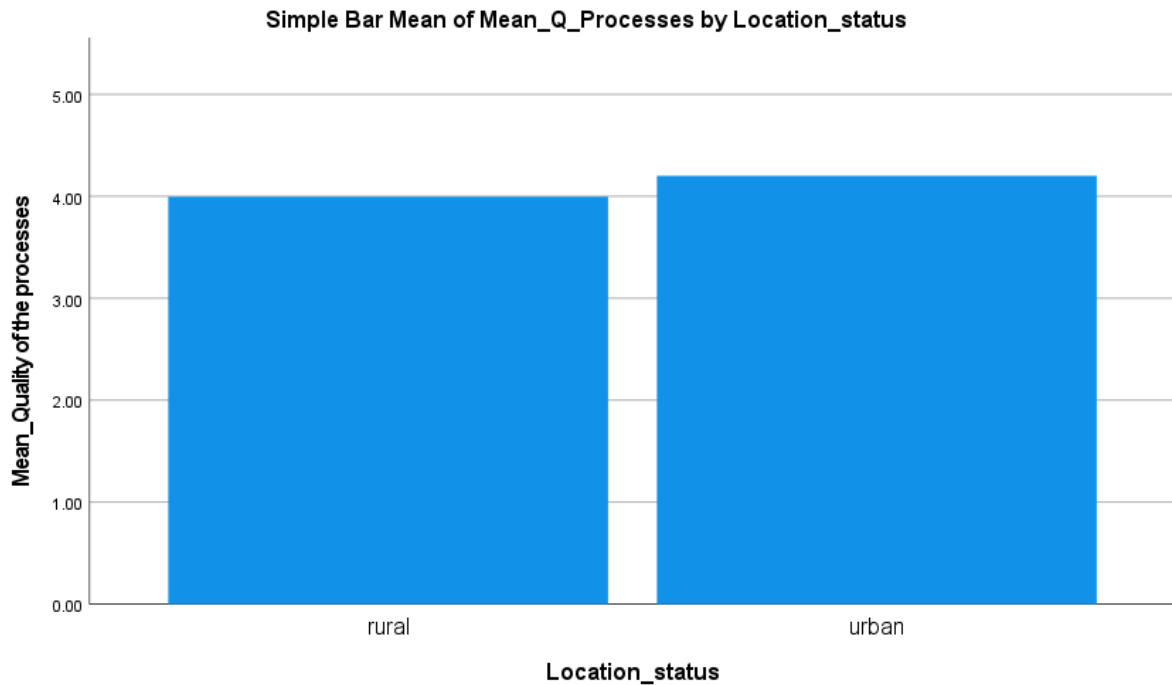
Simple Bar Mean of What opportunities, resources, and support do teachers have to achieve the perceived quality of education in their schools? - The national education policy supports provision of quality education in schools. (a) by Location\_status



Simple Bar Mean of What opportunities, resources, and support do teachers have to achieve the perceived quality of education in their schools? - Schools get adequate financial, material and human resources required to enhance the quality of education. (c) by Location\_status



**Parents:** T-test results show that there are significant differences between the views of parents whose children study in urban and rural areas. Parents in urban areas have better perceptions of the quality of processes.



### **Summary of Quantitative Analysis**

Students, parents, and teachers attending Kyrgyz medium schools, and those participating in the 2030-schools project, where competency-based teaching learning, richer environment, more resources, including internet connections are provided, show better perceptions of quality teaching and learning. Similarly, girls, and parents with higher qualifications have a better view of quality.

The Kyrgyz medium of instruction emerged as a significant factor positively impacting the perceptions of both parents and students across all quality dimensions. This underscores the importance of linguistic considerations in shaping educational experiences. Demographic factors such as gender, age, and educational qualifications were also found to hold considerable influence. Notably, participation in the Schools2030 program was associated with more positive perceptions regarding the quality of their schools, showcasing the impact of targeted initiatives on stakeholder sentiments. Additionally, promoting specific skills at schools, such as critical thinking and teamwork, was linked to enhanced perceptions about the quality of schools.

Gender emerged as a consistent and significant indicator, with females consistently exhibiting more positive quality perceptions across all sampled groups. Higher educational qualifications played a pivotal role, positively affecting quality perceptions for both teachers and parents, while the father's qualifications exerted influence on students. The medium of instruction proved to be a critical antecedent, with Kyrgyz medium schools generally associated with superior quality perceptions. Historical context, age, and parental employment status were identified as additional factors shaping educational quality perceptions.

Descriptive analyses provided a nuanced understanding of overall perceptions. Students, teachers, and parents expressed positive sentiments, although variations in the perceived promotion of specific skills were noted among students. Teachers perceived

satisfactory policy and ministry support yet identified areas of improvement in financial, material, and human resources.

Participation in the Schools2030 program emerged as a pivotal factor influencing perceptions of educational quality. Participating schools generally exhibited better quality perceptions, particularly in the dimensions of environment and processes. Teachers from participating schools reported a more balanced view between competition and peer collaboration. Varied perceptions among parents highlighted the complexity of the impact of such programs.

Significant distinctions between urban and rural areas were observed in the perceptions of students, teachers, and parents. Urban areas generally displayed better perceptions of processes, outputs, and support, pointing to potential equality issues. Varied views on promoting specific skills at schools between urban and rural contexts emphasized the need for tailored educational strategies.

The findings underscore the importance of linguistic considerations, targeted initiatives like the Schools2030 program, and demographic factors in influencing stakeholder sentiments. Acknowledging the significance of gender, educational qualifications, and historical context is imperative for informed education policy and planning. The attention to both urban and rural contexts highlighted the need for tailored approaches to address potential equality issues in terms of resources, opportunities, and support.

### **Results of Qualitative Data**

A detailed analysis of the qualitative findings highlighted above has revealed several shared themes, underscoring the multifaceted nature of quality in education. Among these shared themes, two prominent aspects emerge: quality as input and quality as output.

Both aspects are interconnected, with the quality of input directly influencing the quality of output and vice versa. By examining both quality as input and quality as output, educators and policymakers can gain a comprehensive understanding of the factors contributing to effective educational outcomes. This holistic perspective enables the development of targeted interventions and initiatives aimed at enhancing the overall quality of education. Moreover, it underscores the importance of addressing not only visible outcomes but also the underlying processes and conditions shaping the educational experience.

#### **Quality as Output**

Quality as output, particularly concerning academic skills and performances, is a significant point discussed by stakeholders.

#### ***Quality as academic skills***

This emphasis is deeply rooted in the pursuit of academic excellence, often gauged through standardized tests and participation in subject Olympiads. As one schoolteacher highlighted: "The most important criterion for determining the quality of education is the results of the National Scholarship Testing, and then subject Olympiads." Undoubtedly, the ability to excel academically stands as a central pillar in defining what constitutes quality education for the majority of participants. Furthermore, echoing this abovementioned quote, a



school leader from Naryn emphasized that true quality education is realized when students can effectively apply the knowledge they have acquired in real-life situations. This underscores the importance of not only academic proficiency but also practical application of learned concepts.

Quality education extends beyond mere academic achievements; it encompasses the development of critical thinking skills, problem-solving abilities, and the capacity to apply knowledge in diverse contexts. Therefore, while academic excellence is pivotal, it is equally essential for educational systems to foster an environment that nurtures students' abilities to utilize their learning in real-world scenarios. This holistic approach ensures that education equips individuals with the necessary skills and competencies to thrive in an ever-evolving global landscape.

### ***Quality as non-academic skills***

Unlike the predominant perspective among most teachers, students, and parents, who appear to gauge education quality primarily through students' academic achievements, particularly focusing on memorized knowledge, the representatives of the MoES and international organizations presented a broader viewpoint. They contended that quality education extends beyond mere academic knowledge to encompass the cultivation of essential skills such as critical thinking, leadership, and information management, all recognized as indispensable for success in the contemporary world. Additionally, they emphasized the importance of the practicality and applicability of knowledge, asserting that ensuring students can effectively utilize the knowledge acquired in real-life situations is paramount. For example, a City Education Department's official explained that "If students can use the knowledge they got from this school in practice, if they can use it in life - this will be the best achievement...education is very good, but our children do not know where to use that knowledge". The representative of the Asian Development Bank presented the vision of quality education as follows: "The education system is preparing decent people who behave well in the society, who can navigate in the global community, and who can apply part of their skills in their real life. So, it is more about global citizenship and functional literacy, basically.

### **Quality as Input**

On the other hand, quality as input, as revealed in this research study, focuses on the underlying factors contributing to educational success, including resource factors, teacher quality and parental support.

One crucial factor highlighted in the qualitative analysis is the availability of resources, including human, material, and technical resources, which significantly impact stakeholders' perceptions of quality education. The presence of improved curriculum, textbooks, and access to the internet, along with teachers' use of engaging and interactive teaching methods, are all identified as elements that enhance the quality of education. These resources play a vital role in creating an enriching learning environment and facilitating effective teaching practices.

Quality education was also perceived as the presence of modern technological infrastructure. Both teachers and parents recognize projectors, interactive whiteboards, and internet connectivity as essential tools that enrich the learning experience and maintain student engagement. A school vice-principal underscores the significance of their institution's advanced technological connections, emphasizing the importance of furnishing students with

up-to-date resources for learning. However, economic challenges and migration can pose obstacles to this collaboration, presenting unique challenges in fostering effective parental engagement. In essence, these multifaceted elements collectively shape the landscape of quality education, nurturing a comprehensive and dynamic learning environment.

Another essential aspect of quality as input is the quality of teachers themselves. Stakeholders consistently emphasized the critical role of teachers in delivering quality education. They highlighted the importance of teachers' knowledge, skills, and relationships with students in shaping the learning experience. However, some teachers were noted to predominantly use teacher-centered approaches, indicating a need for more support and professional development opportunities. Stakeholders stressed the importance of teachers becoming reflective practitioners who can critically examine their biases and prejudices while prioritizing equitable and caring interactions with students alongside subject instruction.

Furthermore, the involvement of parents in the educational process is crucial for ensuring quality education. While most schools have good rapport and relations with parents, there appears to be a lack of authentic parental engagement and involvement, with stakeholders noting a more tokenistic approach. This underscores the importance of fostering genuine partnerships between schools and parents to support students' learning and development effectively.

### **Quality as a Process**

The study participants from various sites underscored the significance of factors beyond academic performance when discussing quality education. Many respondents emphasized the importance of a well-rounded education, which includes academic, creative, and practical elements as essential indicators of quality. They highlighted the value of extracurricular activities, proficiency in English, and the development of life skills, recognizing that education encompasses more than just academics. As one student articulated, this holistic approach equips individuals for a comprehensive and dynamic future.

### ***Quality as communication and relationship***

Attaining quality in education demands significant efforts across its diverse aspects. There was unanimous emphasis on the paramount importance of the teacher-student relationship in achieving quality education. Effective communication, engagement, and support from teachers were deemed indispensable, while parental involvement emerged as another critical pillar. Both parents and teachers recognized the vital role parents play in their children's educational journeys.

### ***Quality as well-being and happiness***

The study further revealed that quality education is inherently linked to the well-being and happiness of students, with a positive school environment serving as a cornerstone, free from bullying and conducive to learning. Acknowledging the pivotal role of proactive leadership, a UNESCO Representative advocated that schools led by such leaders would excel and serve as exemplary models for others. Additionally, the central role of teachers in delivering quality education was consistently underscored, emphasizing the importance of supporting and appreciating educators for achieving better educational outcomes.

While these common themes unite the respondents in their understanding of quality education, their perspectives exhibit nuanced differences. For example, the role of Olympiads is viewed differently, with some teachers expressing concerns about their potential to foster one-sided education, arrogance, and egoism among students. Moreover, the significance of the language of instruction varies, with students favoring Russian for better understanding and communication, while parents increasingly perceive English as a valuable skill for the future.

### ***Transformational Leadership and School Culture***

At a mountain village school in Naryn, the leadership approach of Mr. X stood out. His transformational style fostered a strong sense of community, respect, and active engagement among teachers, students, and parents. This leadership not only enhanced the school's organizational culture but also significantly contributed to its success by encouraging participation and valuing everyone's contribution to school growth.

### ***Innovative Pedagogical Approaches***

Observations conducted in the Schools2030 project school unveiled a dedication to innovative teaching methods. The focus on student-centered pedagogies and formative assessment strategies was apparent, with the aim of making learning experiences more engaging, interactive, and relevant to pupils' daily lives.

In summary, policymakers and international representatives underscored a holistic view of quality education, encompassing academic achievement, competency development, soft skills, well-being, and practical knowledge application. Supportive school environments, proactive leadership, and high aspirations collectively enhance the overall quality of educational systems worldwide. This highlights the necessity to comprehend and integrate these diverse perspectives into educational reform efforts.

## **Issues and Challenges**

Kyrgyzstan's education system is confronted with many challenges that significantly impact its effectiveness and students' overall learning experience. These issues came to the forefront through the diverse perspectives of our various stakeholders, including school directors, teachers, students, and parents. While there were common concerns that resonated across all these groups, each brought forth unique insights into the complexities of the system.

### ***Issues with Infrastructure***

Observations conducted across Chuy, Osh, and Naryn regions have unveiled a multitude of challenges plaguing educational settings. Among these challenges are overcrowded classrooms, and outdated infrastructure. These issues collectively impact the learning environment and ultimately influence educational outcomes.

Overcrowded classrooms pose significant hurdles to effective teaching and learning. With a high student-to-teacher ratio, educators often struggle to provide individualized attention and support to each student. This can lead to decreased student engagement, limited opportunities for interaction, and difficulties in addressing diverse learning needs. Furthermore, overcrowding can exacerbate behavioral issues and disrupt classroom management, further hindering the learning process.

Additionally, outdated infrastructure presents significant obstacles to effective education delivery. Schools with inadequate facilities, such as outdated buildings, lack of proper technology, and insufficient resources, struggle to create conducive learning environments. This can impede students' access to quality education and limit their opportunities for academic and personal growth. Moreover, inadequate infrastructure can contribute to disparities in educational opportunities, particularly in marginalized communities where resources are scarce.

There are issues with inadequacy of resources and material-technological infrastructure, shortages of essential educational materials and facilities, misalignment between the curriculum and textbooks, and lack of student motivation and engagement, especially in rural schools.

In many rural schools, shortages of essential educational materials and facilities, such as textbooks, teaching aids, laboratory equipment, and basic amenities like heating and sanitary facilities, have severely undermined the quality of education. Additionally, stakeholders unanimously expressed concerns about the misalignment between the curriculum, textbooks, and teaching materials, recognizing that the curriculum may not effectively address students' needs. Textbooks, often containing errors and lacking methodological guidance, further impact the delivery of quality education.

Compounding these challenges is a decline in student motivation and engagement, which has been acknowledged by educators, students, and parents alike. The perceived shift of students' interests towards technology, such as smartphones and video games, poses a significant hurdle to the overall learning environment and academic achievement.

The representatives from MOES and international organizations also discussed some challenges and issues in quality education and some of these overlapped with those raised by school directors and teachers. For instance, several sources, including the representative from the City Education Department mentioned the shortage of learning resources and poor school infrastructure. The representative from MOES added economic challenges that contribute to this resource scarcity. Despite improvements, access to essential resources remains an ongoing concern.

In summary, addressing these challenges is crucial for improving the quality of education and enhancing educational outcomes. Efforts to reduce overcrowding and invest in modern infrastructure are essential steps towards creating equitable and inclusive learning environments. By addressing these issues, educators and policymakers can ensure that all students have access to quality education that prepares them for success in an ever-changing world.

### ***Growing urban-rural divide***

Qualitative findings indicate that there is an urban-rural divide, wherein both perception and reality suggest a potential decline in quality within rural contexts. Although it was noted by nearly all stakeholders in the qualitative analysis that there is a "better perception of quality" among those attending rural and Kyrgyz medium schools. This information suggests that there is a disparity between urban and rural areas in terms of educational quality, both in perception and reality. The decline may be attributed to various factors such as limited resources, fewer opportunities, and challenges in accessing quality education services.

Interestingly, despite the perceived decline in quality, stakeholders noted a "better perception of quality" among those attending rural and Kyrgyz medium schools. This implies that while the actual quality of education in rural areas may be lower, there is a positive perception among stakeholders regarding the quality of education provided in these settings. This could be due to factors such as community support, cultural values, or other intangible aspects that contribute to a favorable perception of education in rural environments, as well as these perceptions can be because of absence of alternatives in rural settings.

### ***Lack of learning opportunities***

In addition to a comprehensive understanding of overarching issues and challenges, educators in remote rural areas emphasized challenges specific to their contexts. They noted that issues such as limited access to extracurricular activities, lack of specialized courses, and inadequate resources for students stem from geographical constraints. These limitations contribute to educational inequalities that significantly impact the overall quality of education in these regions. Furthermore, educators underscored the critical role of parents in their children's education. However, challenges arise when parents themselves lack sufficient education and awareness regarding the importance of their children's academic progress.

Socioeconomic factors further exacerbate these challenges, as parents often migrate for work to other countries, adversely affecting students' well-being and educational opportunities. The following excerpts from interviews with teachers shed light on the gravity of socioeconomic issues affecting both students and teachers:

- Majority of our students come from low socio-economic backgrounds. Their parents are usually away to Russia for labor work and there are no adults to take care of these children at home. These students, especially the teenagers, get involved in social issues which badly affect their learning (FG with teachers in Alai Region).
- Once a 9-grader committed suicide and another student got pregnant. Both children had no adult at home to take care of them. Their parents were doing labor work in Russia. The school management was punished for these incidents which happened outside the school hours. Teachers were also blamed for these. This is not fair. How can we control things that happen at home? The authorities put every blame on us (FG with teachers in Naryn Region).
- Mental health issues and suicidal tendencies are common among teenagers from low socio-economic backgrounds in the country. Honestly, we [teachers] are afraid of giving a 'Fail' grade to a student who fails in the exam. We are concerned about the vulnerable mental state of students in certain age and background (FG with teacher in Naryn Region)

### ***Poor teaching approaches***

Another prevalent challenge is the persistence of traditional teaching methods. Many educational institutions continue to rely on conventional approaches that prioritize rote memorization and passive learning over active engagement and critical thinking. This outdated pedagogical approach fails to foster creativity, problem-solving skills, and independent learning among students. Consequently, it stifles innovation and fails to adequately prepare learners for the complexities of the modern world.

### ***Disconnect between pedagogy universities and schools***

Furthermore, the disconnect between pedagogy universities and the school system's needs was evident. The Ministry representative explained,

The distance between our higher education institutions and the school is too far. We are growing as a school. ... the school uses many advanced technologies, standards, and programs. ... schools are moving forward, but many of our educational institutions are lagging.

This misalignment affects the quality of teacher training and preparedness for school teaching. Furthermore, the Ministry revealed the shortage of school leadership training, stating, that

There is no directors/leadership training in our educational institutions in Kyrgyzstan. This gap hampers the effective management of schools and the improvement of educational quality.

### ***Issues with poor teacher preparation***

Pedagogy universities (and HEIs that prepare future teachers) were criticized for not conducting relevant research in the education sector, limiting their ability to adapt to the evolving needs of schools. The International Organization representative highlighted that more research is needed to ensure progress. The system's emphasis on rote learning rather than practical knowledge application is a significant challenge. It was highlighted: "The main issue is that the material is not connected to life," revealing the disconnect between school knowledge and its real-world relevance.

Also, the Ministry acknowledged the state of the teacher profession: "The main reasons are teachers who have come to the teaching profession by mistake." City Education Department representative added: "Many teachers today have ideas, but they do not know how to implement them in a long time." These quotes underscore the pressing need for improvements in teacher qualifications, status, and professionalism in general.

### ***Issues with teacher professional development***

A pervasive and shared concern among educators, students, and parents revolves around the quality of teaching and the need for professional development opportunities in Kyrgyzstan. It is widely acknowledged that not all teachers are adequately qualified or equipped with modern teaching methods. This is even though the teachers' teaching methods and various notions of quality education have been a key focus of local and international reforms (Silova & Niyozov, 2020). This raises fundamental questions about the system's ability to prepare students for the demands of the contemporary world. Stakeholders express concerns about the competency of some teachers, particularly in non-S2030 project schools, and highlight a reluctance among certain educators to embrace new teaching methods. While this reluctance hampers the adoption of modern educational practices, further exacerbating the challenges faced by the system, it also prompts questions about the reasons for resistance, reluctance, as well as the effects of the reform processes. An International Organization representative explained, "The capacity of the authorized institutes is not enough," emphasizing the need for solutions to address this issue. In contrast, a severe shortage of teachers, especially for rural areas, has been a pressing concern, which is exacerbated by low salaries and limited

career prospects. As an International Organization representative noted, "You have to get them motivated and interested in investing in the profession." Notably, school and education faculty graduates are often reluctant to pursue teaching careers due to low salaries and limited career prospects, exacerbating the shortage of qualified educators. The respondent referred to statistics showing that only 17% of graduates from pedagogy universities become teachers.

### ***Lack of teacher autonomy***

Teachers grapple with excessive workloads and limited autonomy in teaching approaches, as highlighted by an International Organization's representative. Insufficient freedom is given to educators in shaping their teaching methods. A representative of an international organization argued that bureaucratic constraints are overwhelming teachers, impacting the quality of education. It is also noted that frequent changes in education sector strategies and policies pose challenges for schools in implementing lasting improvements, leading to confusion and difficulties carrying and sustaining policy implementation.

### ***Growing divide in quality education of urban vs rural schools***

The stark divide between urban and rural schools was emphasized by the Kyrgyz Academy of Education, noting vast differences between the two sites, and attributed the discrepancies to teacher access to knowledge and professional development opportunities. Speaking of private schools, an International Organization representative, said that these schools stand out for nurturing critical thinking, tolerance, and independence; they offer a more holistic curriculum. Private schools, accordingly, are setting an example of educational excellence. Furthermore, the Department of Preschool Education lamented the neglect of early childhood education, revealing that there is merely 30% enrolment in kindergartens, which deprives students from critical educational foundations' stage.

In summary, the multifaceted challenges faced by the education system in Kyrgyzstan were illuminated through the perspectives of educators, students, and parents. These challenges encompassed issues related to teaching quality, resources, infrastructure, student rights, equity, well-being, and urban-rural disparities. These challenges are significant hurdles to providing quality education and necessitate comprehensive reform efforts and continued partnerships with external organizations. Although the schools supported by international organizations, including Schools2030 program, are better resourced, they are very few and cannot represent most schools lacking necessary infrastructure and human, material, and financial resources. Addressing these concerns will require a concerted effort from all stakeholders to reform and improve the entire education system-not just selected schools- to benefit Kyrgyzstan's future generations. Addressing these issues is vital for Kyrgyzstan's educational development and, by extension, its future growth and prosperity.

### ***Students' challenges***

Many students echoed concerns commonly voiced by educators and parents. These concerns encompassed various issues, including teacher behavior within classrooms. Students highlighted instances of favoritism, verbal abuse, and even physical punishment. The absence of a declaration outlining student rights within schools emerged as a specific issue compromising equitable treatment for students. Additionally, students expressed challenges

related to school infrastructure, citing issues such as cold classrooms and inadequate spaces for extracurricular activities, which negatively impact their physical comfort and overall well-being.

Concerns regarding academic integrity and cheating within the education system were also articulated, raising doubts about the trustworthiness and fairness of the educational process. Moreover, students expressed dissatisfaction with the perceived lack of motivation and guiding ideology within the education system, feeling uninspired and under-supported. The perceived inadequacies in addressing issues of academic integrity and cheating further exacerbated their discontent with the educational experience.

### **Effects of the Covid-19 pandemic**

The COVID-19 pandemic has significantly impacted various aspects of society, and one of the most affected sectors has been education. With schools and universities forced to transition to online learning, stakeholders have had to adjust to a new way of teaching and learning. In this part of the document, we will explore the challenges faced by schools, teachers, and students during this period and their resilience and adaptability in the face of adversity.

#### **Quality decreased**

All the stakeholders noted that the quality of education went down because of the pandemic. School directors acknowledged the decline in education quality during the pandemic despite their efforts to prevent the decline. They highlighted the negative impact of the shift to online learning and other challenges on overall education quality. One director remarked: "Though we tried not to let the quality go down, the quality went down".

#### **Improvement of digital skills**

However, the upside was improving digital skills to use online platforms. Schools had to learn to use online platforms and independently create video lessons. They described a steep learning curve, with one director noting, "We learned by ourselves...making videos and sharing on WhatsApp." This adaptation was driven by necessity, as many teachers and students needed more devices and infrastructure for effective online education.

#### **Challenge with lack of gadgets**

Both schools and teachers were unprepared to shift to online classes. Teachers needed to gain the necessary skills and infrastructure to effectively deliver online education. Since many teachers did not have personal computers, they had to resort to using phones through platforms like WhatsApp to conduct online classes. The same challenge was shared by students and their families. For example, one director claimed as follows:

The father has a phone, or the mother has it. His/her mother's phone has applications, and his father's phone is old, and button based. There were also many issues. Sometimes, the children refused to join online lessons, saying, "We do not have a phone".

#### **Sponsors support**



Sponsors played a crucial role in supporting schools by providing essential resources like laptops and the infrastructure required for online teaching. This external support helped alleviate some of the resource constraints faced by schools. One such example was given by a school director:

We took many actions, and then we looked for sponsors, and one sponsor gave two laptops to the families in need of help, and then one of our teachers gave a television to a villager who did not have one. They tried to find a way out of this situation.

### **Challenges with adapting to new online technology**

The interviews with teachers revealed their resilience and adaptability during these challenging times. Many teachers emphasized the importance of online communication tools like Zoom and Google Meet in maintaining the continuity of education. They highlighted the contrast between their approach, which involved live interactions and engagement, and some other schools, where students received assignments and minimal guidance. Teachers also discussed their steep learning curve in transitioning to online teaching. They described creating WhatsApp groups and utilizing various digital tools for lesson delivery and feedback. While some teachers adapted quickly, others faced technical challenges, including internet connectivity issues.

### **Parents' appreciation of teachers**

Another recurring theme was the recognition of the value of teachers by parents. Many teachers noted that parents gained a deeper appreciation for their work as they actively participated in their children's education during the pandemic. A teacher commented that "they (parents) appreciated us a lot, they knew our value, and as soon as September came, they brought us their children to wish us good health". Teachers also mentioned acquiring new skills, such as video lesson creation, highlighting their adaptability and dedication to their students' learning.

### **Issues with students' motivation and discipline**

Online learning also posed challenges of motivating students and maintaining discipline. The absence of proper oversight during online classes led to decreased student engagement. Directors expressed concerns about students' lack of participation. They raised control issues in online classes:

In the mountains when children were looking after the sheep. Children just played around when the lesson started. If we ask if they will participate in the lesson, they say "yes" and yet do not join.

The remote learning environment increased children's interest in computer games and mobile phone usage, potentially negatively affecting their academic focus. One school director noted that a school struggled with a decline in discipline, probably because a majority of the children showed increased interest in computer games.

Students' experiences varied, with some mentioning struggles to adapt to the new format. While they appreciated the flexibility that online learning offered, they also pointed out its downsides, such as lack of motivation, difficulty concentrating, and technical challenges. A student elaborated on her pandemic's difficulties

I remember every Sunday we had a chemistry test. They cut electricity, and teachers put "2" because I did not have time to upload my response to the site. I think that students need to be listened to. Again, in our school, many teachers do not want to bother to find out the reason and (a teacher) just puts 2. No questions asked. Because he/she still has so many classes to check.

Other students reported mixed experiences with online lessons, highlighting the importance of engaging teaching methods to maintain their interest. Some mentioned feeling disconnected from their peers and teachers during remote learning. Yet, the challenges, some students acknowledged that the pandemic prompted them to acquire new technological skills, such as using Zoom and other online platforms, which they considered valuable for their future education.

### **Parents' concerns during pandemic**

The parents' interviews underscored the significance of their role in supporting their children's education during the pandemic. Many parents expressed their difficulties adapting to the new online learning environment. They emphasized the importance of teacher-student interactions and the limitations of online teaching in this regard. Parents discussed the financial burden of acquiring the necessary technology, such as smartphones and internet connectivity to facilitate online learning for their children. They also mentioned concerns about their children's screen time and the potential adverse effects on their health and well-being. A parent acknowledged that "it was very harmful to children's health. Many children wear glasses, children are stressed and restricted".

The interviews with school directors, teachers, parents, and students during the COVID-19 pandemic reveal the multifaceted impact of the crisis on teaching and learning. While online learning provided a lifeline for education continuity, it also presented significant challenges related to availability and skills in using technology, low level of engagement, and reduction of social interactions. Positively, teachers' adaptability and dedication were evident in their efforts to provide quality education in a rapidly changing landscape. The pandemic also shed light on the digital divide, with disparities in access to technology and internet connectivity affecting students' learning experiences. Additionally, the interviews underscored the importance of in-person learning and education's social and emotional aspects. As the world continues to combat the pandemic's aftermath, it is essential to reflect on these experiences to inform future strategies and policies for improving the resilience and adaptability of education systems, ensuring that all students have equal access to quality learning opportunities, in-person and online.

### **Teaching and learning strategies used to achieve the quality of education**

This section of the report the overarching research question, "What are teaching and learning strategies used to achieve the quality of education?". This question was explored through the lens of each stakeholder group.

#### **Technology-integrated teaching**

The responses from teachers underscore a shift towards integrating technology into education. One teacher from Bishkek highlighted the importance of adapting to new platforms and technologies, emphasizing the role of seminars and collaborative learning in mastering these tools. In Chui province, teachers participate in regular seminars, share innovative teaching methods, and engage in projects like "*Okuu Keremet*," indicating a commitment to continuous professional development. Integrated sciences are celebrated for enhancing student achievements, with a specific mention of the positive impact of the new law on further vocational orientation. Teachers of one school recognize the benefits of programs like the PRO100 software fostering interest in subjects like mathematics and design.

Parents' perspectives revolved around the creative and technological aspects of teaching. They valued schools with modern technology, such as computers and projectors, and appreciated innovative teaching methods. The emphasis on parental involvement was evident, with parents participating in projects and actively contributing to improving school conditions.

Concerns about the influence of social media on children were also highlighted, pointing to the negative impact of disruptive behaviors and of inappropriate content. Parents also desired additional courses in language, IT, and creative clubs, showcasing their interest in a well-rounded education for their children.

### **Practical and interactive teaching**

A notable shift in teaching philosophy appeared evident in teachers' remarks. A teacher's comment focused on practical application and real-world relevance of students' learning: "I want to teach them to be able to buy something for themselves, to navigate at the airport, that is, to apply the knowledge in their life". This shift towards emphasizing real-world application, as well as use of learning to solve their daily problems, reflects a broader understanding of education as a tool for life preparation and life improvement rather than merely a scholastic academic pursuit.

Students highlighted the significance of how the teaching - learning material is presented. They appreciated those teachers who could effectively deliver content, emphasizing the importance of teachers' attitudes and teaching styles. The desire for interactive and engaging lessons was evident, with students expressing preference for teachers who encouraged questions and created a positive and safe learning environment. However, challenges were acknowledged by teachers, particularly in capturing students' interest in the era of information accessibility. Teachers shared those difficulties of competing with the vast amount of online information and the need of making topics engaging for students.

The call for diverse teaching methods was echoed in students' comments about the need for teachers to find different ways to teach and make subjects enjoyable. The desire for practical and interactive lessons was also evident, with students valuing teachers who understand them, talk in their language, and establish connections.

School directors emphasized a holistic approach to education, incorporating extracurricular activities and integrated circles to engage students. The creation of clubs such as the Club of Young Readers and the Club of Young Leaders reflects a commitment to developing leadership qualities and providing guidance to students.

Directors also underscored the importance of media literacy, leveraging technology, and incorporating IT into the curriculum. The emphasis on active involvement in projects,

competitions, and events illustrated a multifaceted strategy to enhance the educational experience. Representatives from the preschool education department and the Ministry of Education highlighted the importance of developing initial skills in children, incorporating humanization in pedagogy, and promoting an active life position among students. They emphasized the need for vocabulary development, fairy tales, puppet shows, and innovative projects in kindergartens.

The focus on parental education and involvement was evident in initiatives like the School of Parents, YouTube channels, and live broadcasts. Mobile applications and television programs raised the need to promote media literacy from an early age. Our comparative analysis revealed common themes across stakeholder groups, such as the broader notion of education and quality (i.e., including academics, but also social and psychological aspects, emphasizing STEM, but not leaving humanities, ethics, and other critical literacies), importance of technology integration, the practical application of knowledge, and the need for diverse teaching methods. However, notable differences also emerged, with urban schools enjoying technology and creative teaching methods, while rural schools emphasizing the cumulative impact of teacher dedication over time. Overall, the urban-rural disparities need serious attention for questions of equity and social cohesion.

While teachers and school directors highlighted the challenges of adapting to modern teaching methods, students and parents desired more dynamic and engaging educational experiences. Bridging these perspectives is crucial for developing comprehensive strategies that cater to the evolving needs of the educational landscape.

In conclusion, the qualitative analysis showcased the diversity of teaching and learning strategies' perspectives. It provided valuable insights into the challenges and successes of current educational practices, as well as stakeholders aspirations, laying the groundwork for future improvements that address the diverse needs and hopes of students, teachers, and parents. The collaborative efforts between stakeholders and a commitment to innovation and adaptability can pave the way for a more effective, engaging, relevant and valuable quality educational experience.

### **Opportunities, resources, and support**

Below, we provide a summary of the findings from the responses provided by teachers, school leaders, representatives of different education departments, and representatives of international organizations answered to one of the research's key questions, *what opportunities, resources, and support are available to these school leaders and teachers to achieve the perceived quality of education in their schools?*

#### **Classroom resources**

The teachers in Bishkek expressed satisfaction with the availability and quality of classroom resources, particularly highlighting the well-maintained condition of interactive whiteboards. One teacher noted that "resources are well prepared in the classrooms. An interactive whiteboard in good condition was created from the beginning" (FGD with teachers, Bishkek). This emphasis on adequate resources is crucial for creating an effective learning environment. A recurring theme across teacher responses is the adoption of integrated sciences, fostering teamwork, and the implementation of innovative teaching methods. A teacher

remarked, "the biggest thing we have discovered is integrated sciences. Nowadays, children are achieving a lot".

### **Support from development agencies**

Teachers acknowledged the positive influence of collaboration with non-governmental organizations (NGOs) such as the Aga Khan Foundation, UNICEF, and the Asian Development Bank (ADB). The interviewed teachers mentioned that the support from these development partners ranges from providing computers and books to implementing projects focused on improving school conditions. A teacher from Alai province mentioned that as they are "working with non-governmental organizations, many things are coming to the school, computers are coming, books are coming, this is a help for us".

### **Professional development opportunities**

The support for continuous professional development was evident in the teachers' responses. Teachers have actively participated in projects like Schools 2030, where they learned new teaching strategies and improved their math literacy. Additionally, the exchange of methods and experiences between schools, facilitated by organizations like Aga Khan and ADB, has contributed to a dynamic educational quality landscape. Plus, the involvement of UNESCO, the World Bank, and the Asian Development Bank have added another layer of support. The ADB, for instance, is actively engaged in a significant policy project aimed at reforming curriculum and teacher training. These collaborations, especially when they are needs' driven and dialogical in nature, underscore the significance of global partnerships in enhancing educational quality.

### **Uneven distribution of resources**

Concerns were raised about the equitable distribution of resources. While some schools benefited from projects and collaborations, a teacher mentioned, "But we also cooperate with parents; Parents bought a TV, but again, it is not enough; not all classrooms are supplied" (Teacher, Alai). This highlights the need for more resources from more diversified sources as well as for a comprehensive resource distribution.

In conclusion, the opportunities, resources, and support available to school leaders and teachers have played a pivotal role in fermenting the quality of education. Collaborations with NGOs, international organizations (including AKF, UNESCO, the World Bank, and ADB), the government, parents and individuals, provide diverse support, from professional development to infrastructure improvement. While some progress has been made, challenges such as equitable resource distribution and internet connectivity in rural areas call for ongoing efforts. The dedication of educators and the evolving landscape of educational practices and support have underscored the dynamic and evolving nature of the pursuit of quality education in the Kyrgyz context.

### ***Stakeholders' Recommendations to Enhance Quality***

A prominent theme across stakeholders' (school directors, teachers, parents and students) responses was the emphasis on improving the quality of teachers. Their responses are categories around the following sub-themes.

### **Improving teachers' teaching approaches**

The consensus among stakeholders was that teachers should evolve along the changing educational landscape, adopting modern teaching methods and staying updated with innovations in their fields. A school principal observed: "The quality of teachers' education should be greatly improved." The stakeholders highlighted the growing gap between teachers' existing teaching approaches and the evolving digital age. They argued that students are more tech-savvy than their teachers and, therefore, the education system should integrate modern technologies. This includes providing teachers with the necessary resources, such as interactive panels and digital tools, to enhance their learning experience and pedagogical capacities.

### **Motivating prospective teachers**

Several stakeholders, particularly school principals, stressed the importance of incentivizing prospective teachers as part of addressing the need for high-quality teachers. They proposed waiving university fees for teacher education programs and providing substantial scholarships to students who excel in their studies. This approach aims at attracting and retaining high-quality individuals in the teaching profession.

### **Continuous professional development**

Continuous professional development was viewed as crucial in adapting to rapidly changing educational landscapes. Stakeholders advocated for regular training, webinars, and online courses to equip teachers with updated pedagogical skills and content knowledge. This ongoing development was deemed essential for nurturing modern, effective educators.

### **Emphasis on improvement language proficiency**

Recognizing the importance of language proficiency in today's globalized world, stakeholders emphasized the need for students to learn multiple languages: English, Russian, and Kyrgyz were specifically highlighted. Additionally, there is an increased interest in learning Chinese due to its significance in the regional-global market.

Students in Kyrgyzstan advocated for a more engaging and practical curriculum, urging the inclusion of life skills such as financial literacy and sex education. They emphasized the importance of early career guidance, starting from the 9th grade and underscored the value of extracurricular activities and hands-on learning experiences, particularly in subjects like Physics and Chemistry. Parents, recognized as crucial influencers in the education system, called for improving communication between schools and parents regarding financial contributions and sustainability of schools, suggesting a reduced reliance on parental funding and prioritizing investments in infrastructure and educational resources. Both parents and students expressed concerns about students' psychological well-being, recommending the inclusion of school psychologists to address emotional and behavioral issues. Parents further propose that teachers receive child psychology training to understand students better and support them. Stakeholders, particularly students, emphasized the necessity of reducing class sizes for more personalized education, arguing that smaller classes would enable teachers to provide more individualized attention, fostering a more conducive learning environment.

In conclusion, the stakeholders in Kyrgyzstan are deeply committed to enhancing the quality of education. Their common ideas revolved around improving teacher quality,

integrating modern technology, providing financial incentives for future teachers, and fostering continuous professional development. In other words, they acknowledged that both input and processes of education quality need to be made available so as to produce quality outcomes for the students and communities. However, distinct perspectives from students and parents highlighted the importance of a student-centered curriculum, parental involvement, psychological support, and smaller class sizes. The collaborative efforts of all stakeholders are critical in shaping the future of education in Kyrgyzstan and ensuring that it aligns with the needs of the 21st century.

To tackle the challenge of attaining quality education, policymakers and international organization representatives provided a range of recommendations. One recurring theme was the significance of teachers in the education system. According to the National Center for Evaluation, teachers play a crucial role in education, emphasizing the significance of seeking and understanding their opinions and job satisfaction for achieving academic progress, including quality. Policymakers advocated for a clear career progression path for teachers, emphasizing rewards for excellence and professional growth. The Ministry proposed higher standards for teacher preparation programs, including increased entry thresholds to ensure competent individuals enter the teaching profession. To attract high-quality candidates, their recommendations included offering scholarships and stipends, particularly for those from lesser-privileged backgrounds. Collaboration between educational institutions and schools was stressed for better teacher training, aligned with practical classroom needs. Continuous professional development, practical experience during pedagogical training, and strengthening requirements for teacher education were deemed as essential aspects to consider. Additionally, a balanced approach to teaching, reduced teacher workloads, and an emphasis on natural sciences, technology mathematics (i.e., STEM-related topics) were suggested. Building kindergartens in under-served areas, promoting multilingualism, ensuring adequate funding, and revising spending priorities were also highlighted. To ensure accountability, an evaluation mechanism for schools, including rating and ranking systems were proposed. Additionally, acknowledging the impact of bullying, interviewees stressed the need for peace education and conflict resolution training in schools.

In conclusion, the quotes provided by various stakeholders shed light on the multifaceted nature of challenges related to education quality. The recommendations and ideas put forth by policymakers, ministry representatives, and international organizations reflected a comprehensive approach to addressing these issues. They included the importance of teacher quality, professional development, cooperation between teacher education institutions and schools, parents and schools, and the need to balance academic education with student's holistic development, the need for enabling students apply their learning, and the need to provide material, technological and socio-psychological support. Furthermore, socioeconomic factors, optimization of education spending, and evaluation mechanisms were vital in pursuing high-quality education. Overall, these insights offer a roadmap for improving education and, consequently, the prospects of the society it serves.

### **Synthesis of Quantitative and Qualitative Findings**

A comparative look at the findings identified via the above analysis of the qualitative and quantitative findings reveals several shared themes. Students, parents, and teachers

attending Kyrgyz medium schools, and those participating in the Schools2030 project, where competency-based teaching learning, richer environment, more resources, including internet connections are provided, show better perceptions of quality teaching and learning. Similarly, girls, and parents with higher qualifications have a better view of quality. Qualitative findings, however, provided more expanded notions of various aspects of the theme of quality education. These are as follows:

### ***Quality as academic and socio-ethical aspect***

Quality education includes academic and social-ethical aspects. Juxtaposed with the quantitative data analysis, one can suggest that two aspects of quality broadly co-mingle with the key competencies proposed by competency-based education reform that is currently promoted in Central Asia, including Kyrgyzstan.

### ***Urban-rural divide***

Urban-rural divide: qualitative findings show that quality both in terms of perception and reality may be declining in the rural contexts. Even though it was highlighted by almost all the stakeholders of the qualitative analysis, this concern, however, needs further verification, especially given its discrepancy with the quantitative findings on the ‘better perception of quality’ among those who attend Kyrgyz medium schools.

### ***Resource factor***

Resource factor: the qualitative analysis showed that availability of human, material, technical, including IT resources positively affects the stakeholders' perceptions about quality teaching and learning. Improved curriculum, textbooks, teachers' use of engaging, interactive methods, access to the internet all help with improving the quality of education.

### ***Quality of teachers***

A particular emphasis was made on the role and quality of teachers by all stakeholders: Their knowledge, skills and relationship with students, including their own knowledge of the various competencies and higher order skills in addition to their devotion and commitment are central to providing good quality. The stakeholders appreciated the teachers' commitments and sacrifices, especially during COVID 19th peak season and overwhelmingly suggested supporting teachers, including primarily increasing their salaries. At the same time, the participants also highlighted the need to enable teachers to reflect on their biases, prejudices, and practices so as to not only teach their subjects, but also relate to students equitably and with care.

### ***Impact of COVID-19***

A key insight related to during COVID education experience was the preference for in person learning, instead of on-line. This insight largely corroborates with the findings elsewhere where the negative psycho-social and mental impact of isolation and online teaching during COVID have been highlighted. The qualitative findings also revealed that quality is a dynamic, evolving and at times contested notion that depends on the context. Quality cannot be taken for granted and requires constant work, diligence, and commitment. Overall, the



themes around quality education corroborate with the findings from Tajikistan desktop study, as well as with the findings from the comparative, international research: Quality education is critical to individual, communal, and overall national development, especially in the 21st century of knowledge economy and society and in times of stiff economic competition and intercultural co-existence.

### **Conclusions**

Based on the findings several conclusions, having implications for policy and practice, can be drawn. These include, but not limited to, the following:

1. The data revealed that there is a tendency of measuring quality of education mainly through students' scores in various tests, examinations, and Olympiads. Although there is a realization about the importance of students' holistic development, which involves students' academic, social, emotional, physical, and moral development, the current assessment practices seem to focus mainly on academic achievements only. The implication of this limited view of quality is that teachers may be compelled to teach to the tests by focusing more on learning of subject matter than on any other domains of holistic development. It may also encourage students towards rote-memorization of subject matter to be able to reproduce it in the exams/tests.
2. School leadership matters the most in achieving desired quality in education. To provide quality leadership, the principal and other leaders must have the quality in them. They must be appointed through a rigorous and transparent process based on merit. Only then, they can provide quality leadership. Principals appointed through political support and nepotism lack both leadership and management skills and thus unable to inspire change in schools. Other studies have also concluded that a good principal does not guarantee the success of a school, but there are no successful schools without a great leader. Leithwood and Seashore-Louise (2012) argue, "To date, we have not found a single documented case of a school improving its student achievement record in the absence of talented leadership" (p. 3). This argument is supported by Miller (2012), who asserts, ". . . If sound leadership at the policy level is a seed of development, then sound leadership of educational institutions (school) and at the classroom level is arguably a flower of development" (p. 9). Thus, the findings and conclusions in the current study have implications for the recruitment and development of school leaders and the enactment of their leadership role.
3. While school leaders seem to encourage parents' participation in schools, there are no viable structures, culture, and mechanisms for developing genuine collaboration and partnerships between schools and local communities. To develop cordial relations and genuine collaborations between schools and parents, there must be shared leadership and collective decision-making involving parents in all matters of the schools. Parents must understand and enact their role as partners - not mere beneficiaries of the services provided by schools.
4. Based on our visits to all the 15 schools participating in this study, we reach a conclusion that one common challenge to quality education is the lack of resources (human, financial and material). Several schools do not have washrooms, playgrounds, adequate number of classrooms, library, computers, and laboratories. Quality education requires quality

teachers, leadership, and other financial and material resources. Unless these resources are provided, the desired quality in education may be difficult to achieve.

## References

- Academy of Education of Kyrgyzstan. (n.d.). Что такое PISA? Образцы тестов PISA. [What is PISA? Sample PISA tests.] <https://kao.kg/wp-content/uploads/2020/11/%D0%A7%D1%82%D0%BE-%D1%82%D0%B0%D0%BA%D0%BE%D0%B5-PISA.pdf>
- Bahry, S. (2005). Traveling policy and local spaces in the Republic of Tajikistan: A comparison of the attitudes of Tajikistan and World Bank towards textbook provision. *European Educational Research Journal*, 4(1), 60-78. <https://journals.sagepub.com/doi/abs/10.2304/eeerj.2005.4.1.6>
- Belkanov, N. (1997). *Russian Education for Non-Russian Peoples. Russian Education & Society*, 39(9), 28–43. doi:10.2753/res1060-9393390928
- Center for Educational Assessment and Teaching Methods. (2007). Отчет об основных результатах исследования «Национальное оценивание образовательных достижений учащихся». [National Sample-Based Assessment Report on the Results of the Survey]. [https://testing.kg/media/NSBA\\_Report\\_2007ed.pdf](https://testing.kg/media/NSBA_Report_2007ed.pdf)
- Center for Educational Assessment and Teaching Methods. (n.d.). National assessment of educational achievements of students in Kyrgyzstan. <https://testing.kg/news/natsionalnoe-otsenivanie-obrazovatelnyih-dostizhenij-uchaschihsya-v-kyrgyzstane22>
- Center for Educational Assessment and Teaching Methods. (2014). National Sample-Based Assessment (NSBA) 2014 Report on the Results of the Survey. [https://testing.kg/media/NSBA2014\\_Report\\_Engl.pdf](https://testing.kg/media/NSBA2014_Report_Engl.pdf)
- Center for Educational Assessment and Teaching Methods website (11 November, 2023). Национальное оценивание образовательных достижений учащихся в Кыргызстане. <https://testing.kg/news/natsionalnoe-otsenivanie-obrazovatelnyih-dostizhenij-uchaschihsya-v-kyrgyzstane22>
- De Young, A.J. (2002). West meets East in Central Asia: competing discourses on education reform in the Kyrgyz republic. *Journal of Educational Research, Policy and Practice*, 3(3), 3-45.
- De Young, A.J. (2004). On the current demise of the “Action Plan” for Kyrgyz education reform: A case study. In S.P. Heyneman & A. DeYoung (Eds.), *The challenges of education in Central Asia* (pp. 201-223). Greenwich, Connecticut: Information Age Publishing Inc.
- De Young, A., & Santos, C. (2004). Central Asian educational issues and problems. In S.P. Heyneman & A. DeYoung (Eds.), *The challenges of education in Central Asia* (pp. 65-80). Greenwich, Connecticut: Information Age Publishing Inc.
- Korth, B. (2004). Education and linguistic division in Kyrgyzstan. In S.P. Heyneman & A. DeYoung (Eds.) *The challenges of education in Central Asia* (pp. 97-112). Greenwich, Connecticut: Information Age Publishing Inc.
- Korth, B., & Schulter, B. (2003). Multilingual education for increased interethnic understanding in Kyrgyzstan. *On-line article. Cimera Publications. Retrieved February, 28, 2003.*
- Leblanc, O. (n.d.). USAID Time to Read Provides 1.5 million books to more than 200,000 Kyrgyz Children. USAID. <https://www.usaid.gov/kyrgyz-republic/press-release/usaid-time-read-provides-15-million-books-more-200000-kyrgyz-children>
- Leithwood, K., & Seashore-Louise, K. (2012). *Linking leadership to student learning. Jossey-Bass.*

Miller, P. (2012). *The changing nature of educational leadership: Educational leadership in the Caribbeans & beyond (editorial)*. *Journal of the University College of the Cayman Islands, Special Issue, JUCCI 6, December*.

Ministry of Education and Science of the Kyrgyz Republic & Center for Educational Assessment and Teaching Methods. (2017). Report on the main results of the study "National Sample-Based Assessment" of the 8th grade students in 2017. [https://testing.kg/media/NSBA2017\\_8\\_Fin\\_Report.pdf](https://testing.kg/media/NSBA2017_8_Fin_Report.pdf)

Ministry of Education and Science of the Kyrgyz Republic & Center for Educational Assessment and Teaching Methods. (2018). Report on the main results of the study "National Sample-Based Assessment" of the 4th grade students in 2017. [https://testing.kg/media/NSBA2017\\_Grade4\\_Report\\_Ru.pdf](https://testing.kg/media/NSBA2017_Grade4_Report_Ru.pdf)

Ministry of Justice of the Kyrgyz Republic. (2012, March 23). Постановление от 23 марта 2012 года № 201 О стратегических направлениях развития системы образования в Кыргызской Республике. <http://cbd.minjust.gov.kg/act/view/ru-ru/92984/10?cl=ru-ru>

Ministry of Education and Science of the KR. (2021). Программа развития образования на 2021-2040 гг. <https://edu.gov.kg/programs/1/>

Ministry of Education and Science of Kyrgyzstan Republic, Center for Educational Assessment and Teaching Methods. (2022). Национальное оценивание образовательных достижений учащихся 4-х и 8-х классов Кыргызской Республики в 2021 году: Отчет об основных результатах исследования [National Sample-Based Assessment of 4th and 8th-grade students in the Kyrgyz Republic in 2021: Report on the main research results]. Bishkek

Ministry of Education and Science of the Kyrgyz Republic (2020). Summary of implementation of policy measures in the field of education and science based on the results of 2020. Strategic directions for the development of the education system until 2020. Retrieved from <https://edu.gov.kg/programs/2/>

Miller, J. (1999). Making connections through holistic learning. December 1998/January 1999 | Volume 56 | Number 4 *The Spirit of Education* Pages 46-48. [https://tspace.library.utoronto.ca/bitstream/1807/32533/1/el199812\\_miller%5b1%5d.pdf](https://tspace.library.utoronto.ca/bitstream/1807/32533/1/el199812_miller%5b1%5d.pdf)

National Statistical Committee of the Kyrgyz Republic. (n.d.). Охват детей средним общим образованием по полу и территории. [Coverage of children with secondary general education by gender and territory.] <http://www.stat.kg/ru/opendata/category/4709/>

Niyozov, S. (2001). *Understanding teaching in the rural, mountainous and post-Soviet Tajikistan* Department of Curriculum, Teaching, Learning Ontario Institute for Studies in Education, University of Toronto

Organisation for Economic Co-operation and Development. (2010). *PISA 2009 Results: What Students Know and Can Do: Student Performance in Reading, Mathematics and Science (Volume I)*. Paris: OECD Publishing. Retrieved from <https://www.oecd-ilibrary.org/docserver/9789264091450-en.pdf?expires=1701767763&id=id&accname=oid033066&checksum=FE60CD0B04D14FFCF364630A45FA0E67>

Shamatov, S. (2005). "Beginning Teachers' Professional Socialization in Post-Soviet Kyrgyzstan: Challenges and Coping Strategies," unpublished doctoral dissertation, Ontario Institute for Studies in Education of the University of Toronto.

Shamatov, S. & Bahry, S. (2020). Variation in Educational Quality in Kyrgyzstan by District and Language of Instruction: An Analysis of 2017 National Scholarship Test Results. In D. Egea (ed.), *Education in Central Asia: A kaleidoscope of challenges and opportunities* (pp. 21-35). Springer.

Silova, I. (2009). The Crisis of the Post-Soviet Teaching Profession in the Caucasus and Central Asia. *Research in Comparative and International Education*, 4(4), 366-383.

Silova, I. and Steiner-Khamsi, G. (eds) (2009) *How NGOs React. Globalization and Education Reform in the Caucasus, Central Asia and Mongolia*. Bloomfield, CT: Kumarian.

Silova, I., & Niyozov, S. (2020) (Eds.), *Globalization in the Margins: Education Reforms in the post-Soviet Context*. IAP Publishing.

Sputnic Kyrgyzstan. (2023, August 30). С 2024 года школы КР могут в пилотном режиме перейти на ваучерную систему [From 2024, schools in the Kyrgyz Republic can switch to a voucher system in pilot mode.]. <https://ru.sputnik.kg/20230830/shkola-kyrgyzstan-vauchernaya-sistema-finansirovaniya-1078201448.html>

Tabyshaliev, S. (1979). *Torzhestvo idei velikogo oktiab'ria v Kirgizii*. Frunze: Ilim.

Tikly, L., & Barrett, A. M. (2011). Social justice, capabilities and the quality of education in low income countries. *International Journal of Educational Development*, 31(1), 3-14. <https://doi.org/10.1016/j.ijedudev.2010.06.001>

Tikly, L. (2011). Towards a framework for researching the quality of education in low-income countries. *Comparative Education*, 47(1), 1-23. <https://doi.org/10.1080/03050068.2011.541671>

UNESCO (2005). *Guidelines for quality provision in cross-border higher education*. Paris: UNESCO.

UNICEF Report. (2009). *Learning achievement in the CEE / CIES region: A comparative analysis of the results from the 2006 Programme for International Student Assessment*. Retrieved September 12, 2012 from [http://www.unicef.org/ceecis/UNICEF\\_PISA\\_WEB.pdf](http://www.unicef.org/ceecis/UNICEF_PISA_WEB.pdf)

USAID. (n.d.). *Kyrgyz Republic. Education*. <https://www.usaid.gov/kyrgyz-republic/education>

USAID. (n.d.). *Okuu Keremet! (Learning is Awesome!)*. <https://www.usaid.gov/kyrgyz-republic/fact-sheets/okuu-keremet-learning-awesome>

Zholdoshev, I. (2023, May 29). В проекте закона об образовании предлагается ввести ваучерную систему [The draft law on education proposes to introduce a voucher system]. *Vesti.kz*. <https://vesti.kg/politika/item/112717-v-proekte-zakona-ob-obrazovanii-predlagaetsya-vvesti-vauchernuyu-sistemu.html>