The effective use of school resources is a policy priority across OECD countries. The OECD Reviews of School Resources explore how resources can be governed, distributed, utilised and managed to improve the quality, equity and efficiency of school education.

The series considers four types of resources: financial resources, such as public funding of individual schools; human resources, such as teachers, school leaders and education administrators; physical resources, such as location, buildings and equipment; and other resources, such as learning time.

This series offers timely policy advice to both governments and the education community. It includes both country reports and thematic studies.
OECD REVIEWS OF SCHOOL RESOURCES:
KAZAKHSTAN

SUMMARY

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The executive summary and assessment and recommendations are drawn from:


Further information can be found on the project website: [www.oecd.org/education/schoolresourcesreview.htm](http://www.oecd.org/education/schoolresourcesreview.htm)

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EXECUTIVE SUMMARY

The primary and secondary education system in Kazakhstan has accomplished significant achievements. It has managed to reach almost universal access to primary and secondary education, and few differences are observed in enrolment by geographical location, socio-economic background and gender. Although the level of education attainment of the population is high, the performance of Kazakh 15-year-olds in PISA (Programme for International Student Assessment) 2012 suggests that there is considerable room to improve the quality of student learning outcomes. In mathematics, Kazakh students are on average two years behind their peers in OECD countries and about 45% of them are low performers, a proportion significantly above the OECD average (23%). The language of instruction in schools, school location and the socio-economic background of students and schools make a difference in student performance. National and international assessments also suggest marked differences in educational outcomes between urban and rural areas.

Kazakhstan has embarked on profound reforms to improve the quality of the education system and is increasingly looking to international standards and best practices. Reform initiatives include the expansion of the pre-primary education network, the development of new mechanisms of school financing (including a new per capita funding scheme), the creation of resource centres to support small-class schools, further investment in school infrastructure and a wider use of information technologies in schools. In this context of reforms, while there is an apparent desire to increase resources devoted to education and awareness that spending per student remains markedly lower than the OECD average and that of other neighbouring countries, there remains an official reluctance to expand public expenditure on education. This is linked to concerns about both the sector’s efficiency and its absorptive capacity. This report analyses the effectiveness of the Kazakh school system and identifies policy areas with potential efficiency gains or requiring further public investment.

The following policy priorities were identified to improve the effectiveness of resource use in the Kazakh school system.

Increase overall public spending on education as the sector gains absorptive capacity, while addressing key inefficiencies

Kazakhstan underinvests in education in comparison with other countries with similar income. The lack of adequate resources is reflected at a range of levels such as low enrolment rates in pre-primary education; poorly remunerated teachers; overcrowded urban schools; and poorly equipped small-class schools. At the same time, there is considerable scope for a more efficient management of resources in areas such as the school network and the teaching workforce. A gradual increase in public spending is needed to meet the ambitions set out in the sector’s strategic documents. Additional resources should be prioritised where these can have the greatest impact: early educational years and support to low performing and disadvantaged schools.

Achieving considerable efficiency gains and ensuring that additional resources are well-spent, however, would require changes in governance structures. There is a need to strengthen the capacity to effectively manage and monitor the use of resources across all levels. In particular, insufficient local and school autonomy hinders effectiveness of resource use. Schools and rayons (local authorities) have little
flexibility to invest more in human resources (by increasing staffing levels or by raising teacher salaries) if these are more acutely needed, or alternatively to invest in physical resources (school buildings, school equipment such as smart boards), if the present ones are insufficient or outdated. In addition, local and regional governments have very little spending discretion as norms determine how resources should be allocated and intergovernmental transfers have a very limited equalisation effect. A gradual increase of autonomy coupled with accountability and capacity building mechanisms could enable a more effective use of resources at the local and school level.

The distribution of resources to schools is currently decided on a discretionary and incremental basis by rayons in consideration of national norms but steps have been taken towards the development of a per-student school funding scheme. This is a positive move as a well-designed funding formula can, under certain conditions, be the most efficient, equitable, stable and transparent method of funding schools. Before national roll-out, the formula could be refined to take greater account of students' needs, capture better differences in class size across the country and increase its simplicity.

**Review the organisation of the school network and lengthen the school day**

A wide-ranging review of school network organisation could shed light on potential expansions or downsizings of school facilities in light of demographic trends. A vision for the provision of education in rural areas could be developed to improve the quality, equity and efficiency of the large number of small-class schools, which are a result of a policy to ensure universal access to compulsory schooling. Kazakhstan should sustain the efforts to remove three-shift schools and explore ways to minimise the impact of double-shift schools on younger students. There is also a need to adjust the norms for instructional hours to be more in line with OECD averages for official instructional time, particularly for students in grades 1-4. Having a relatively short school day, in terms of hours of instruction, may place children, particularly those from disadvantaged backgrounds and those who may be struggling, at risk of failure.

**Support disadvantaged students and schools**

More and more, the focus needs to shift towards providing education that promotes equity by recognising and meeting different educational needs. There is no systematic policy to support students who are falling behind. There is little provision of early support to prevent students falling behind, with personalised and intensive intervention. A greater focus on addressing underperformance is needed in Kazakhstan. Ensuring that schools provide their students with adequate and timely support is essential to enable struggling students not only to stay at school but to get the most out of their schooling years. Schools should be encouraged to use early warning systems to identify students at risk and support them as early as possible. This is in contrast with the overemphasis placed on top-performing students. Also, schools in Kazakhstan appear to be making slow progress in accommodating children with disabilities.

**Improve teacher quality and school leadership**

There is scope to strengthen the quality of teachers and school leaders. Professional standards could be developed to clarify expectations of what systems of initial education and professional development should aim to achieve, serve as a framework for the selection of candidates in recruitment processes, offer the credible reference for making judgements about their competence, guide professional development, and provide the basis for career advancement. Initial teacher education and professional development opportunities could be reviewed to ensure that these provide a solid foundation for teachers and adequately respond to their needs. In the case of school leaders, improvements in their recruitment, professional development and appraisal are needed to tap into their potential role in leading school improvement.
There is an imperative need to reconsider the number of staff and their remuneration. Current student-teacher ratios indicate that there might be some oversupply of teachers in the system. Increasing student-teacher ratios and class sizes could free up resources to further invest in teachers’ professionalisation and remuneration. Also, the concept of teacher employment, whereby basic compensation is associated uniquely to the teacher’s teaching load (stavka system), is a source of concern as it does not appropriately recognise the many tasks a teacher accomplishes beyond teaching and reduces his or her engagement in school activities. As a result, teacher employment needs to be re-conceptualised and the stavka system should be discontinued. The objective is to raise the professionalism of teachers, which can also be supported by better and more restricted selection into the profession and possibly fewer teachers with better salaries.

**Use evaluation and information systems to foster improvement and accountability**

Kazakhstan recognises the importance of teacher and school evaluation but there is scope to strike a better balance between the currently prevailing accountability function and the improvement one. Clearly, there needs to be a stronger emphasis on teacher and school evaluation for development purposes, where evaluation results lead to genuine professional discussions about effective teaching and teachers and schools receive advice for the improvement of pedagogical practices.

There is ample room to improve the external and independent monitoring systems of Kazakhstan’s education system. The current monitoring approach is compliance-driven and entails no analysis of educational performance. As such, it is limited in the way it evaluates efficiency, equity, and value for money. An external independent monitoring system for school resource use should be a priority. External and independent bodies would strengthen the analysis of the ample data generated by existing monitoring systems. Enhancing the transparency and reporting framework is also likely to help reduce the opportunities for misallocation of resources and corruption that exist throughout the system, although a complementary policy to reduce loopholes in the system of norms is also needed.

The improvement of data collection systems and practices is also needed. In particular, procedures to ensure the quality of the data should be introduced at every step of the collection and processing of the data. Furthermore, Kazakhstan needs to improve the dissemination of information about activities at the school and local levels, including information on school and local education budgets. This could include school attestation reports. Similarly, school principals should disseminate their schools’ activity reports and financial plans, in accessible language, by posting them on the web or on school bulletin boards, thus increasing transparency. Also, the existence of school Boards of Trustees, while still a nascent change, opens up avenues for improved transparency and reporting procedures at the school level.
ASSESSMENT AND RECOMMENDATIONS

Education system context

The primary and secondary education system in Kazakhstan has accomplished significant achievements. It has managed to reach almost universal access to primary and secondary education, and few differences are observed in enrolment by geographical location, socio-economic background and gender. Although the level of education attainment of the population is high, the performance of Kazakh 15-year-olds in PISA (Programme for International Student Assessment) 2012 suggests that there is considerable room to improve the quality of student learning outcomes. In mathematics, Kazakh students are on average two years behind their peers in OECD countries and about 45% of them are low performers, a proportion significantly above the OECD average (23%). The language of instruction in schools, school location, and the socio-economic background of students and schools make a difference in student performance. National and international assessments also suggest marked differences in educational outcomes between urban and rural areas.

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Strengths and challenges

There are clear directions for the system but limited capacity to foster greater effectiveness

Grand vision plans place education as one of the top priorities in Kazakhstan and a strategic programme sets out ambitious reforms to boost the quality of the education system. Some of the recent flagship initiatives include the introduction of a per student financing scheme and the extension of the number of compulsory schooling years. Improving the capacity of the education administration is one of the major challenges ahead to build a more effective education system. At the national level, several steps have been taken in recent years to reinforce the capacity in the Ministry or create specialised agencies to, for example, promote compliance with operational norms and analyse educational and financial data.

The extensive central planning and a detailed system of norms are two key features of the Kazakh education governance system inherited from Soviet times, which provide a clear direction for the
sector, policy continuity and enable monitoring progress towards the achievement of policy goals. However, norms constrain the ability of schools and local governments to match resources to their specific needs, and in consideration of their conditions and context. Schools and local authorities (rayons) have little flexibility to invest more in human resources (by increasing staffing levels or raising teacher salaries) if these are more acutely needed, or alternatively to invest in physical resources (school buildings, school equipment such as smart boards), if the existing ones are insufficient or outdated. Overall, local and regional governments have very little spending discretion as norms determine how resources should be allocated and intergovernmental transfers have a very limited equalisation effect. Another issue of concern is the lack of consultation with stakeholders, which means that education strategies might not fully reflect the rich diversity of the country.

**Spending on education is relatively low**

The overall level of public resources devoted to education is low compared to the OECD average as well as to that of other countries with similar levels of economic development. The amount devoted to school education, 2.1% of GDP, is considerably below the OECD average of 3.6%, although the latter also encompasses post-secondary non-tertiary expenditures. At 11% of GDP per capita, Kazakhstan’s 2013 public spending per student was significantly below the OECD average. The lack of adequate resources in schools can hamper the quality of learning environments. While larger education budgets are no guarantee of better education quality, a minimum level of spending is necessary for ensuring good quality education provision. A school system that lacks quality teachers, adequate infrastructure and enough textbooks will almost certainly fail to promote quality education. Underinvestment in the school system can also result in educational inequalities, as disadvantaged areas or schools receive scarcer resources. The government is aware that public spending is low but concerns about both the sector’s efficiency and its absorptive capacity prevent increases.

**The per student funding formula is a positive move ahead that requires further development**

The distribution of resources to schools is currently decided on a discretionary and incremental basis by rayons in consideration of national norms but steps have been taken towards the development of a per-student school funding scheme. This is a positive move as a well-designed funding formula can, under certain conditions, be the most efficient, equitable, stable and transparent method of funding schools. The scheme under piloting in 2014 has considerable scope for improvement. For instance, the envisaged new funding scheme provides no room for local governments to adjust the allocations to local needs and excludes some types of schools (e.g. gifted, small-class schools). Also, the formula proposed does not clearly identify groups of students for whom additional per student amounts should be allocated, which means that it cannot be considered a genuine per student formula. Despite the fact that the formula is overly complex, it might not capture with enough accuracy class size, which greatly varies in Kazakhstan and strongly influences the costs of provision. Furthermore, there are also indications that the development of the new scheme would benefit from a broader timeline and a thorough analysis of its impact before national roll-out.

**The specific needs of disadvantaged students and schools need to be taken into consideration**

The limited attention to the specific needs of students and schools in the distribution of resources results in inequities. There are very few programmes and resources targeted at students from a disadvantaged background or with learning difficulties. This is partly explained because the current concept of disadvantage is too narrow as it focuses only on disabilities and extreme socio-economic disadvantage, and thus a relatively small number of students are entitled to receive support. In contrast, OECD countries recognise that schools with higher proportions of disadvantaged students are at greater odds of suffering from a myriad of social and economic problems that can inhibit student
learning and have developed mechanisms to support them. This means that, for example, schools might not have enough resources to adequately support students who are falling behind with personalised and intensive early intervention. The case of students with special needs and disabilities is of particular concern as most of them continue to be educated in separate “correctional” schools or home learning schemes rather than in mainstream schools.

The overemphasis on preparing top-performing students for participation in academic Olympiads and prioritising “gifted children” is detrimental to other students. Teachers might focus on higher performing students and thereby direct less effort to lower performing students. Schools tend to group students by ability, a practice that doesn't improve the overall performance and can be particularly harmful if lower quality teachers are allocated to lower performing children. In addition, schools that cater to gifted students, such as the Nazarbayev Intellectual Schools, receive considerably higher levels of funding than mainstream schools. It can be questioned, however, whether the most talented students of the country attend these schools as disadvantaged students have more limited access to extracurricular classes to prepare for admission. Moreover, the proportion of top-performing students in international assessments remains very small while a large number are falling behind their peers in other countries. The most rapidly improving education systems in PISA show that improvements at the top and bottom of the performance scale can go hand in hand. However, it is reductions in the number of low performing students which are particularly effective to raise the overall performance of the system.

The extensive school network raises concerns

A distinctive feature of the school network is its large geographical coverage as a result of a strong policy to ensure universal access to compulsory schooling. The large number of small-class schools, which account for half of all public schools, might not be the most cost-effective option to deliver education services in rural and remote areas. In addition, students in small-class schools tend to suffer from poorer learning environments. Some evidence suggests that the teaching quality in small-class schools, as measured by teachers' professional category and highest qualification, is significantly lower than in other schools. In addition, the strict application of staffing norms squeezes school budgets as low student-to-teacher ratios are at the expense of either the quality of teachers, maintenance, equipment and instructional materials. To respond to the challenge of small-class schools, the Ministry of Education and Science has created resource centres to support them but a clear strategic vision or plans for consolidation have not been developed yet.

The extensive school network also results in a large number of sparsely populated school buildings which are very costly to maintain. Considerable efforts have been undertaken in recent years to upgrade school infrastructure and address the chronic underinvestment in maintenance of schools which left many buildings in need of modernisation. In spite of this, several challenges remain. Old buildings that fail to heat properly in the winter, or are too expensive to heat, threaten students’ health and ability to learn in one of the world’s coldest climates. Schools that lack basic equipment, instructional materials or without indoor toilets are alarmingly common in rural areas. In areas with declining student rolls, school facilities that were built for a larger student population are not being used to their full capacity and require high maintenance costs. In contrast, in urban areas, two-shift schools are the norm and three-shift schools are still in some parts of the country.

There are concerns about teacher and school leader preparation

The lack of national standards for teachers and school leaders, which provide a clear and concise statement or profile of what they are expected to know and be able to do, hinders their potential. Teaching and school leadership standards can be useful mechanisms for clarifying expectations of
what systems of initial education and professional development should aim to achieve, serving as a framework for the selection of candidates in recruitment processes, offering the credible reference for making judgements about their competence (as in their attestation), guiding professional development, and providing the basis for career advancement.

Initial teacher education raises both quality and efficiency concerns. The fact that the required degree for primary-school teaching can be obtained at the secondary and post-secondary non-tertiary level and that there is an oversupply of initial teacher education programmes raise concerns about its quality. There are also indications of an oversupply of graduates, which in 2013 corresponded to 11.4% of the entire teaching workforce. Other concerns relate to the high level of specialisation of degrees which limits the flexibility of the teacher labour market, the lack of specific assessments to identify teaching potential and assess motivation for the profession as the basis for entry, and the limited autonomy of institutions of teacher education in designing their teacher education programmes as these are regulated at the central level (e.g. specialisations, curriculum, structure of programmes).

There are indications that the current framework for teacher professional development is not responding adequately to teachers’ needs. The frequency of professional development is questionable, as teachers are only eligible for external-to-the-school professional development activities once every five years. Incentives to engage in professional development seem to be increasingly related to salary increases and career advancement rather than the genuine improvement of teaching practices. In spite of this, the frequency and intensity of school-based professional development opportunities in Kazakhstan seems to be significant and school principals play a greater role in instructional leadership than on average in OECD countries.

**There is scope to better recruit and prepare school leaders to foster school improvement**

The formal allocation of school leadership responsibilities among several staff is a strength of the Kazakh school system as strategic and pedagogical leadership cannot be exercised over time by one person alone. In practice, however, the distribution is dictated by norms and the level of interaction and shared vision is questionable. Moreover, school leaders might not be sufficiently focused and prepared to foster school improvement. Recruitment focuses on their educational qualifications and experience rather than leadership ability. Few opportunities exist to take up professional development and most of them are disconnected from their daily practice in schools. Lack of professional development opportunities is of concern as a large proportion has been in the system for a long time and might face difficulties in keeping up with current practices.

**There is a need to reconsider the number of staff and their remuneration**

Analysis of class size and student-teacher ratios as well as of the structure of leadership teams in Kazakhstan provides indications that, compared to the situation in OECD countries, the overall number of teachers and school leaders can be considered excessive. The large number of teachers and school leaders is driven by the significant proportion of small-class schools in the country and strict staffing norms. The large number of staff squeezes school budgets, creates rigidities and crowds out investments in other areas. About 93% of school expenditure in rural schools is devoted to staff compensation. This means that budgets are very tight and that principals have very limited room for manoeuvre to manage resources in a more efficient way or invest in school development activities. In particular, the large number of staff discourages improvements in their compensation which is considered low in Kazakhstan, although the complexity of the teacher salary structure hinders its analysis. The definition of class sizes is a recurrent trade-off that has a great impact on expenditure due to the labour-intensive nature of education: small class sizes require a large number of teachers whilst greater class sizes can free up resources to improve teaching quality. Research has found that
higher teaching quality has a greater impact on student achievement than smaller classes. Another issue relates to the concept of teacher employment, whereby basic compensation is associated purely to the teacher’s teaching load (stavka system), and might not appropriately recognise the many tasks a teacher accomplishes beyond teaching and his or her engagement in school activities (e.g. reflection on own practices, mentoring of less experienced teachers, communication with parents and professional development).

The official instruction time might be insufficient, particularly for disadvantaged students

In Kazakhstan, the official instructional time is provided with few disruptions and complemented with widespread after-school activities. Classes are orderly, without loss of time due to student behaviour or teacher absenteeism. However, there are some concerns about the management of instructional time: multi-shift teaching, which is prevalent in Kazakhstan, might reduce the official instructional time; the school calendar is not adjusted to local conditions and needs; and instructional time for students in primary grades may be inadequate for students who come from disadvantaged backgrounds. While increasing the amount of time, alone, cannot guarantee improved student learning, insufficient time spent on early learning may account for lower achievement.

The introduction of teacher and school evaluation processes is a positive move that can be further strengthened

Teachers benefit from a clearly established career structure with four steps associated with a teacher certification (or attestation) process. The existence of a teacher attestation process conveys the important message that the guiding principle for career advancement is merit and can provide incentives for teachers to perform at their best, bring recognition to effective teachers, support professional learning, and help recognise and spread good practice more widely. However, the combination of the accountability and developmental functions in a single process of teacher evaluation raises a number of challenges. The accountability function often prevails when teachers are confronted with high-stakes consequences as they are less likely to reveal weak aspects of their practice. Moreover, the evaluation process is not clearly linked to professional development opportunities to improve teacher performance and, as a result, might be perceived as a meaningless exercise that encounters mistrust or apathy. The lack of teaching standards can also hamper the consistency of internal teacher evaluation processes across schools and the inability of the system to ensure the quality of such processes.

There is a clear commitment to accountability with a regular cycle of external school evaluations. Some aspects of the approach to external school evaluation are adequately designed such as its structured approach and the consideration of a broad array of evidence including classroom observation. There is, however, scope for further refinement as there is limited attention to the developmental function of school evaluation. The external school evaluation is predominantly an assessment of how legal requirements are met, or how stipulations in the education standards are being fulfilled. There is not enough focus on school improvement strategies and follow-up is limited to schools which are not granted the attestation in their original evaluation. Also, school self-evaluation has not been recognised as a key instrument for school improvement yet and its penetration across the school system remains at an early stage of development.

A problematic issue in Kazakhstan is the use of raw student achievement data (i.e. results of standardised assessments such as the Unified National Test (UNT), student prizes at Olympiads and other competitions) to judge and compare the performance of individual teachers, schools, rayons and regions. UNT results or results in Olympiads carry much more than the impact of the evaluated teacher and also reflect, for instance, the impact of the student’s family, the student’s previous learning
or school and local resources. Clearly, this leads to unfair comparisons as it puts certain teachers – such as those in more advantaged schools – at an advantage *vis-à-vis* other teachers in terms of receiving a positive evaluation. The same happens at the school, local (*rayon*) and regional (*oblast*) level. Comparisons between teachers, schools, *rayons* and *oblasts* are of little use if not conducted on a “like-with-like” basis and can encourage strategic responses such as “teaching to the test” and “narrowing of the curriculum”.

**More reliable data, transparency and accountability could enable a more effective management of school resources**

Increased attention has been paid to creating, collecting and making data available. Numerous data collection exercises exist (administrative, performance, stakeholder surveys, indicators). Recent positive developments include the creation of a national database of education information, the computerisation of data collection processes, and the reduction of the administrative burden of data collection that falls on schools and local authorities by more than halving the number of forms to be filled out from 467 to 162. However, a recurrent problem with education data in Kazakhstan is the lack of processes to ensure their quality and validity. This is of concern as lack of reliable data impedes its use in the formulation and evaluation of education policies.

The existence of detailed norms provides clear expectations for what should be achieved and how resources should be managed, and thus facilitates their monitoring. There are multiple mechanisms to check compliance and gauge progress towards national objectives, notably the State Program for Education Development in the Republic of Kazakhstan 2011-2020 (SPED). However, the monitoring approach is compliance-driven and does not entail analysis of educational performance. Similarly, the control of budget implementation is inadequate and lacks transparency, as detailed and accurate cost estimates are rare. Moreover, an independent and external evaluation agency that strengthens the analysis of the ample data generated by existing monitoring systems does not exist. As a result, there is a general lack of high quality cost-benefit analyses of different educational policies and programmes at school and educational authority levels, meaning that schools and governments often make decisions with minimal attention to the efficiency or effectiveness of their likely educational outcomes.

Greater transparency is also an important challenge ahead in order to increase accountability. Budget transparency is lacking at the local level as the majority of schools do not have their own budgets due to centralised accounting; and budget information is generally not disclosed to parents and the principal. At the national level, limited information and detail is disclosed on the national government’s budget and financial activities. Weak transparency and accountability mechanisms open up opportunities for corruption and misuse of resources at different levels of the education system. These can jeopardise efficiency and performance, damage the most disadvantaged in particular and fuel attitudes and values such as favouritism, bribery, and fraud. Similarly, the involvement of parents and other key stakeholders in fostering school improvement and holding the school accountable is still incipient. Reports on the annual activities and results of the attestation process of schools are not currently published and widely disseminated. The creation of Boards of Trustees opens up avenues for improved transparency and reporting procedures at the school level, but their roles are still unclear.

**Policy recommendations**

**Increase overall public spending on education, while addressing key efficiency concerns**

A gradual expansion of public spending should be envisaged to meet the ambitious sector’s strategic plans and lean towards OECD standards (5-6% of GDP). Additional funds need to be spent wisely and go alongside improving the efficiency of public funds’ use. Investments should be
prioritised to the early educational years as well as to equity- and quality-enhancing aspects. Another priority should be the strengthening of the performance monitoring and accountability mechanisms in the education system. Also, the budget envelope should be increased only slowly, in parallel with the increase of the capacity of the system to absorb new programmes and new approaches.

**Redesign the system of intergovernmental transfers**

Kazakhstan should explore how to further reform the system of intergovernmental transfers in order to improve its efficiency and equity. Specific areas to consider affecting the education sector include: (i) ensuring a clearer distribution of responsibilities for education financing across levels of government; (ii) using formulas with transparent indicators and coefficients to allocate resources; (iii) enabling greater equalisation of resources across oblasts and rayons to ensure that poorer areas receive adequate financing to provide high-quality education services; and (iv) introducing specific reporting categories in the budget classification to ensure that various targeted funds and off-budget resources are adequately and fully reported and accounted for.

**Explore ways to gradually increase local and school autonomy**

Kazakhstan can explore ways to gradually provide more autonomy to schools and lower levels of government to enable them to foster improvements in education. Certain decisions are best left to local authorities and school principals, who best know their schools’ needs, to ensure a more optimal allocation of resources. More autonomy would imply relaxing the current system of norms, which could be used to set minimum standards rather than detailed mandates. Increased autonomy is likely to exacerbate the existing differences between schools and local governments, and mechanisms to disseminate best practices and support those who need to improve should be introduced. In this regard, it will be necessary to strengthen the improvement function of the school evaluation system.

**Sustain the efforts to increase capacity and move towards evidence-based planning and monitoring**

Kazakhstan needs to develop a culture of using evidence and evaluation as the basis for future reform initiatives, both in the design phase (when analysing what type of reforms are required) and in the implementation phase (when deciding on the best way of putting reform concepts into practice). The best way to start this type of reflection is by reviewing the experience of recent policy initiatives and obtaining and publishing the assessment of the successes and limitations encountered in their implementation. The current major policy initiatives should be reviewed. The impact of the per-capita financing pilot, Boards of Trustees, resource centres for small-class schools, e-learning, and other initiatives should be analysed and the results of these analyses shared with a broad range of stakeholders throughout the education system. Evidence gathered from these reviews should be published and used as a basis for professional discussions regarding future steering of reform initiatives.

**Give greater attention to low performing and disadvantaged students and schools**

Enhancing equality of educational opportunity requires additional emphasis on improving the performance of disadvantaged students. A rebalancing of resource provision between initiatives catering to elite students and everybody else is needed. In particular, little rationale exists for heavy public investment into the training of elite students for academic Olympiads. Limited public resources should instead be concentrated on the majority of students, as well as those who fall behind academically. Concrete policy measures to address this challenge include broadening the concept of disadvantage to ensure that all children receive a basic minimum quality of education, reviewing the
equity of the current distribution of resources and providing greater funding for low performing or disadvantaged students.

Schools should be encouraged to identify and support such students as early as possible. Once identified, a systemic policy should also be implemented to support these students throughout their academic life cycle. This may imply the need for additional resources to target schools, classes, or individual students at risk of falling behind. Expectations for all students should be raised system-wide, and grouping of students into separate classes by ability should be discouraged. Every student should be given the support and opportunity to reach his or her full potential with those falling behind receiving additional mentoring or coaching. Special attention should also be paid to students at risk of dropping out and proactive policies should be put in place to mitigate that risk.

**Postpone and refine the roll-out of school formula funding**

The national roll-out of the new envisaged funding scheme should be postponed until the new mechanisms have been refined. Adequate preparation for the rollout of a new funding scheme is a necessary condition for its success. An in-depth study of the pilot should be conducted and its results published and publicly discussed. The findings should be used to define a new funding scheme, which should then be developed with reliance on the existing international experience. For the pilot project itself, proper monitoring procedures by an agency different from the one implementing it need to be introduced.

**Improve the organisation of the school network**

A national vision for education provision in rural areas should be developed. The current reliance on small-class schools scattered across Kazakhstan’s vast rural areas is unsustainable and leads to serious concerns about its quality, equity and efficiency. The strategy should have four main pillars: (i) a national strategic direction and plan to consolidate some small-class schools; (ii) greater flexibility to allow rural schools to manage their resources more efficiently; (iii) greater equity and fairness in the distribution of resources to rural schools; and (iv) mechanisms to monitor the quality of education in small-class schools. The current initiative to use resource centres in order to support small-class schools needs to be independently reviewed and assessed.

**Improve the management of human resources**

Kazakhstan should take steps towards the development of a high quality teaching and leadership force. First, there is a need to raise the bar to enter the profession by introducing interviews and tests to assess the aptitude and motivation of candidates. The number of places in initial teacher education could be limited to levels closer to the needs of the school system. Second, it is also imperative to improve the quality of initial teacher education programmes and institutions and require a higher education qualification to enter the teaching profession at all educational levels. The number of teacher specialisations should be reduced to enable teachers to teach multiple subjects, and in this way allow efficiencies in the management of human resources. Third, the development and wide dissemination of standards for teachers and school leaders are key to ensure a common understanding of what it means to be a good teacher or school leader in Kazakhstan. Finally, moving from a concept of teacher employment whereby compensation is based on a teaching load to a concept whereby compensation is based on a work load could be an important first step to improve teacher professionalism. The overall number of staff employed as well as their compensation level also needs to be reconsidered.
Provide structured, regular and meaningful opportunities for professional development for teachers and school leaders

There is a clear need for professional development to become a more regular practice among teachers in Kazakhstan, with a greater diversity of activities, led by school development plans and with a supply which reflects teachers’ developmental needs. There must be a recognised and explicitly stated definition of what constitutes good teaching, and teachers should be encouraged and empowered to reach those goals. A systemic approach to the development of school leaders is also needed. A diagnosis of the skills of current leaders can help inform the next steps in identifying professional development needs for current and future leaders. This is particularly important in light of the planned rollout of the new school financing mechanism, which will require greater capacity on the part of school leaders to understand the principles of financial management.

Review the use of learning time in schools

Kazakhstan should sustain the efforts to remove three-shift schools and explore ways to minimise the impact of double-shift schools on younger students. In multi-shift schools, all primary grades should be taught during the first shift, which would have the result of benefitting both the younger students and the older students whose learning is enhanced by starting school later in the day. While multi-shift schooling can facilitate access to education when rapid demographic changes stress existing facilities or the construction of new schools is difficult, it can have a negative impact on the quality of learning.

Kazakhstan should also adjust the norms for instructional hours to be more in line with OECD averages for official instructional time, particularly for students in grades 1-4. Having a relatively short school day in terms of hours of instruction may place children, particularly those from disadvantaged backgrounds and those who may be struggling, at risk of failure. Lengthening the school day has been found to benefit young learners. Schools could also be encouraged to explore different ways of organising the learning time in the school. Different learning time options can include the organisation of after-school and holiday programmes, study support or breakfast clubs, or take other forms.

Encourage greater participation of the school community and more collaboration between schools

A greater scope for the involvement of parents and other key stakeholders in holding schools accountable and fostering further educational improvements exists. The expansion of the use of Boards of Trustees is a step in the right direction. However, multiple channels can be made available for parents and community members to more actively participate in school life. The use of school facilities by the broader community, for example, is uneven; despite few legal prohibitions, school leaders are either unwilling or unable to maximise the use of their facilities for communal use. Greater collaboration between schools and the community, as well as among schools, could also facilitate a more effective use of resources in Kazakhstan. School leaders could be encouraged to take a more active role in collaborating with other schools and fostering the improvement of the broader education system, including through the use of shared facilities, staff, and equipment.

Use teacher, school leader and school evaluation to foster the improvement of practices

Evaluation and assessment practices can be strengthened in several areas to enhance the effectiveness of resource use. First, the developmental function of teacher attestation can be strengthened. A process internal to the school, carried out by line leaders, senior peers, and school management, which accounts for the school objectives and context, should become systematic in all
Schools. The main outcome would be feedback on teaching performance which would lead to an individual plan for professional development for each teacher in the school. An external validation of this internal process would then take place to ensure the soundness of the respective school’s processes. Second, all school leaders should be required to undergo a meaningful appraisal exercise. This would involve designing specific criteria, guidelines and consequences for the appraisal system. It should provide school leaders with feedback to foster improvement, recognise their achievement and identify those that might need more support. To be effective, the appraisal should be well-rounded rather than based in narrow measures of school performance. Also, more rigorous processes to inform professional development opportunities as well as recognise performance are needed.

School evaluation should become a key lever for sustained improvement in schools. External school evaluation processes should strengthen their focus on school development and move away from the current compliance-driven model. This could involve the separation of school attestation into two detached processes: (i) external evaluation focussing on teaching and learning processes at the school; and (ii) an audit process to assess the school’s compliance with regulations, possibly including financial regulations. The external evaluation focussing on teaching and learning processes would involve providing advice for improvement to each school on the basis of transparent, nationally agreed criteria. Processes to organise external evaluations could also be made more efficient than is currently the case in Kazakhstan by considerably reducing the size of evaluation commissions, simplifying the content and structure of the evaluation report, reducing the paperwork involved and ensuring the school’s self-evaluation report feeds into its own self-improvement process. Identifying and disseminating good practices and strengthening the schools’ self-evaluation process are two additional areas in which further refinement is needed to bring Kazakhstan closer to evaluation practices common in OECD countries.

Contextual information on schools should be developed and published alongside student results. It is recommended that any publication of UNT results at the school level should be presented in ways that take account of underlying differences including, for example, the socio-economic background of students. Also, it needs to be recognised that the UNT, as mostly a higher education entrance examination, has not been designed to evaluate individual schools and is taken on a voluntary basis by students who want to enter higher education. It is therefore unclear whether such tests can actually capture the value each school has added to the learning of its students, which raises questions about the interest of their publication at the school level.

**Introduce incentives to encourage a more effective use of resources**

Moving from the present system of mandatory norms to a system of effective incentives that encourage efficiency is a difficult process. Still a gradual transition away from a compliance mentality to one that emphasises creative problem-solving and greater autonomy in decision making is needed. By relaxing the current system of prescriptive norms, education authorities at all levels can be empowered to use resources to address their most pressing issues in the ways that make sense given the local conditions. In the short term, this can be encouraged by allocating a specific freely disposable budget amount to be used according to each school’s own priorities. Any savings generated in previous years may be rolled over as contributions to this freely disposable amount. Further efforts are needed to implement performance-based budgeting, which provides incentives for greater efficiencies in resource use and holds budget holders accountable for the results they achieve.

**Improve monitoring mechanisms and data collection**

The development of external and independent monitoring systems would strengthen the current monitoring framework in the Kazakhstan education sector. Once such systems are in place,
benchmarking and monitoring indicators of school resource use would allow national authorities to rapidly assess the education system, leading to improved policy planning and implementation. External and independent bodies would strengthen the analysis of the ample data generated by existing monitoring systems.

At the same time, improvement of data collection systems and practices is also needed. In particular, a unified Education Management Information System for the sector should allow for in-depth analysis of school-level information by policymakers to inform resource allocation decisions. Procedures to ensure the quality of the data should be strengthened to improve their validity and reliability.

Lastly, the financial reporting arrangement between levels of government can be strengthened. National education authorities should have a clear view of the total amount of resources, both public and private, spent on the education sector. This information should be readily available by sub-sector (i.e. pre-primary, general secondary, vocational, etc.), expenditure type, and detailed geographic designation of where the money is spent. Analysts at the Ministry of Education and Science - and indeed at all levels of the education system - should be able to compare per student expenditure amounts, class sizes, staffing levels, and other relevant indicators with stated Government priorities to judge the allocative efficiency of resource use.

**Analyse the effectiveness of resource use**

Stronger analytical capacity would ensure that the Government is able to implement the designed policy changes more effectively. By enhancing analytical capacity in accounting, budgeting, monitoring, and supervision, Kazakhstan’s policymakers could do more to base their decisions on information regarding resource use. While the current monitoring system is heavy on quantitative indicators embedded in the State Program for Education Development 2011-2020 (SPED), it does little in the way of measuring the effectiveness of resource use in relation to performance. At the subnational level little performance-based monitoring takes place. A budgeting process that is better informed by the tracking of relevant outcomes at all levels of the education system will go a long way to increasing the effectiveness of resource use.

**Proactively disclose information and increase transparency**

Kazakhstan needs to improve dissemination of information about activities at the school and local levels, including information on school and local education budgets. While dissemination of reports may be viewed as another burden in the reporting process, school oversight bodies should consider using a single nationally-developed format to ensure that parents and voters know how schools operate in their community and how school resources are used. This could consist in the publication of school attestation reports (or parts of them) in language accessible to the wider public. This publication should avoid publishing private information as, for example, the identification of those individuals liable for the violations demonstrated in the school attestation report. Similarly, school principals should disseminate their school’s activity reports and financial plans, in accessible language, by posting them on the web or on school bulletin boards, thus increasing transparency.

The usefulness of Boards of Trustees can be further enhanced through the training of their members to build capacity on educational resource use issues. Boards of Trustees should receive greater guidance from national and local authorities regarding their mandates and particular care should be taken in the selection of their members as the Boards would require a range of competencies. Capacity development efforts should focus on increasing the knowledge of the Boards in areas such as: (i) understanding existing transparency and reporting mechanisms; (ii) monitoring
school resource use; (iii) operating independently from local authorities; and (iv) understanding equity and efficiency issues in education resource use.

**Tackle and reduce opportunities for corruption**

Reducing opportunities for misuse of resources and corruption should be an urgent priority. A holistic approach requires a balance between monitoring the compliance with the rules governing resource use and the implementation of adequate transparency and reporting frameworks. Promoting integrity in public life and encouraging all stakeholders to root out acts of fraud and corruption are key policy initiatives to be considered. To tackle opportunities for corruption, authorities must identify the causes of corruption, raise awareness and encourage whistleblowing, and close existing loopholes in the system of norms that allow for potential misuse of funds.
The effective use of school resources is a policy priority across OECD countries. The OECD Reviews of School Resources explore how resources can be governed, distributed, utilized and managed to improve the quality, equity and efficiency of school education.

The series considers four types of resources: financial resources, such as public funding of individual schools; human resources, such as teachers, school leaders and education administrators; physical resources, such as location, buildings and equipment; and other resources, such as learning time.

This series offers timely policy advice to both governments and the education community. It includes both country reports and thematic studies.