



EARLY CHILDHOOD EDUCATION
AND CARE POLICY REVIEW

KAZAKHSTAN

Ineke Litjens, Miho Taguma,
Edward Melhuish and Tigran Shmis



EARLY CHILDHOOD EDUCATION AND CARE
POLICY REVIEW

KAZAKHSTAN

Ineke Litjens, Miho Taguma,
Edward Melhuish and Tigran Shmis



This work is published on the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of the OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Photo credits:

© Information Analytics Centre (IAC), Kazakhstan

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgement of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to rights@oecd.org. Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at info@copyright.com or the Centre français d'exploitation du droit de copie (CFC) at contact@cfcopies.com.

Foreword

In the last decade, Kazakhstan has made an enormous effort to improve and enhance its early childhood education and care (ECEC) system. It has undertaken major policy reforms, in particular to expand access to ECEC, and has increased public spending on ECEC. Kazakhstan decided to have its system reviewed by the OECD to explore the strengths and challenges of its ECEC system. The purpose of this review was to highlight the main issues involved in ensuring access, equity and quality in ECEC; and to investigate what the most effective, relevant and feasible policy options are to further improve access, equity and quality in ECEC. The report serves to provide insights and advice to the Kazakh ECEC authorities, at all levels of government, as well as practitioners and stakeholders. It aims to help them give more children access to a place in an ECEC provision, ensure better equity for all children in the system, and enhance the quality of ECEC provision for today's and future generations. The report is also intended to help other OECD member and non-member economies to understand the Kazakh ECEC system.

The review was conducted based on two visits: a fact-finding mission and a policy review mission. The members of the fact-finding mission included: Miho Taguma (OECD Secretariat, ECEC project manager), Ineke Litjens (OECD Secretariat, Analyst and Leader of the Review), and Tigran Shmis (World Bank, Education Specialist). The members of the policy review mission included: Miho Taguma, Ineke Litjens, and Edward Melhuish (Academic Research Leader, Department of Education, University of Oxford). The report was prepared under the leadership of Ineke Litjens and Miho Taguma and reviewed by Miho Taguma. The main authors are Ineke Litjens, Edward Melhuish and Tigran Shmis. The Secretariat provided extensive information, analysis and discussion in regard to the three key areas of the review: access, equity and quality. Administrative support was provided by Claude Annie Manga Collard, Mernie Graziotin and Maria C. Huerta. Sophie Limoges helped with finalising the publication and provided extensive support on the layout of the report. Editorial support was provided by Victoria Elliott and Elizabeth Zachary.

Kazakhstan's involvement in the OECD review was co-ordinated by Mr Serik Irsaliyev, President of the Information Analytic Centre JSC, and Mr Azamat Yestayev, former analyst at the Information Analytic Centre of Kazakhstan JSC. A key part of Kazakhstan's preparation was the crafting of a Country Background Report (CBR) on its early childhood education and care (ECEC) system and policies, prepared by the Information Analytic Centre JSC. The review team is highly indebted to the authors of the CBR, and to all those who supported them. The CBR is referenced as "JSC IAC, 2014" throughout this report. The CBR follows the questionnaire and guidelines prepared by the OECD.

The fact-finding mission took place on 14-18 April 2014 and included visits to Astana and Almaty. The policy review visit took place on 26-30 May 2014 and covered visits to Astana, Almaty, Taldykorgan and Akmola oblast (region). The OECD Secretariat and the Kazakh authorities jointly planned the visits. During the review visit, the team held discussions with a wide range of national, regional and local authorities; educational institutions training prospective teachers; training institutions for staff; ECEC staff and setting managers; parents; and international organisations operating in Kazakhstan. These meetings and visits sought to provide a broad perspective on ECEC policies and practices in Kazakhstan. The review team is extremely grateful for the insightful discussions, helpful comments and explanations and the time dedicated to the review by the various people it had the pleasure to meet. Our special thanks goes to Mr Aslan Sarinzhypov, the Minister of Education and Science of the Republic of Kazakhstan (2013-2016); Ms Zhanyl Zhontayeva, Director of the Department for Preschool and Secondary Education of the Ministry of Education and Science; Mr Serik Irsaliyev, President of the Information Analytic Centre JSC; Ms Sharapat Sultangazyeva, Head of Department for Early Childhood Education and Care of the Ministry of Education and Science; Mr Yerlan Shulanov, Vice-President of the Information Analytic Centre JSC; Ms Zhazira Nurmukhametova, former Head of Department for Early Education and Childhood Development in 2014 at JSC; Mr Yeldos Nurlanov, Head of Department for Early Education and Childhood Development in 2014 at JSC; and the following analysts at JSC: Mr Azamat Yestayev (former analyst); Mr Nurzhan Yessimzhanov; Ms Lada Baron; Ms Shynar Shaymuratova; Ms Yelizaveta Korotkikh and Ms Assemgul Yeskendirova. These people shared their expertise and answered the never-ending questions of the review team throughout the two visits and afterwards. Thanks to the hospitality of all Kazakh stakeholders, the visits were very inspiring.

Besides the information obtained through the CBR and the review visits, statistical information received from Kazakh authorities has been used in this report. When no statistical information, data or formal reports were available, the review drew on direct experience or third-party reports during the review visits. Such sources present evident limitations as they cannot always be readily verified. However, they may sometimes be the only evidence available. Where this is so, it is clearly explained in the report. These cases suggest a need to improve data sources so that policies and their implementation can be adequately monitored. The question of data will be addressed in more detail in Chapter 5, which analyses Kazakhstan's challenges regarding quality. As the review visits took place in 2014, all data in this report refer to data, policies and practices in Kazakhstan in this year, and have been updated where changes have taken place in between the time of the review visits and publication.

This report is organised in five chapters. Chapter 1 provides the national context, with information on Kazakhstan's demography, human and economic development, education policies and key frameworks shaping ECEC. Chapter 2 provides an overview of the key strengths of Kazakhstan's ECEC system and introduces the challenges regarding access, equity, and quality. Chapter 3 presents the challenges and policy options and recommendations on improving access to ECEC, while Chapter 4 tackles the issues Kazakhstan faces regarding equity and provides possible solutions. Finally, Chapter 5 focuses on quality, again identifying challenges and making policy recommendations.

Table of contents

Foreword	3
Executive summary	7
Strengths	7
Challenges and recommendations.....	8
Chapter 1 Early childhood education and care in Kazakhstan	11
Context of Kazakhstan.....	12
Governance of the early childhood education and care system	17
The structure of early childhood education and care	19
Early childhood education and care policies and outcomes	22
Chapter 2 Assessment of early childhood education and care in Kazakhstan	27
Key strengths of the Kazakh early childhood education and care system	28
Challenges.....	34
Chapter 3 Access to early childhood education and care in Kazakhstan	39
Key points	40
Challenge	41
Recommendation	45
Supporting arguments	45
Chapter 4 Equity in Kazakhstan’s early childhood education and care system	53
Key points	54
Challenges.....	55
Recommendation	61
Supporting arguments	62
Chapter 5 Providing quality early childhood education and care in Kazakhstan	67
Key points	68
<i>Challenge 1 – Quality assurance and minimum standards</i>	70
Recommendation	74
Supporting arguments	74
<i>Challenge 2 - Curriculum</i>	76
Recommendation	80
Supporting arguments	80
<i>Challenge 3 – Early childhood education and care staff</i>	84
Recommendation	85
Supporting arguments	86
<i>Challenge 4 - Research</i>	90
Recommendation	92
Supporting arguments	92
<i>Challenge 5 - Data</i>	95
Recommendation	96
Supporting arguments	96

Tables

Table 1.1. Parental leave policies in Kazakhstan and selected comparison countries.....	16
Table 1.2. Organisation of education in Kazakhstan.....	19
Table 1.3. Number of early childhood education and care settings in Kazakhstan over time.....	21
Table 3.1 Average cost of constructing a kindergarten facility per USD 10 000.....	44
Table 4.1. Educational level of early childhood education and care teachers (excluding teachers in mini-centres), by region (2013).....	60
Table 4.2. Number of children (below primary school age) with special needs and availability of specialised early childhood education and care groups (2013).....	61
Table 5.1. The number of teachers per group in Kazakhstan, by operating hours	71

Figures

Figure 1.1. Kazakhstan by oblasts.....	12
Figure 1.2. Preschool age population projections in Kazakhstan, by age cohort.....	13
Figure 1.3. Evolution of GDP and public expenditure.....	15
Figure 1.4. Types of pre-school organizations in Kazakhstan.....	20
Figure 1.5. Evolution of ECEC institutions in Kazakhstan 1991-2014.....	21
Figure 1.6. Proportion of ECEC settings in Kazakhstan with infrastructural issues.....	23
Figure 2.1 Enrolment rates of 3-year-olds in ECEC	33
Figure 3.1. Enrolment rates of children under the age of 3, 2005/2006 and 2012/2013	42
Figure 3.2. Enrolment rates of children from age 3 to primary schooling age, 2005/2006 and 2012/2013.....	42
Figure 3.3. An example of a modernised approach to education spaces.....	48
Figure 4.1. ECEC enrolment rates of children aged 3 to 6 in Kazakhstan (2013)	56
Figure 4.2. Number of 3-6 year-olds in Kazakhstan, by region (2013).....	56
Figure 4.3. Number of ECEC settings in Kazakhstan, by region (2013)	57
Figure 4.4. Average monthly expenditure for public and private ECEC in Kazakhstan, by income quintile (2010)	59
Figure 4.5. Average share of household expenditure on ECEC, by income quintile (2010)	59
Figure 4.6. From targeted to progressively universal policies.....	63
Figure 5.1. Regulated teacher-child ratio for 2-year-olds in ECEC	72
Figure 5.2. Regulated teacher-child ratios for 3 and 4 year-olds in ECEC	73
Figure 5.3. Curriculum frameworks in place for early childhood education and care	78
Figure 5.4. Distribution of kindergarten teachers by level of education in ECEC educational institutions in Kazakhstan (2013).....	86
Figure 5.5. Distribution of staff in ECEC educational institutions in Kazakhstan.....	88

Executive summary

Early childhood education and care (ECEC) is clearly a policy priority in Kazakhstan. The topic has received increased political attention over the last few years, which is reflected in the inclusion of ECEC in the country's main policy and planning programmes and increasing public investments. This review describes the key strengths of Kazakhstan's ECEC system; it indicates the areas of opportunity to further improve access and quality; and it gives some policy recommendations on how these challenges can be overcome based on good practices across OECD countries.

Strengths

- **Increasing attention to equity issues at the policy level:** A number of policies aim to facilitate equity in the provision of general services, and several measures have been implemented to decrease inequality in the country. While this is a step towards a more equitable society, large differences between regions occur regarding access to ECEC, and children with special needs also experience inequitable access to early development provisions.
- **Innovation in ECEC provision:** The country is experimenting with some innovative provisions of ECEC, such as the Nazarbayev Intellectual Schools (NIS) which implement a 21st century pedagogical approach and focus on supporting children's early development in a wide range of subjects. Such innovative concepts can serve as an example for ECEC settings in the country.
- **High participation rates for over 3-year-olds:** With increasing public investment and a rapid expansion of the number of ECEC settings, participation rates for over 3-year-olds are high in Kazakhstan, with 73.4% of 3 to 6 year-olds enrolled in an ECEC programme. The country has an ambitious participation goal of the full enrolment of over 3-year-olds by 2020. This goal is likely to bring some workforce challenges.
- **A move towards a more holistic child development view:** The current curriculum frameworks in Kazakhstan show that there is increasing awareness of the importance of not merely teaching academic skills, but also of developing socio-emotional, health, and physical skills at an early age. In line with OECD countries, Kazakhstan is moving towards a more holistic child development view, although there is room for improvement regarding the flexibility of staff in implementation, and the level of innovation in pedagogical approaches.

Challenges and recommendations

- **Access of under 3-year-olds and expansion of the ECEC system:** The Kazakh ECEC system has greatly benefited from large public investments in ECEC and a strong policy focus on early learning and development. As a result, the great majority of children over the age of 3 receive some form of early education. However, challenges remain in providing access and increasing the participation rates in ECEC for children below the age of 3. Currently, there are insufficient ECEC provisions and places available to offer early development opportunities to children aged between 1 and 3. This is related to some inefficiency issues in Kazakhstan, notably an inefficient use of space and financial resources due to the current regulatory and budgeting scheme.
 - **Recommendation:** Actively promote ECEC for under 3-year-olds and expand policies and services to cover the youngest children to ensure more equitable access and the development of all children in Kazakhstan. Promote inter-ministerial collaboration in implementing more cost-efficient methods for expanding the ECEC system nationwide for all children.
- **Geographical, socio-economic, and special needs inequities regarding access to and participation in ECEC:** These inequities in the current ECEC system result in unequal early development opportunities for (certain groups of) children.
 - **Recommendation:** Develop a clear policy framework for dealing with equity issues in the provision of and participation in ECEC services for all children in Kazakhstan. Equity policies benefit children’s development, school outcomes, and society.
- **Quality assurance due to the rapid expansion of the ECEC system and unfavourable minimum standards:** The rapid expansion of ECEC provision and participation may affect the quality of ECEC provision as there are unfavourable minimum regulatory standards in place that can negatively impact quality, child development and staff-child interactions.
 - **Recommendation:** Strengthen the quality of ECEC provision in all regions by updating or improving the existing standards to international OECD quality measures. Use these standards as a basis for the regular monitoring of ECEC provision in all regions.
- **Continuous child development, flexibility for staff, and meeting different needs of children:** The four different curricula in place, which have been approved by the government and are mandatory documents for settings to implement, impede children’s continuous holistic early child development and can hamper transitions. There is also little flexibility for staff in implementing or experimenting with innovative practices and adapting the framework to the setting and children’s needs.
 - **Recommendation:** Use the existing curricula as a basis for constructing a more aligned and integrated curriculum framework for the whole ECEC age range to stimulate continuous early child development. Children benefit from a more continuous early education experience in which pedagogy is aligned throughout the ECEC period and beyond. Involve stakeholders in the design

process to gain support for an integrated framework and ensure effective implementation.

- **Expected shortages in staff:** Due to the rapid increase in ECEC provision, the growing population in the ECEC age range, and the planned growth in ECEC provision and places, an ECEC teacher shortage can be expected. This shortage is challenged by unfavourable working conditions for ECEC teachers, including low status, low salaries, and insufficient preparation for the teaching job.
 - **Recommendation:** Kazakhstan has a training system in place that provides pre-service full teacher education programmes and shorter in-service professional training modules in different regions of the country. The country can make use of this training system to attract or upgrade staff to the ECEC teaching profession and better prepare them for the job. At the same time it can update its working conditions to encourage a larger inflow of staff and to maintain staff in the sector.
- **Limited research on ECEC leading to a lack of knowledge:** Research on ECEC is not yet widely conducted in Kazakhstan, which results in a lack of knowledge on how the ECEC system is performing.
 - **Recommendation:** Invest in the ECEC research field through providing earmarked funding to research institutions via a bidding approach to ensure relevant ECEC research is conducted. Research could include longitudinal studies on child development and research on the level of quality in ECEC settings. Collaboration with the international research field can further strengthen Kazakhstan’s ECEC research sector by learning from best practices.
- **Lack of important indicators to adequately assess the ECEC system at national and international levels:** Kazakhstan lacks data on important ECEC indicators to adequately assess its ECEC system nationally and internationally. Solid data collection on relevant indicators can provide information on, for example, the country’s level of quality, child development, and the system’s effectiveness. A lack of data also results in a lack of knowledge and the possibility to project future resource needs.
 - **Recommendation:** Expand current data collection to cover more indicators that can contribute to national assessments of the ECEC system through inter-ministerial collaboration. Develop data on par with data collection exercises in OECD countries, which will allow for international comparison and learning from best practices.

Chapter 1

Early childhood education and care in Kazakhstan

This chapter provides background information on Kazakhstan in order to provide context to the country's early childhood education and care (ECEC) system. It includes information and data on Kazakhstan's geography and demography, economic and human development, and governance of the ECEC system. It also covers the structure of education in Kazakhstan and its recent ECEC policies.

Context of Kazakhstan

Geographic and demographic characteristics

Located in Central Asia, Kazakhstan is the ninth largest country in the world by land surface, which is equivalent to more than twice the combined size of France, Germany and Poland. The country is bordered by Russia in the north, the Caspian Sea in the west, China in the south east, Kyrgyzstan and Uzbekistan in the south, and Turkmenistan in the south west. The population amounted to 17 million people in 2013. Its large area and small population result in a low density of population, which was estimated at 6.2 persons per square kilometre in 2013 (JSC IAC, 2014a).

Figure1.1. Kazakhstan by oblasts (region)



Note: This document, as well as any data and any map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

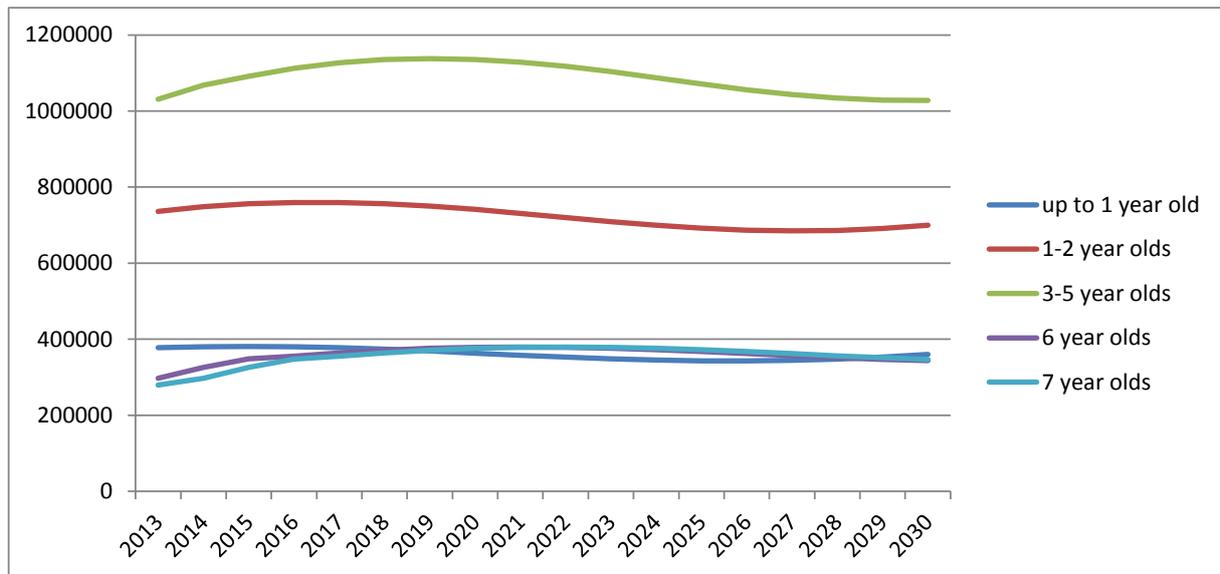
Source: JSC IAC (2014a), Bernard Tom, Wikipedia Commons reproduced in: *OECD Review of Policies and Practices for Monitoring Quality in Early Learning and Development: Country Background Report for Kazakhstan*, JSC Information Analytic Center of the Ministry of Education and Science of the Republic of Kazakhstan, Astana.

Natural conditions considerably influence the provision of early education in some areas. Kazakhstan has extreme temperatures, which range from an average of over 30°C in the summer to an average of –20°C in the winter. More than half of the country, including the entire west and most of the south, is either semi-desert (12%) or desert (44%). Serious environmental concerns also affect the provision of education and the well-being of children in former nuclear, industrial or mining sites, as do land degradation, desertification and water scarcity.

The birth rate in Kazakhstan is, compared to OECD countries, high, at 2.6 children per woman (in 2013), which has presented challenges for the provision of and enrolment in ECEC (JSC IAC, 2014a). As a result, the population is relatively young, with 5.2 million people (almost one-third) under the age of 18 years. Among under

18-year-olds, 2.4 million (almost 15% of the total population and almost 50% of children under the age of 18) are of preschool age (0-7 years) (JSC IAC, 2014a). Although Kazakhstan is currently experiencing a growth in the number of children of preschool age, by 2019, the growth of this group is expected to reach its peak and then start to decrease (see Figure 1.2).

Figure 1.2. Preschool age population projections in Kazakhstan, by age cohort



Source: Data provided by Ministry of National Economy of the Republic of Kazakhstan Committee on Statistics (former Kazakhstan Agency of Statistics), <http://www.stat.gov.kz/>.

Population trends are not homogeneous across the country: the northern areas are experiencing a decline, while in the south there is a baby boom. East Kazakhstan, Kostanay and Karaganda, North and West Kazakhstan, Akmola and Pavlodar experienced population decreases between 1999 and 2009, with the number of inhabitants in North Kazakhstan falling by 18%. In contrast, the population increased by more than 20% in the regions of Mangystau, South Kazakhstan and the cities of Astana and Almaty during this period. In 2013, more than half of the population (9.4 million) lived in urban areas, and an increasing trend towards urbanisation can be observed (JSC IAC, 2014b). The most urbanised regions are Karaganda (79%), Pavlodar (70%), Aktobe (62%) and East Kazakhstan (59%). In contrast, the rural population was concentrated in the regions of Almaty (77%), South Kazakhstan (61%), Zhambyl (60%), North Kazakhstan (58%) and Kyzylorda (57%) (JSC IAC, 2014a).

Kazakhstan is a country with a wide range of ethnicities. Ethnic Kazakhs comprise 65% of children, ethnic Russians 21% and ethnic Uzbeks 3%. Other groups of minorities reflect the movements during the Soviet period and include Ukrainians (1.8%), Uighurs (1.4%) and Germans (1.0%) (JSC IAC, 2014b; figures for early 2014). Kazakhstan is predominantly Muslim (70%), roughly one-quarter of the population is Christian (26%), and 3.5% of the population is designated “other” or has no religious affiliation (JSC IAC, 2014b).

Kazakh is the official language of the Republic and is understood by two-thirds of the population. Russian is considered the language of inter-ethnic communication as it is

understood by virtually everyone (94%). About 15% of the population speak English. In 2013, the language of instruction in most ECEC settings was Kazakh (71%), followed by Russian (28%), Uzbek (0.1%), Uighur (0.03%), and Tajik (exact figures unknown) (Ministry of Education and Science, 2014).

The net migration rate (the difference between the number of emigrants and immigrants) is positive and accounted for 6 990 individuals for the period 2008-2012. There are marked differences in the skill levels of immigrants and emigrants. The number of emigrants with higher education (5 829) is almost double that of immigrants (3 096) (JSC IAC, 2014b). Foreign citizens without Kazakh citizenship account for only 0.4% of the population. In 2012, in an effort to combat child labour, Kazakhstan granted children of migrant workers, including seasonal migrants, the right to attend educational institutions with the same rights as Kazakh children (JSC IAC, 2014b).

Economic growth and inequalities

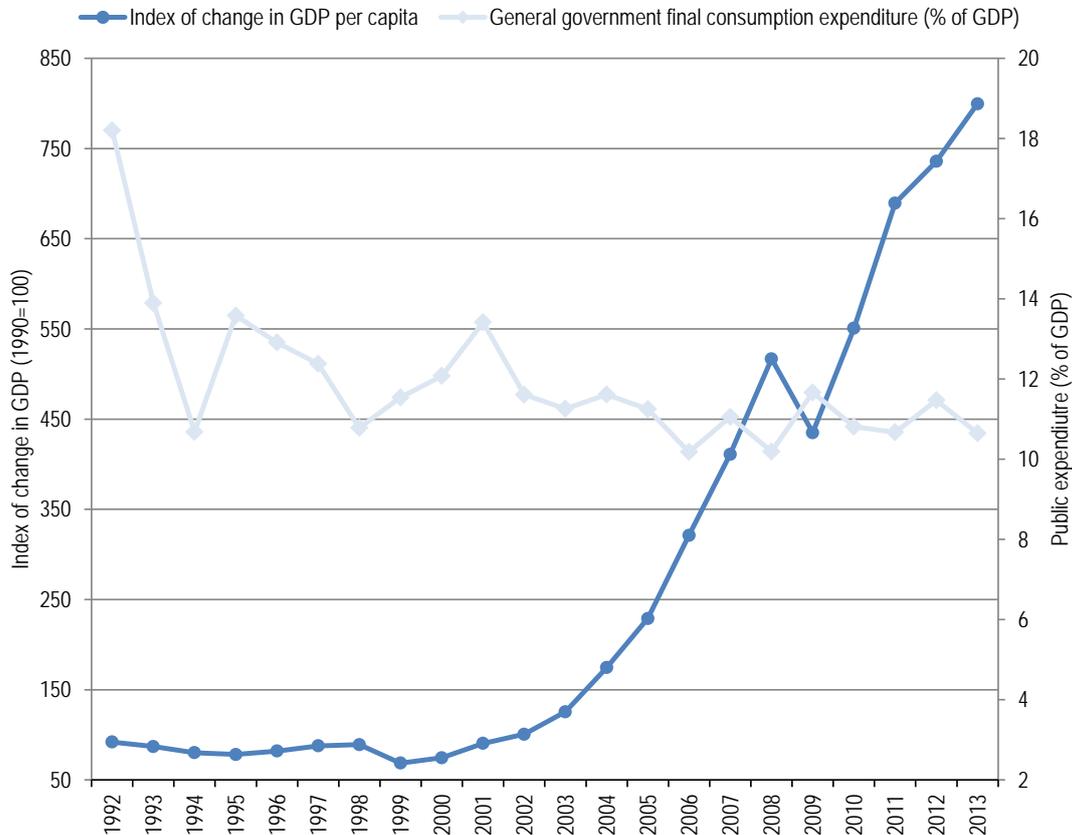
Kazakhstan has experienced extraordinary economic growth in the last decade. Rapid growth in the early 2000s drastically slowed during the global financial crisis of 2008, but had rebounded by the end of 2009. In 2013, annual GDP growth was 6% and inflation had remained stable. With a per capita GDP of USD 13 609 in 2013 (World Bank Statistics, 2014), which had doubled in only a decade, Kazakhstan is considered an upper-middle income economy. It is 50th among 148 countries in the Global Competitiveness Index (2013). In the World Bank's Doing Business Rating (2014), which ranks 189 economies (2014), Kazakhstan is 64th place, well ahead of other countries in Central Asia and also the Russian Federation, which is ranked 92nd.

Economic activity and investment in Kazakhstan is centred on extractive industries (e.g. oil, gas and mining industries), which represented 65% of Kazakhstan's exports and attracted 70% of the inflow of foreign direct investment in 2009 (OECD, 2012). Despite efforts to diversify the economy around transport, pharmaceuticals, telecommunications, petrochemicals and food processing, these continue to be less productive and not very competitive. The over-reliance on oil and extractive industries means that public expenditure is very vulnerable to production and global price shocks. Taxes on oil revenues were estimated to represent 37% of public revenues in 2006 (Daly, 2008).

Indicators on the income, health and well-being of the Kazakh population suggest that significant challenges remain in terms of human development. The distribution of income differs widely across the country. However, the Gini index, a coefficient that measures inequality in a society, ranging from 0 (perfect equality) to 1 (maximum inequality), has decreased steadily in the past decade, from 0.34 in 2001 to 0.28 in 2012 (JSC IAC, 2014b), resulting in relatively low income inequality compared to neighbouring countries. The proportion of the population living below the Kazakh poverty line was 3.8% in 2012 (JSC IAC, 2014b). Twice as many people below the poverty line live in rural areas (World Bank, 2012). Regarding the international poverty line, as measured by the purchasing power parity (PPP)-corrected of USD 2.50 per capita per day, poverty in Kazakhstan fell from 41% in 2001 to 4% in 2009. However, against a benchmark of a higher poverty line at the PPP-corrected USD 5 per capita per day (which is more appropriate for countries with a higher level of income per capita), some 42% of Kazakhstan's population were still living in poverty in 2009, though down from 79% in 2001 (World Bank, 2012). The life expectancy of Kazakhs is 69 years, which is low compared to countries with a similar level of income. The average in Europe and Central Asia (ECA) is 71.5 years and in high HDI countries like Japan it is 82.7 years. Despite

improvements in the last decade, maternal mortality, infant mortality and under-5 mortality rates remain relatively high (JSC IAC, 2014b).

Figure 1.3. Evolution of GDP and public expenditure



Note: General government final consumption expenditure (formerly general government consumption) includes all government current expenditure for purchases of goods and services (including compensation of employees). It also includes most expenditure on national defence and security, but excludes government military expenditure that is part of government capital formation.

Sources: World Bank Statistics (2014), *World Bank national accounts data*, World Bank online database: <http://data.worldbank.org/indicator/NY.GDP.PCAP.CD>; UNESCO (2014), *Public Expenditure Data*, UN online database: <http://data.un.org/>.

The labour market has high female participation rates, a highly skilled workforce and almost full employment. The Global Gender Gap Report (World Economic Forum, 2013) ranks Kazakhstan in 37th place (the Russian Federation ranks 61st) in the world regarding its treatment of women. The major weakness in Kazakhstan's performance is in the political arena, where women have little representation. Although women constitute a significant majority of the population, there has never been a female head of state, only 16% of ministerial positions are held by women, and only 24% of parliamentary deputies are female. However, employment rates of women are high, and female unemployment was only 6.2% in 2011 (JSC IAC, 2014b). About half of the workforce has completed tertiary education, which represents a larger proportion than in the OECD (30%) and European Union (28%), on average (OECD, 2014a). The unemployment rate fell from

12.8% in 2000 to 5.3% in 2012 (JSC IAC, 2014b). In 2011, 55% of the employed labour force worked in services, 27% in agriculture and about 20% in the industrial sector (World Bank, 2012). The informal economy accounted for 38% of GDP in 2007 (Schneider et al., 2010).

The country is actively engaged in the international community, and virtually all major international organisations and donors are present in Kazakhstan. The World Bank, the Asian Development Bank (ADB) and the International Monetary Fund (IMF) are among the international governmental organisations that provided substantial development loans to Kazakhstan in the 1990s. By the early 2000s, Kazakhstan had repaid the loans and was able to borrow on international markets, becoming one of the few countries that managed to become donor-free in just a decade. The Asian Development Bank and the United Nations International Children’s Emergency Fund (UNICEF) have been particularly engaged in providing support in the field of early education (see ADB, 2004 and UNICEF, 2010). Today, the government is pursuing accession to the World Trade Organization (WTO) and is increasingly partnering with the OECD to bring public policies up to par with developed countries.¹

Early childhood education and care is regarded in Kazakhstan as an opportunity to support female labour market employment, as well as stimulate early childhood development and provide young children with equal opportunities. National policies provide a comprehensive package for mothers, including the promise of job security and a long period of paid maternity leave entitlements. In Kazakhstan, women receive 126 calendar days of maternity leave that are fully paid. Extended maternal leave is possible for up to three years, paid at 40% of the woman’s wage until the child is one-year-old, with the remaining 24 months set at a fixed amount. In the Russian Federation, leave entitlements are somewhat more generous, with 140 calendar days paid at a rate of 100%, and a 40% wage allowance until the child is 1 ½ years old. Maternity leave entitlements are more favourable in Sweden, with 480 days of paid leave at 80%, although a longer leave period of up to three years is unpaid. On average across OECD countries, mothers are entitled to just under 18 weeks (126 calendar days) of paid maternity leave around childbirth (OECD, 2015).

Table 1.1. Parental leave policies in Kazakhstan and selected comparison countries

Kazakhstan	Russian Federation	Sweden	Bulgaria	United Kingdom
<ul style="list-style-type: none"> • 126 days of birth and pregnancy leave at 100% wage • parental leave up to 36 months (40% of wage until the child reaches 1 year of age, and a fixed amount for the remaining 24 months) 	<ul style="list-style-type: none"> • 140 days birth and pregnancy leave at 100% wage • parental leave for up to 36 months (40% of wage until 18 months of age, fixed amount for remaining 18 months) 	<ul style="list-style-type: none"> • 480 days (60 exclusively for mother and father, remainder discretionary) at 80% of wage 	<ul style="list-style-type: none"> • 48 weeks maternity, at 90% of wage, paid by the employer and the government • Limited paid paternity leave 	<ul style="list-style-type: none"> • 273 days (30 days at 90% wage, remainder at fixed rate) • 14 days paternity leave

Sources: World Bank Statistics(2014), *World Bank national accounts data*, <http://data.worldbank.org/indicator/NY.GDP.PCAP.CD>; Data for Kazakhstan adopted from JSC IAC (2014a), *OECD Review of Policies and Practices for Monitoring Quality in Early Learning and Development: Country Background Report for Kazakhstan*, JSC Information Analytic Center of the Ministry of Education and Science of the Republic of Kazakhstan, Astana; Data for Bulgaria from World Bank (2013), *Bulgaria Early Childhood Development SABER Country Report*, World Bank, Washington DC.

Governance of the early childhood education and care system

A hierarchical distribution of responsibilities

Kazakhstan declared independence from the Soviet Union in 1991 and established a secular democracy with a presidential government and separation of powers between its legislative, executive and judiciary branches. The President, Nursultan Nazarbayev, has been in office since 1991. He exercises strong control over the prime minister, all branch ministers, and regional governors. Independent scrutiny of Kazakhstan’s political system reveals the limitations of the democratic process and insufficient freedom of public discussions (ICG, 2013; Heinrich, 2010; Bhuiyan, 2010).

Kazakhstan has a highly centralised top-down system that leaves very little political, administrative and fiscal authority to lower levels of a clearly delineated hierarchy. Administratively, the country is divided into 14 regions (Kazakh: облыстар, *oblistar*) and two cities of special status: the current capital Astana and the former capital Almaty, which are referred to as oblasts or regions hereafter. Oblast governors serve as representatives of the president and are responsible for the implementation of the president’s policy decisions. The country is further divided into 175 districts (Kazakh: аудандар, *awdandar*), which are referred to as rayons hereafter. These encompass 87 cities, 31 villages and 6 828 rural settlements. Oblast governors are also responsible for appointing and dismissing heads of the rayons.

Several actors are involved with ECEC at the national level. The Presidential Office plays an important role in the definition of early education strategies and in the development of key initiatives. The President is involved in all the major early education strategies and, in his annual address, provides clear directions for the early education system that the Ministry of Education and Science then further develops and implements. The Presidential Office may also directly develop and implement initiatives of special interest for the country, such as the network of Nazarbayev Intellectual Schools to cater to gifted students (see Box 2.1). The Presidential Office is also responsible for the overall review of monitoring reports on progress towards the objectives set in strategies.

The Ministry of Education and Science (referred to hereafter as “the Ministry”) is the central body responsible for the governance of inter-sector co-ordination in the fields of ECEC, education, science, protection of children’s rights, and youth policy. The Law on Education attributes the following responsibilities to the Ministry: defining and executing the early educational policy, drafting regulations concerning funding for (early) education, drafting and adopting educational standards and curricula, organising and implementing assessment systems, establishing requirements for teacher training, supporting the early educational process in the Kazakh language, and establishing international agreements on early educational purposes. The Ministry has created several subordinated organisations to support its work in areas of specific interest.

Strategic and operative plans set short, mid and long-term directions and goals, and a system of norms indicate how these should be achieved. Multiple mechanisms are in place at all levels to monitor progress towards the national objectives and ensure compliance with the system of norms. In general, the Ministry reports to the Presidential Office and is monitored by the Ministry of the Economy and Budget Planning on its performance, and the Ministry of Finance on the execution of the budget. Oblasts and rayons are responsible for the delivery of early education services in ECEC settings, but they cannot contradict internal and external central government policies and are required to follow national interests (Bhuiyan, 2010).

In comparison with other OECD countries, ECEC settings have little autonomy in Kazakhstan. Their responsibilities are to distribute children into groups/classes, develop strategies to support low performers, and establish a leadership team and teaching body. An area in which principals have a comparatively high level of autonomy is teacher recruitment and dismissal, which is the sole responsibility of the ECEC settings (provisions). However, the number and type of staff within ECEC provisions is determined by central norms (i.e. national standards).

Parent committees represent parents' interests and play an important role in ECEC. They can be established at the setting level, although ECEC provisions are not obliged to set them up. Such committees can participate in meetings with ECEC managers and staff and allow parents to voice their concerns, raise issues and suggest new ideas. In addition, parents can attend activities organised at an ECEC setting, participate in class activities, and go to teacher-parent meetings. Consultation on policy tends to be limited to public authorities and operates from the top down. The role of civil society and interest groups in early education is weak. The Ministry of Education has tried to increase transparency by creating and regularly updating an official website, and encouraging early educational institutions to create their own website. In addition, the media coverage of early education issues is generally descriptive and highlights current events and interviews with officials. Substantive and qualitative analysis of early education remains insignificant and research on the topic is limited (ADB, 2004).

Legal and strategic foundations

The Constitution of the Republic of Kazakhstan (1995) and the National Law on Education (2007) lay down the main foundations of the early education and education system. The law determines the national ECEC policies, the objectives and principles of early education, the administrative structure, and the system of public and private provision. It ratifies the administrative and financial decentralisation of institutions providing educational services. The legal framework also encompasses specific provisions of other legislative acts, edicts of the president, decrees of the government, and orders of the Minister of Education and Science. Policy developments in ECEC are guided by a multitude of planning documents and strategies, notably the State Programme of Education Development 2011-2020.

Kazakhstan continues to use national strategic planning to set out a vision for the country, but also to regulate every aspect of the ECEC system at the central level. A number of strategies and planning documents ensure consistency and guide policy making in the short, medium and long term. All major strategies are considered part of the legislative framework. The national architecture of strategic planning for ECEC, and the education system as a whole, consists of:

- **Long term:** Development Strategy Kazakhstan 2050 “One nation, one destiny”, adopted in 2012, provides a vision for the country for the years to come and superseded the Strategy Kazakhstan 2030, adopted in 1997.
- **Medium term:** Several strategies co-exist for the medium term, notably the Programme of Education Development in the Republic of Kazakhstan for 2011-2020 (adopted in 2010) and the Strategic Plan of the Ministry of Education and Science of the Republic of Kazakhstan for 2011-2015 (from 2011). Other strategic documents include the National Action Plan for the development of school children’s functional literacy for 2012-2016 (from 2012), and the Education Development Concept of the Republic of Kazakhstan until 2015 (from 2004).

- **Short term:** The president’s annual address to the nation provides an opportunity to present new initiatives and new strategies, which then are usually developed into strategic sectorial documents and laws. The ministries, including the Ministry of Education and Science, also develop their own operational plans for each year.

Strategies contain specific targets and indicators to measure implementation progress, which is regularly monitored and reported to the relevant authorities. The planning system uses a top-down approach. Oblasts and subsequently rayons also define their ECEC strategies and planning documents to translate national strategic goals into specific regional and local implementation plans.

The structure of early childhood education and care

Organisation of the education system

The structure of the Kazakh education system is displayed in Table 1.2. Primary education is the first stage of compulsory education and lasts four years. The majority of children start primary school at age 7, although 6-year-olds can also be enrolled. Secondary education starts at the fifth grade and consists of two levels: basic comprehensive education (grades 5-9) and senior comprehensive education (grades 10-11). After basic comprehensive education, students can continue to senior comprehensive education for two more years or enter technical vocational schools (colleges) for three years. After completing secondary education (the senior comprehensive level), students may progress to higher education institutes and universities.

Table 1.2. Organisation of education in Kazakhstan

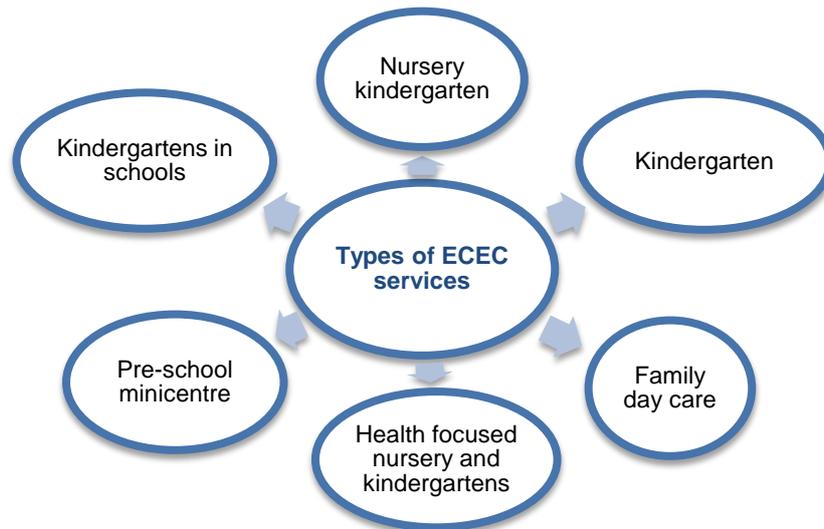
Age	Grade or type of provision	Level of education
<i>Early childhood education and care</i>		
1-6	No grade, but these include kindergartens, crèches (day nurseries), family day care facilities, sanitary kindergartens, school-based kindergartens, and preschool mini-centres	Pre-primary education (ISCED 0)
<i>Primary education</i>		
6(7)-9(10)	1-4	Primary education (ISCED 1)
<i>Secondary education</i>		
11-16	5-9	Secondary education (basic comprehensive in Kazakhstan) (ISCED 2)
16-18	10-11	Secondary education (senior comprehensive, gymnasium) (ISCED 3)
<i>Professional education programmes (i.e. vocational education)</i>		
16-19	Technical vocational schools, colleges	Post-secondary education (technical vocational education) (ISCED 4)
<i>Higher education</i>		
17+	Universities, academies, institutes	Tertiary education (bachelor’s degree) (ISCED 6)
21+	Universities, academies	Tertiary education (master’s degree and PhD) (ISCED 7)

Source: Adapted from JSC IAC (2014a), *OECD Review of Policies and Practices for Monitoring Quality in Early Learning and Development: Country Background Report for Kazakhstan*, JSC Information Analytic Center of the Ministry of Education and Science of the Republic of Kazakhstan, Astana.

Types of early childhood education and care settings

ECEC services in Kazakhstan are supplied by a comprehensive system of six types of setting (see Figure 1.4). All are part of the official system. Little information is available on the home-based services (family day care), which are therefore not fully considered in this review.

Figure 1.4. Types of preschool organisations in Kazakhstan

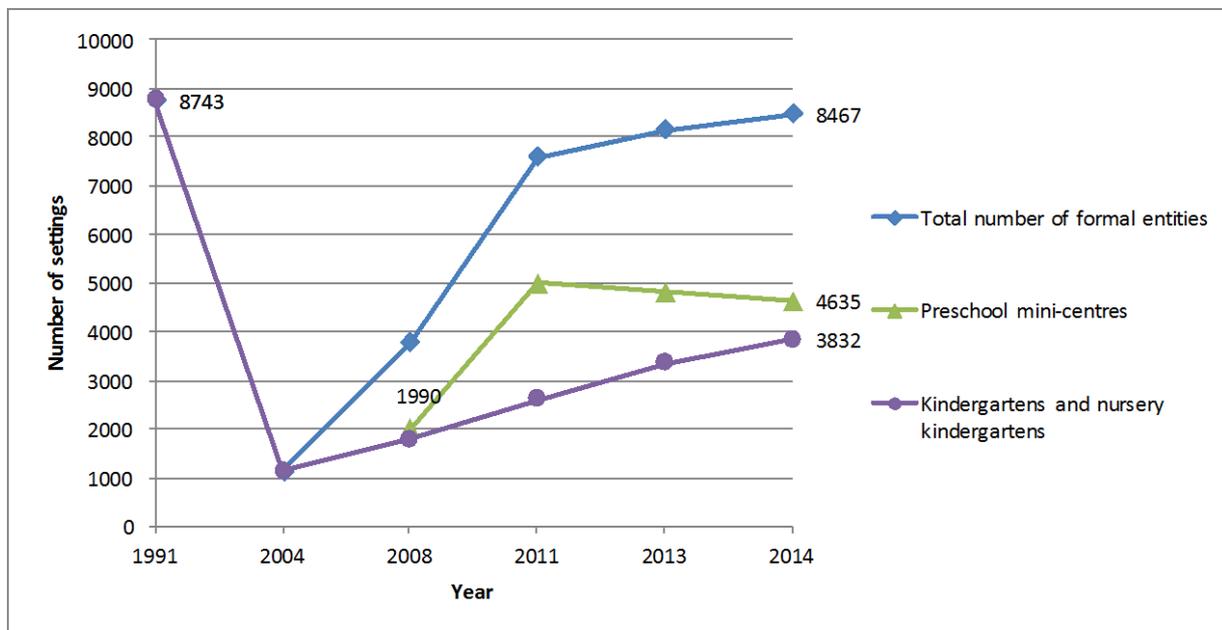


- Nursery kindergartens serve children from age 1 to 3 years. Enrolment in nursery kindergartens is accounted for under kindergartens in the official statistics.
- Kindergartens cater to children from the age of 3 to 7. Nursery and regular kindergartens are the main providers of ECEC: Kazakhstan's 3 340 nursery kindergartens and kindergartens have an enrolment of 491 343 children.
- Family day care is offered in homes, with small groups, usually of 5-6 children. These small-capacity settings are considered part of the public ECEC system.
- Health-focused nursery and kindergartens (or "sanatorium kindergartens") specialise in children who need medical support (such as physical therapy, tuberculosis therapy or allergy therapy). For a child to be enrolled in these settings, a medical declaration is needed and participation in ECEC is free. Kazakhstan has 67 such settings, which enrol 7 411 children. A network of 36 specialised kindergartens for children with special educational needs (SEN) provides for children with serious handicaps (speech, hearing, mental, vision and other disabilities). These serve 4 942 children.
- Preschool mini-centres are the second largest provider of ECEC in Kazakhstan: 4 803 mini-centres provide for 189 463 children.
- School-based kindergartens provide ECEC for children aged 5 to 7. More than 200 000 children participate in such kindergartens (NCES, 2014).

Rapid increase in the number of early childhood education and care settings

The number of preschool institutions in Kazakhstan has been steadily growing, with provision nearing the level reached in 1991 at the time of the split with the Soviet Union. While a large number of settings provide ECEC to children aged 3 or older, few settings cater to younger children. To compensate for this lack of services for young children, parents can take up to three years of maternity/paternity leave. This contrasts with the trend in OECD countries, where governments are seeking to increase ECEC participation rates and provision for the youngest children. At present, Kazakhstan has 8 467 ECEC settings or pre-primary education institutions (PEIs). No data on the number of family day care settings is available to date (see Figure 1.5).

Figure 1.5. Evolution of early childhood education and care institutions in Kazakhstan 1991-2014



Note: The total number of formal entities excludes the number of family day care settings.

Source: NCES (2014), *National report on the status and development of education of the Republic of Kazakhstan*, National Centre for Education Statistics, Astana.

Table 1.3. Number of early childhood education and care settings in Kazakhstan over time

	1991	2004	2008	2011	2013	2014
Total number of settings	8 743	1 120	3 763	7 591	8 143	8 467
Preschool mini-centres			1 990	5 000	4 803	4 635
Kindergartens and nursery kindergartens	8 743	1 120	1 773	2 591	3 340	3 832

Note: The total number of formal entities excludes the number of family day care settings.

Sources: Ministry of Education and Science, and the Republican Center Early Childhood (2006), *Investments into early childhood: First step into top 50 competitive countries of the world*, Ministry of Education and Science of the Republic of Kazakhstan, Astana; NCES (2007), *National report on the status and development of education*, National Centre for Education Statistics, Astana; NCES (2014), *National report on the status and development of education of the Republic of Kazakhstan*, National Centre for Education Statistics, Astana.

Early childhood education and care policies and outcomes

Early childhood education and care is regarded as a policy priority

The split from the Soviet Union in 1991 and the transition to a market economy resulted in a period that had particularly harsh consequences for the education sector. Drastic adjustments included the closure of about 3 668 preschools and 590 schools and a severe reduction of teacher salaries (ADB, 2004). In recent years, the Kazakh government has made early education, education and lifelong learning a policy priority, developing new curricula, learning resources and teacher training. Emphasis has been placed on increasing participation in early learning for children from the age of 3, as well as boosting primary school enrolment, transition rates and graduation rates. Public investment in education has been gradually increased to 4.1% of GDP in 2012-13, which is nevertheless lower than the OECD average of 6-7% (OECD, 2014b).

Kazakhstan's government is committed to improving efficiency, quality and access to ECEC services. From 2000 onwards, programmes and policies have been developed to increase the provision of ECEC and increase participation, in particular for 5 and 6 year-olds (i.e. in the year before primary schooling). Both the State Programme of Education Development (SPED) 2011-2020 and the Strategy of Kazakhstan 2050 cite ECEC as a policy priority. For instance, the Strategy of Kazakhstan 2050 sets out the ambitious goal of increasing ECEC enrolment to 100% for all 3 to 6 year-olds by 2020. In addition, SPED includes an intermediary goal of achieving 77.7% enrolment rates in this age group in 2015.

Policies pay off in terms of enrolment and outcomes

Kazakhstan has now achieved near-universal access to primary education, with 100% transition rates from primary to secondary education and very low repetition rates. In 2010, Kazakhstan ranked first on the UNESCO Education for All (EFA) Development Index by achieving near-universal primary education (99%), adult literacy (99.6%), and gender parity (99.3%). In addition, ECEC enrolment has been on the rise since the extensive expansion and significant public investments since 2000. Between 1990 and 1998, enrolment rates dropped from 47.9% to 10.8% (Ministry of Education and Science and the Republican Center Early Childhood, 2006). At present, about 50% of children aged between 1 and primary school age attend some form of ECEC. While this is low in comparison to OECD countries (OECD, 2014b), participation rates of 3 to 6 year-olds are above the OECD average at 73.4% in 2013 (National Centre for Educational Statistics, 2014).

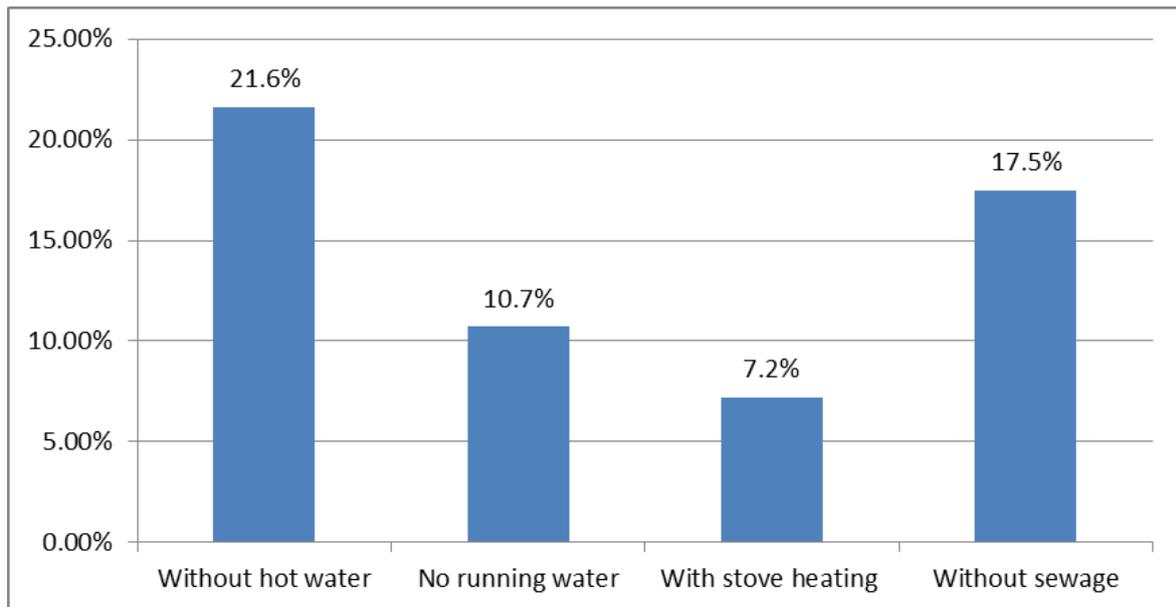
Kazakhstan participated in the Trends in International Mathematics and Science Study (TIMSS) in 2007 and 2011, a mathematics and science assessment for fourth and eighth graders; and in the Programme for International Student Assessment (PISA) in 2009 and 2012, an international literacy, math and science assessment for 15-year-olds. While Kazakh students performed well in the TIMSS assessment in 2007 (ranked 5th in 2009 on mathematics and 11th on science), results were not as good in 2011, when Kazakhstan fell to 27th place in mathematics and 32nd place in science. In addition, 2009 PISA results were not very positive, with 59% of Kazakh students scoring below the basic competency level in mathematics; 58% in reading; and 55% in science. The 2012 PISA results showed significant progress, especially in mathematics and science where the average score increased from 405 to 432 for mathematics and from 400 to 425 for science. In addition, the percentage of low performers in mathematics in 2012 almost

halved the level reached in 2009, decreasing from 59% to 32%. While these are positive developments in PISA results, the results are still far below the OECD average, which is 494 for mathematics, 501 for science, and 496 for reading skills. For reading, Kazakhstan is the bottom performer in PISA, and among the ten lowest performers for science (JSC IAC, 2014a; OECD, 2014c).

Early childhood education and care infrastructure needs improvement

The infrastructure of preschool educational institutions needs improvement. The existing building regulations for ECEC settings are outdated, originating in the 1960s-1970s. Settings have many different spaces, rooms and corridors, while creative spaces, modern technology and energy efficiency are not included in the regulations and are thus often not taken into account in constructing settings. This results in missed opportunities for economies of cost and space-efficiency. Meanwhile, a large proportion of ECEC settings face structural issues, such as a lack of hot or running water and sewage systems (see Figure 1.6). The most urgent challenges Kazakhstan faces, however, are related to access, equity and quality in ECEC. These will be discussed in subsequent chapters.

Figure 1.6. Proportion of early childhood education and care settings in Kazakhstan with infrastructural issues



Source: NCES (2014), *National report on the status and development of education of the Republic of Kazakhstan*, National Centre for Education Statistics, Astana.

Note

1. In the field of education, Kazakhstan has engaged in several OECD reviews in recent years in the following areas: school resources review (OECD/World Bank, 2015), vocational education and training (Alvarez, 2014), a general review of the secondary school system (OECD, 2014a), students with special needs and those with disabilities (OECD, 2010), and higher education (OECD, 2007).

References

- ADB (2004), *Education Reforms in Countries in Transition: Policies and Processes*, six country case studies commissioned by the Asian Development Bank in Azerbaijan, Kazakhstan, Kyrgyz Republic, Mongolia, Tajikistan, and Uzbekistan, Asian Development Bank, Manila, www.pitt.edu/~weidman/2004-educ-reforms-countries.pdf.
- Álvarez-Galván, J. (2014), *A Skills beyond School Review of Kazakhstan*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264221826-en>.
- Bhuiyan, H.S. (2010), “Decentralisation and public governance in Kazakhstan”, *International Journal of Public Administration*, Vol. 33/12-13, Routledge, London.
- Daly, J.C.K. (2008), *Kazakhstan’s Emerging Middle Class*, Central Asia-Caucasus Institute and Silk Road Studies Program, Washington, DC.
- Heinrich, A. (2010), “The Formal Political System in Azerbaijan and Kazakhstan. A Background Study”, *Forschungsstelle Osteuropa Bremen. Arbeitspapiere und Materialien*, No. 107, March 2010, Forschungsstelle Osteuropa, Bremen.
- ICG (2013), *Kazakhstan: Waiting for Change*, International Crisis Group, Brussels.
- JSC IAC (2014a), *OECD Review of Policies and Practices for Monitoring Quality in Early Learning and Development: Country Background Report for Kazakhstan*, JSC Information Analytic Center of the Ministry of Education and Science of the Republic of Kazakhstan, Astana.
- JSC (IAC) (2014b), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Kazakhstan*, JSC Information Analytic Center of the Ministry of Education and Science of the Republic of Kazakhstan, Astana.
- Ministry of Education and Science (2014), *Main indicators of ECEC system in 2013*, Ministry of Education and Science of the Republic of Kazakhstan, Astana.
- Ministry of Education and Science, and the Republican Center Early Childhood (2006), *Investments into early childhood: First step into top 50 competitive countries of the world*, Ministry of Education and Science of the Republic of Kazakhstan, Astana.
- NCES (2014), *National Report on the Status and Development of Education of the Republic of Kazakhstan*, National Centre for Education Statistics, Astana.
- NCES (2007), *National Report on the Status and Development of Education*, National Centre for Education Statistics, Astana.
- OECD (2015), *OECD Family Database*, OECD, Paris, www.oecd.org/social/family/database.htm.
- OECD (2014a), *Reviews of National Policies for Education: Secondary Education in Kazakhstan*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264205208-en>.
- OECD (2014b), *Education at a Glance 2014: OECD Indicators*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/eag-2014-en>.

- OECD (2014c), *PISA 2012 Results: What Students Know and Can Do (Volume I, Revised edition, February 2014): Student Performance in Mathematics, Reading and Science*, PISA, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264208780-en>.
- OECD (2012), *OECD Investment Policy Reviews: Kazakhstan 2012*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264121812-en>.
- OECD (2010), *Reviews of National Policies for Education: Kazakhstan, Kyrgyz Republic and Tajikistan 2009: Students with Special Needs and those with Disabilities*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264073210-en>.
- OECD (2007), *Reviews of National Policies for Education: Higher Education in Kazakhstan*, World Bank/OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264033177-en>.
- OECD/The World Bank (2015), *OECD Reviews of School Resources: Kazakhstan 2015*, OECD Publishing, Paris <http://dx.doi.org/10.1787/9789264245891-en>.
- Schneider, F. et al. (2010), *Shadow Economies All over the World: New Estimates for 162 Countries from 1999 to 2007*, World Bank, Washington DC.
- UNESCO (2014), *Public Expenditure Data*, UN online database: https://data.un.org/Data.aspx?q=public+expenditure+per+capita+percentage+GDP&d=UNESCO&f=series%3aXUNIT_GDPCAP_FSGOV.
- UNICEF (2010), *Country Profile: Education in Kazakhstan*, UNICEF, www.unicef.org/ceecis/Kazakhstan.pdf.
- World Bank (2013), *Bulgaria Early Childhood Development SABER Country Report*, World Bank, Washington DC, http://wbfiles.worldbank.org/documents/hdn/ed/saber/supporting_doc/CountryReports/ECD/SABER_ECD_Bulgaria_CR_Final_2013.pdf.
- World Bank (2012), *World Bank – Kazakhstan Partnership Program Snapshot*, April 2012, World Bank, Washington DC.
- World Bank Statistics (2014), *World Bank National Accounts Data*, <http://data.worldbank.org/indicator/NY.GDP.PCAP.CD>.
- World Economic Forum (2013), *The Global Gender Gap Report 2013*, http://www3.weforum.org/docs/WEF_GenderGap_Report_2013.pdf.

Chapter 2

Assessment of early childhood education and care in Kazakhstan: Key strengths and opportunities

This chapter first of all highlights the key strengths of Kazakhstan's early childhood and care (ECEC) system. It indicates the opportunities these strengths provide to enhancing the quality of the ECEC system. It compares Kazakhstan's situation on each of the key strengths with OECD countries, and explains how that topic is arranged in other countries. This can provide Kazakhstan with some further food for thought on how to further strengthen these areas.

Key strengths of the Kazakh early childhood education and care system

Early childhood education and care is a policy priority

Across OECD countries

Support for ECEC has been growing among OECD member states where it has received increased policy attention and public investment in countries including: Germany, Korea, New Zealand, Norway, Ireland and England (OECD, 2012; 2015a). ECEC has been high on the political agenda in several countries, such as the United States, and there is a growing awareness that an early start in ECEC provides children, particularly those from disadvantaged backgrounds, with a strong start in life. Among the reasons for increased governmental attention and investment are: the wish to increase female labour market participation, reconciling work and family life, tackling demographic challenges (such as ageing societies in most OECD countries), and the need to redress educational disadvantages (OECD, 2006). European governments in particular have paid increasing attention to family and childcare policies in order to help families cope with their career and family responsibilities. Another reason for an increased emphasis on ECEC is immigration, as immigrant children may encounter difficulties in learning, especially when they do not speak the country's dominant language. In the Netherlands, for example, targeted ECEC programmes have been implemented in mainstream ECEC services for children of immigrant backgrounds or of low socio-economic status (SES).

In Kazakhstan

Kazakhstan has several state programmes to increase the number of ECEC settings and the enrolment of children in preschools and care settings. Clear participation targets for the future have been set, such as the objective to reach universal enrolment of all 3 to 6 year-old children by 2020. In addition, policy documents indicate that the enrolment of children under the age of 3 should be made a policy priority.

The strong focus on ECEC is enshrined in President Nazarbayev's development plan: "Kazakhstan – 2050" (Nazarbayev, 2012). The goal of this plan is to bring Kazakhstan into the ranks of the 30 most competitive countries around the world through a focus on eliminating corruption and ensuring a healthy, well-educated population. As part of this policy strategy, plans for improving the quality of the education system have been developed and are being implemented. ECEC has been recognised as an important means of achieving a strong, active, well-educated, innovative and healthy society, and as a result, 4.1% of the country's GDP is spent on education, and 0.6% on ECEC in particular (NCES, 2014). While this illustrates the increased policy relevance of education and ECEC, the share of GDP spent on ECEC in Kazakhstan is below the OECD average of 0.8%, and far below countries that regard ECEC as a top priority, such as Denmark where 2% of the country's GDP is spent on ECEC (OECD, 2015b). The 100% enrolment target is also part of the President's plan and it is already seeing results as the number of ECEC settings has increased rapidly (see Chapter 3 and 5 for further analysis) and the enrolment rates of children above the age of 3 rose to 73.4% in 2013 (JSC IAC, 2014).

Increasing attention to equity issues at the policy level

Across OECD countries

The highest-performing early education systems in OECD countries are those that combine quality with equity. Equity in early education means that personal or social circumstances, such as gender, ethnic origin or family background, do not constitute obstacles to achieving developmental potential (fairness), and that all individuals reach at least a basic minimum level of skills (inclusion). In such education systems, the vast majority of children have the opportunity to attain high-level skills, regardless of their personal and socio-economic circumstances (Field, Kuczera and Pont, 2007). Equity and fairness are issues for OECD countries. Children from poorer homes in most OECD countries are between three and four times more likely to score poorly in PISA mathematics tests at age 15 than their better-off peers (OECD, 2014a).

Early childhood services are particularly important for at-risk and immigrant children as participation in ECEC can strongly contribute to their social and cognitive development, as well as their social inclusion. Moreover, ECEC services can fulfil an early screening purpose by detecting any special needs of children, which can then be treated at an early age. Participation in quality care and early education is therefore highly relevant for these children in particular.

Most OECD countries, to different degrees, provide comprehensive ECEC services in several ECEC settings, or in collaboration with other social services. In addition, measures are often implemented to provide additional support to ECEC services that target or host at-risk children. These include a differentiated pedagogy adapted to fit the needs of disadvantaged children or specialised training for staff. The latter is, for instance, done in New Zealand where teachers working with Maori children from disadvantaged backgrounds are trained to work with this particular group of children and how to encourage their development as these children are at greater risk of learning disadvantages. Other measures include hiring additional staff, such as specialised staff who are trained to work with immigrant children in the Netherlands. These teachers are trained on specific ECEC programmes that target immigrant children. With the support of these additional teachers, immigrant's language development is stimulated and it lessens the work load of regular teachers. In addition, some countries or programmes opt for a strong collaboration with families. This is the case in the Perry Pre-school Project in the United States where parents are highly engaged in the implementation of the programme and receive support in how to improve the home learning environment. However, equity remains an issue, and when disadvantaged children (whether at risk or disabled) participate in mainstream ECEC services they often do not receive the full range of early care, learning, health and family services that are needed to strengthen and improve their early development (OECD, 2006; Field, Kuczera and Pont, 2007).

In Kazakhstan

An increasing number of policies in Kazakhstan facilitate equity in the provision of all services. These policies derive from the long-term strategy “Kazakhstan-2030: Prosperity, security and improved living standards for all Kazakhs”, which was adopted in 1997. Since 1998, all the programmes in the country have been developed in accordance with the Development Strategy for Kazakhstan to the year 2030, including the following programmes that have implications for equity (JSC IAC, 2014):

- The strategic plan for development of the Republic of Kazakhstan until the year 2020 (the Decree of the President of the Republic of Kazakhstan No. 922, dated 1 February 2010).
- The strategy of gender equity in the Republic of Kazakhstan for 2006-2016 (the Decree of the President of the Republic of Kazakhstan No.1677, dated 29 November 2005).
- The state programme of education development in the Republic of Kazakhstan for 2011-2020 (Decree of the President of the Republic of Kazakhstan No.1118, dated 7 December 2010).
- The state programme of health care development in the Republic of Kazakhstan "Salamatty Kazakhstan" (the Decree of the President of the Republic of Kazakhstan No. 1113, dated 29 November 2010).
- The state targeted social assistance law (Law of the Republic of Kazakhstan No.246, dated 17 July 2001).
- The second stage (2014-2015) of the National Action Plan to secure the rights and improve the quality of life of persons with disabilities (2012-2018) (Resolution of the government of the Republic of Kazakhstan No.254, dated 26 March 2014).

As part of these programmes, several measures to reduce poverty have been implemented. These include active measures such as providing training to staff, and passive measures such as wage increases, a single cash payment to parents upon birth of a child, cash benefits to parents for taking care of young children below the age of 1, and the introduction of social assistance cash benefits for low-income families to meet the difference between average income per head and the official poverty threshold (40% of subsistence income) (JSC IAC, 2014).

Nevertheless, poverty rates are still high, with 42% of the population living in poverty according to World Bank estimates (World Bank, 2012), and 33% of the population according to a study by Roelen and Gassmann (2012). The latter study calculated the child poverty rate of children below the age of 18 to be 45% (Roelen and Gassmann, 2012). When referring to poverty rates in this report, it will be clearly indicated which data source is the reference.

Rural poverty is almost twice as high as urban poverty in Kazakhstan, according to 2010 data from the Asian Development Bank. Given the high incidence of migration from rural regions to the towns and cities in Kazakhstan (JSC IAC, 2014), there is a risk that urban poverty will increase and that there will be an increasing number of children who need additional support in ECEC, as children with low socio-economic backgrounds are at greater risk of learning disadvantages in ECEC and later schooling (Duncan and Magnuson, 2005; Guerin, 2013; Hochschild, 2003; OECD, 2006; Zhang, 2003).

Innovation in early childhood education and care provision

Across OECD countries

ECEC provision is changing in many countries as societies change (which in the case of OECD countries is generally towards an ageing of the population) and as the demands of labour markets evolve. More countries are offering broad services, sometimes by integrating ECEC into schooling (as in the Netherlands) and by providing childcare,

preschool, primary school and often also secondary school in a single location as part of an integrated educational setting. Other countries offer additional services to parents to prepare them better for the labour market or to strengthen their parenting skills. For example, language classes are offered to parents in the Flemish Community of Belgium, while in the United States, many ECEC programmes provide parenting classes. In OECD countries, children with special needs are included in regular ECEC as much as possible, and when appropriate.

With rapid developments in technology, ECEC systems and centres are making better use of technological innovations, either by educating young children in how to use technological appliances or by using them as teaching tools. Many OECD countries use technology in early education through computers and other information and communication technology (ICT) tools. ICT has the potential to affect how people live, learn and work. If used wisely, ICT and other technologies can have many benefits, including helping children visualise abstract issues and learn how to read. They can also help develop children’s technological skills. So far, only a few countries, including Korea, New Zealand and Spain, are teaching areas related to ICT and technology in early education. However, the use of technology, in particular computers, is widespread in preschools. Some innovative tools and methodologies, or the innovative use of existing technologies, stand out, such as the use of whiteboards to engage children, and the use of iPads.

In many OECD countries, the classic blackboard has been replaced by interactive whiteboards, which work like large computer screens. Whiteboards provide more visual representations and can play videos; they can encourage children to become more actively involved. The interactive whiteboard allows children to connect with the information being presented by the teacher, thereby making it meaningful. In Victoria, Australia, the use of interactive whiteboards was found to increase children’s oral language skills and attention span because it stimulated more interest in the activity than reading from books (Terreni, 2011).

In the Netherlands, 12 iPad schools opened in 2013. In these primary schools, which also include kindergartens (preschools), all children and their teachers have an iPad. The children work with numerous special apps that track their progress, provide insight into recent activities, and create a virtual playground. The teachers also make use of the iPad to teach: information is provided on a large screen, which is directly linked to the child’s iPad. In general, the Dutch iPad schools and kindergartens place greater emphasis on technological knowledge and skills than other schools and preschools. Maurice de Hond, initiator of the project, believes that “Children should be prepared for the world of 2030, not the world of yesterday.” (www.ipadscholen.com)

In Norway, children’s views are regarded as highly important in pedagogical practice, and iPads are used for evaluating children’s satisfaction (using “smiley faces”) about activities and practices (OECD, 2015a).

In Kazakhstan

In OECD countries, ECEC is typically offered in care settings, preschools, nurseries or kindergartens. In Kazakhstan, however, although most ECEC is provided in this conventional way, the country also provides ECEC in a range of more innovative types of provision, such as the Nazarbayev Intellectual Schools (NIS) (Box 2.1). These schools could potentially be an example or blueprint for further ECEC expansion. Recently, NIS expanded their network to include preschool and to implement a 21st century pedagogical

approach that focuses strongly on supporting children’s early development in a wide range of subjects. These schools have also adopted a “train the trainer” professional development programme. The schools in this network are situated in the same location (integrated setting), which eases transitions for children and students between different education levels. Although only one Nazarbayev Intellectual Pre-school has been established so far, the innovative concept is to be extended in coming years. Such preschool provision can serve as an example for other ECEC settings in the country and shows that Kazakhstan is looking for innovative forms of early education provision.

Box 2.1. Nazarbayev Intellectual Schools

Nazarbayev Intellectual Schools (NIS) are autonomous schools that report to a higher board of trustees chaired by the president. They provide an interesting comparison with regular schools reporting to the Ministry of Education and Sciences. NIS were established in 2008 to serve as an experimental platform for the development, monitoring, research, analysis, approbation, introduction and implementation of modern models of educational programmes. As of 2013, they catered to 9 700 students in 15 schools in Astana, Aktobe, Atyrau, Karaganda, Kokshetau, Kyzylorda, Pavlodar, Semey, Shymkent, Taraz, Ust-Kamenogorsk and Uralsk. NIS cater to about 1 108 students from rural areas, who use boarding facilities.

Admission to a NIS is based on competitive examinations. As of 2013, the selection process includes tests in mathematics, languages (including Kazakh, Russian and English) and the ability to study mathematics and science (quantitative reasoning and spatial thinking). The selection process is rigorous, particularly for students applying for places in classes with Kazakh language instruction. In 2013, about 7 689 individuals applied for one of the 884 places available in the Kazakh language of instruction for grade 7, and 2 864 individuals for one of the 860 places in the Russian language of instruction. The acceptance rate for those studying in Kazakh (12%) is thus much lower than for Russian (30%) (NIS Annual Report, 2013). Fewer than 50% of all applicants met the requirements for a merit scholarship.

The instructional resources for NIS are comparable to those in OECD countries, with new facilities and sizeable libraries (e.g. 181 books per enrolled student in the Astana NIS) and widespread availability of technology such as mini TV studios (8 NIS), “interactive floors” (6 NIS), high-speed Internet access in newly opened schools, interactive white boards and equipped science laboratories. The NIS curriculum was developed in collaboration with international partners. Teachers in NIS are competitively recruited and approximately 15% hold master’s degrees or PhDs in the sciences; 14.4% are foreign teachers. The student-to-teacher ratio averages 6.4 across all NIS.

Source: Nazarbayev Intellectual Schools (NIS) (2013), Annual Report of Autonomous Educational Organisation “Nazarbayev Intellectual Schools”, NIS, Astana.

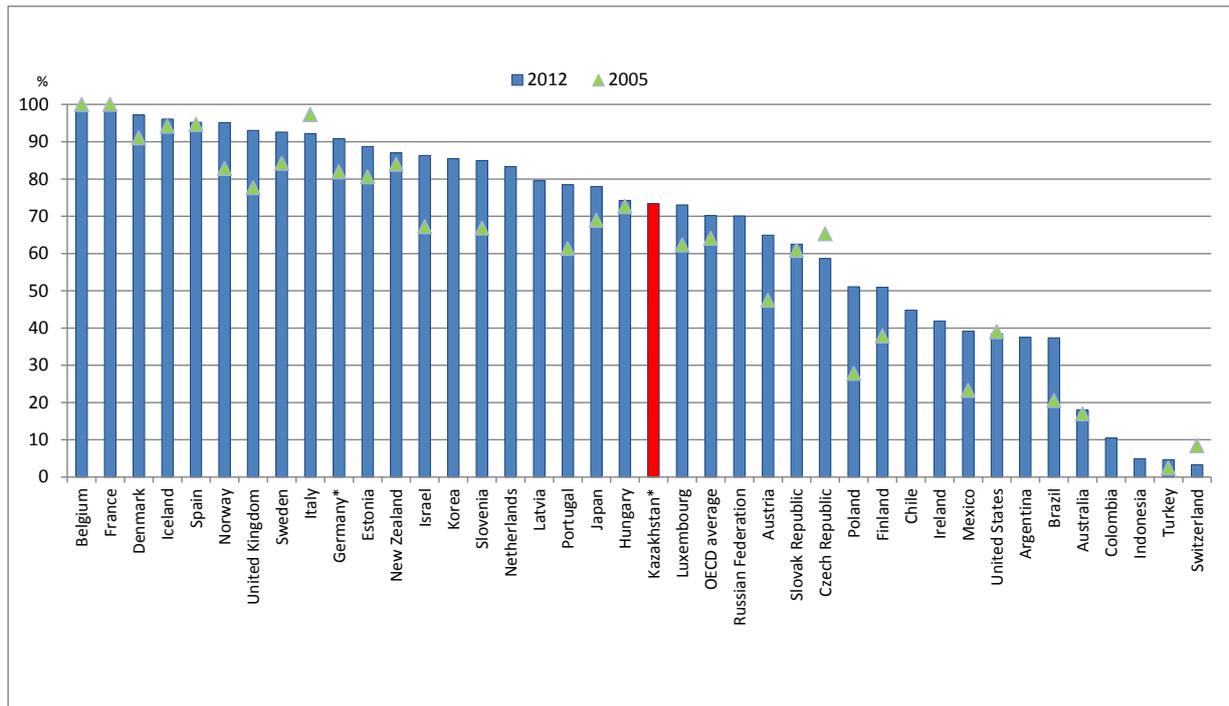
High participation rates for over 3-year-olds

Across OECD countries

As Figure 2.1 shows, the enrolment of 3-year-olds in early education increased by more than 6 percentage points on average in the OECD between 2005 and 2012; with Mexico, Portugal, Slovenia and the United Kingdom achieving gains of more than 15 percentage points. A similar trend can be observed for older age groups. By 2012, 82% of 4-year-olds were enrolled in early education (with 2% in primary education) and 81% of 5-year-olds (13% in primary) (OECD, 2014b). This means that early education is becoming universal in many countries, with 95% or more of 5-year-olds enrolled in countries including France, Germany, Japan, the Netherlands and Norway. In other

countries, such as Australia, Ireland, New Zealand and the United Kingdom, more than 85% of 5-year-olds already attend primary school. While the starting age of compulsory education is, on average, 6 years in the OECD member countries, many countries use younger starting ages as a tool to ensure participation in education at an early age. For example, compulsory education starts at the age of 5 in the Netherlands, at the age of 4 in Luxembourg, and at the age of 3 in Mexico (OECD, 2014b).

Figure 2.1 Enrolment rates of 3-year-olds in early childhood education and care



Note: For Germany, the year of reference is 2006 instead of 2005. For Kazakhstan, the year of reference is 2013 instead of 2012 and regards enrolment rates of 3-6 year-olds instead of 3-year-olds.

Source: OECD (2014b), *Education at a Glance 2014: OECD Indicators*, OECD Publishing, Paris, Chart C2.1, <http://dx.doi.org/10.1787/888933118409>.

In Kazakhstan

Kazakhstan has seen a steady increase in the number of preschools and the number of children attending preschools. The preschool attendance rate doubled between 2006 and 2010, and overall ECEC participation rates increased from 41.6% of all ECEC-aged children in 2010 to 48.8% in 2013. The participation of 3 to 6 year-olds has increased particularly, and now almost three-quarters (73.4%) of children in this age bracket attend some form of formal ECEC (NCES, 2014). The implementation of Kazakhstan's 2011-2020 National Education Development Programme (SPED) aims to further increase participation rates with the goal of reaching universal participation (100%) by 2020. The Balapan Programme (part of SPED), which aims to expand the network of public and private kindergartens and preschools, is also expected to contribute to increased enrolment.

Towards a more holistic child development view

Across OECD countries

There is a general acceptance in OECD countries that some structuring and orientation of children’s learning in ECEC services is required, and most use a curriculum in early childhood services. This is generally true of countries with an integrated system, where care and early education are offered in the same setting. In countries with a split ECEC system (where childcare and preschool are separated), curricula are more often only in place for over 3-year-olds, the general preschool age. All OECD countries have at least one curriculum framework.

There is an increasing awareness that ECEC can contribute to improved academic outcomes in subjects such as mathematics and reading, but also in children’s early socio-emotional development (Huntsman, 2008; OECD, 2012; Sylva et al., 2004). For this reason, many OECD countries (the Nordic countries in particular) have adopted a holistic view of child development that emphasises children’s social and emotional skills as well as their learning capacities. ECEC is no longer seen merely as a place to prepare children for school; schools are now expected to be prepared for children. A more child-centred viewpoint is implemented in many OECD countries, even in those where ECEC includes an academic curriculum, such as the United Kingdom (Wall, Litjens and Taguma, 2015).

While all OECD countries have a curriculum framework (OECD, 2015a), this is not always developed at the national level. In some countries, staff and settings have a relatively wide scope to adapt the framework to the needs of the setting and its children. Staff have considerable flexibility in implementing a holistic child development view to best meet the needs of children. In Nordic countries, the framework is a legally binding document, but prescribes very little. It provides guidance for ECEC through additional staff guidance documents, but leaves a wide margin for implementation. In a few countries, such as France and Luxembourg, the national framework leaves staff very little leeway. In others, such as the Netherlands, curricula are usually developed at the setting level in alignment with the needs of both staff and children (Wall, Litjens and Taguma, 2015).

In Kazakhstan

The current frameworks for curriculum, learning and teaching in Kazakhstan show an increasing awareness of the importance of developing socio-emotional, health and physical skills at an early age, as well as teaching children early academic skills, such as mathematics and reading. Kazakhstan has revised some of its existing frameworks in the past few years and is diverting from the direct instruction approach, which is a teaching method that was commonly adopted in many non-OECD and post-Soviet countries some decades ago but that is now widely replaced by a more child-centred vision of early learning. In line with other OECD countries, Kazakhstan is shifting towards a more holistic view of child development. The flexibility for staff in implementation, and also innovation in pedagogical approaches, still leaves room for improvement, however, as will be discussed in Chapter 5.

Challenges

Despite the strengths of the Kazakh ECEC system, some significant challenges inevitably remain in a relatively fast-growing system. These concern access to ECEC,

equity in ECEC and quality of ECEC, and are set out in summary below. Ways of addressing these challenges are explored in Chapters 3 to 5.

- Kazakhstan’s ECEC system has benefited from extensive public investment and a strong policy focus on early learning and development. As a result, the great majority of children over the age of 3 receive some form of early education. However, for those under the age of 3, access to ECEC needs to be expanded and participation rates increased. For early development opportunities, ECEC provision and places for children between 1 and 3 years-old is insufficient. This is related to some inefficiency issues in Kazakhstan, notably the inefficient use of space and financial resources due to the current regulatory and budgeting scheme.
- The current system has geographical, socio-economic and special needs inequities regarding access to and participation in ECEC, which has resulted in unequal opportunities for early development for certain groups of children.
- The rapid expansion of ECEC provision and participation raises quality concerns. Although registration for ECEC settings was re-established in 2015, unfavourable minimum regulatory standards, in comparison to OECD countries, can have a negative impact on child development and staff-child interactions. Settings are reviewed against safety, hygiene and health regulations when opening and are re-evaluated after three years. However, after these first two initial evaluations, ECEC settings are normally monitored only once every five years, which can result in low-quality or underperforming settings operating for years without notice.
- The four different curricula in place, which have been approved by the government and are mandatory documents for settings to implement, impede children’s continuous holistic early child development and can hamper transitions. Children benefit from a more continuous early education experience in which pedagogy is aligned throughout the ECEC period and beyond. Additionally, staff have little flexibility in implementing or experimenting with innovative practices and adapting the framework to the setting’s and children’s needs.
- Due to the rapid increase in ECEC provision, the growing population in the ECEC age range, and the planned growth in ECEC provisions and places, an ECEC teacher shortage can be expected. This shortage is complicated by unfavourable working conditions for ECEC teachers and staff, including low status, low salaries and insufficient preparation for instruction and teaching.
- Research on ECEC has not yet been widely conducted in Kazakhstan, and information on how the ECEC system is performing is limited.
- Kazakhstan has insufficient data on important ECEC indicators needed to adequately assess its ECEC system, both on a national and international basis. More robust data collection on relevant indicators can provide information on, for example, the country’s level of quality, child development and the system’s effectiveness. The lack of data also limits Kazakhstan’s capacity to project future resource needs.

References

- Duncan, G.J. and K.A. Magnuson (2005), “Can family socioeconomic resources account for racial and ethnic test score gaps?”, *Future of Children*, Vol. 15/1, pp. 35-54.
- Field, S., M. Kuczera and B. Pont (2007), *No More Failures: Ten Steps to Equity in Education*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264032606-en>.
- Guerin, B. (2013), *Breaking the cycle of disadvantage: Early childhood interventions and progression to higher education in Europe*, European Commission, Brussels.
- Hanushek, E. and L. Woessmann (2007), “The Role of School Improvement in Economic Development”, *NBER Working Papers Series*, No.12832, National Bureau of Economic Research, Cambridge, www.nber.org/papers/w12832.
- Hochschild, J.L. (2003), “Social Class in Public Schools”, *Journal of Social Issues*, Vol. 59/4, pp. 821-840.
- Huntsman, L. (2008). *Determinants of Quality in Child Care: A Review of the Research Evidence*, http://www.community.nsw.gov.au/_data/assets/pdf_file/0020/321617/research_qualitychildcare.pdf
- iPad scholen (2015), website of “iPad scholen” [iPad schools] in the Netherlands, www.ipadscholen.com, (accessed 4 March 2015).
- JSC IAC (2014), *OECD Review of Policies and Practices for Monitoring Quality in Early Learning and Development: Country Background Report for Kazakhstan*, JSC Information Analytic Center of the Ministry of Education and Science of the Republic of Kazakhstan, Astana.
- Nazarbayev, N.A. (2012), *Strategy Kazakhstan-2050: New Political Course of the Established State*, http://akorda.kz/en/page/page_poslanie-prezidenta-respubliki-kazakhstan-lidera-natsii-nursultana-nazarbaeva-narodu-kazakhstana-
- NCES (2014), *National Report on the Status and Development of Education of the Republic of Kazakhstan*, National Centre for Education Statistics, Astana.
- NIS (2013), *Annual Report of Autonomous Educational Organisation “Nazarbayev Intellectual Schools”*, Nazarbayev Intellectual Schools, Astana.
- OECD (2015a), *Starting Strong IV: Monitoring Quality in Early Childhood Education and Care*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264233515-en>.
- OECD (2015b), *OECD Family Database*, OECD, Paris, www.oecd.org/social/family/database.htm.
- OECD (2014a), *PISA 2012 Results: What Students Know and Can Do (Volume I, Revised edition, February 2014): Student Performance in Mathematics, Reading and Science*, PISA, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264208780-en>.
- OECD (2014b), *Education at a Glance 2014: OECD Indicators*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/eag-2014-en>.
- OECD (2012), *Starting Strong III: A Quality Toolbox for Early Childhood Education and Care*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264123564-en>.

- OECD (2006), *Starting Strong II: Early Childhood Education and Care*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264035461-en>.
- Roelen, K. and F. Gassmann (2012), *Child well-being in Kazakhstan*, UNICEF, New York City.
- Sylva, K. et al. (2004), *The Effective Provision of Pre-School Education (EPPE) Project: Final Report*, DfES, London <http://eprints.ioe.ac.uk/5309/1/sylva2004EPPEfinal.pdf>.
- Terreni, L. (2011), “Interactive whiteboards, art and young children”, *Computers in New Zealand Schools: Learning, Teaching, Technology*, Vol. 23/1, pp. 78-100.
- Wall, S., I. Litjens and M. Taguma (2015), *Early Childhood Education and Care Pedagogy Review: England*, OECD, Paris, www.oecd.org/education/early-childhood-education-and-care-pedagogy-review-england.pdf.
- World Bank (2012), *World Bank – Kazakhstan Partnership Program Snapshot*, April 2012, World Bank, Washington DC.
- Zhang, M. (2003), “Links between school absenteeism and child poverty”, *Pastoral Care*, Vol. 10/1.

Chapter 3

Access to early childhood education and care in Kazakhstan

Chapter 3 addresses the topic of access to ECEC provisions in Kazakhstan. It explains the challenges Kazakhstan encounters in providing access to all children, provides strong research- or practice-based arguments for the challenge, and gives some policy options on how these challenges can be overcome. Examples of practices and policies from other countries have been included in the recommendations as to provide Kazakhstan with some ideas for strengthening the access to early learning facilities.

Key points

- Kazakhstan has made significant efforts to increase access to ECEC for children aged 3 years and older. Increased policy attention on ECEC and large investments in the early childhood sector have resulted in high participation rates of children between the age of 3 and the start of primary school (age 6 or 7). Despite this impressive result, Kazakhstan faces challenges in ensuring access for all children.
- ECEC is popular in Kazakhstan: interest in participation is high but the current provision does not meet the needs of parents. There are long waiting lists to enter ECEC, which indicate insufficient access and provision. This is a particular challenge in urban areas where less space is available, fewer suitable buildings can be used for ECEC provision, and where there are a comparatively large number of children in the ECEC age range.
- Participation of children below the age of 3, and provision of settings for young children, fall behind in Kazakhstan. With a strong policy focus on older children in the ECEC age range, the youngest children are less likely to benefit from a strong start in education.
- Current regulations regarding construction, management of innovations, sanitary and safety do not favour the efficient use of space and resources. Inconsistent and poorly co-ordinated regulations affect access as ECEC settings have either unused space or inefficiently used space. Moreover, the wide regulatory framework, with many restrictions and strict requirements, can hamper the construction of new settings.
- The current per capita funding scheme for ECEC provisions is not very efficient as it is based on previously existing budgets for construction, staff etc., and the services provided by settings are not clearly defined and accurately budgeted for.
- Expanding ECEC policies to increase coverage for children under the age of 3, while strengthening inter-ministerial collaboration on funding, could improve access to ECEC in Kazakhstan. Expanding access is a cost-effective investment that has benefits for the early development of young children, their later school and career success, as well as for Kazakh society at large. Interest in early development programmes can be enhanced by involving parents, launching media campaigns, and developing universal multisectoral programmes. Stronger collaboration between ministries and agencies responsible for ECEC can facilitate discussions and negotiations towards more child-centred regulations, and stimulate innovation in access and provision.

Challenge: Access for children under 3 and inefficiencies in expanding the early childhood education and care system

Kazakhstan has made great progress in expanding its number of ECEC settings. Access and provision (the number of early childhood provisions and the number of available places) have increased, and the population has responded enthusiastically. Participation rates for children aged 3 and older are high, with almost three-quarters (73.4%) participating in some form of ECEC. It is expected that this enrolment rate will further increase along the lines of the government's plan for expansion, as laid out in the State Programme of Education Development of the Republic of Kazakhstan (SPED) 2011-2020.

While the increase in access and participation is an impressive achievement, some challenges remain. First, general access to ECEC could be improved. The waiting lists for children to enrol in an ECEC programme are long. This demonstrates that ECEC is highly valued by parents, but that their needs have not been fully met. Second, since the policy focus has been on the expansion of services for children aged 3 to 6, access to ECEC for younger children has fallen behind. Third, the rapid expansion of services has not always led to the best use of resources, and some inefficiency in financing and constructing new settings has been noted.

The planned expansion will call for greater resources, with associated budget consequences. In any major expansion it is important to project the expected costs of building new infrastructure and hiring new staff. Additional recurrent costs at the municipal level should be properly calculated and budgeted for, as should staff costs and other additional costs for the government.

Lengthy waiting lists for enrolling children in early childhood education and care indicate that more access and provision are needed

Demand for ECEC services in Kazakhstan is high due to extensive policies focusing on enhancing awareness of the importance of ECEC, public investment in ECEC and increasing provision. The demand for enrolment in early learning is higher in urban than in rural areas as they have more young children and a larger share of the population falls into the ECEC age category. Participation rates for children over the age of 3 are lowest in the cities of Astana (62.6%) and Almaty (54.8%). These cities also have a comparatively low number of places, 171 ECEC settings in Astana and 293 in Almaty, despite there being a substantial share of the population below the age of 7. Most other regions (oblasts) have over 400 ECEC provisions with fewer children in the ECEC age range (Ministry of Education and Science, 2014).

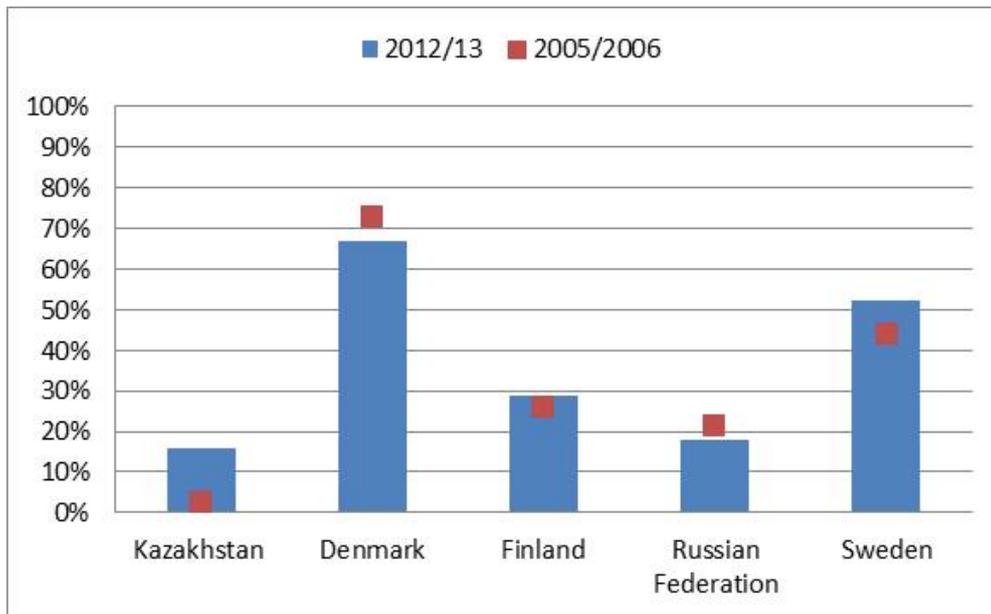
While the government has made major investments in expanding ECEC provision in the last 15 years, access is not yet universal. This is highlighted in the long waiting lists for ECEC enrolment: almost 500 000 children are on a waiting list for an ECEC programme in a public setting, while almost 700 000 children attend some form of ECEC. It is important to note that the actual number of children who need a space in a public ECEC setting may be lower, since children attending a private form of ECEC can be included on the waiting list for a public programme. This does not suggest that parents would not prefer their children to attend a public ECEC setting, but it may mean that it is less urgent to provide these children a space in public ECEC as their parents are able to afford private provision.

Long waiting lists indicate that there is insufficient access and provision. Kazakhstan recognises this issue and acknowledges that it is a particular challenge in urban areas, where less space is available and there are fewer suitable buildings to use for ECEC provision. The government is planning to increase the construction of new ECEC facilities. This should happen in a cost and space-efficient manner, which will be discussed in the recommendations below.

Early childhood education and care policy focus is largely on children over 3-years-old, at the expense of younger children

The government of Kazakhstan has strongly encouraged children aged 3 years and older to attend ECEC, and its policies have focused on their participation. However, the participation of children under the age of 3, and the provision of nursery kindergartens, has remained low. As a result, the youngest children are less likely to benefit from a strong start in early learning. This is seen in a low enrolment rate of 15.8% for children aged 1 to 3 (see Figure 3.1), which is far below the OECD average of 33% (OECD, 2015).

Figure 3.1. Enrolment rates of children under the age of 3, 2005/2006 and 2012/2013

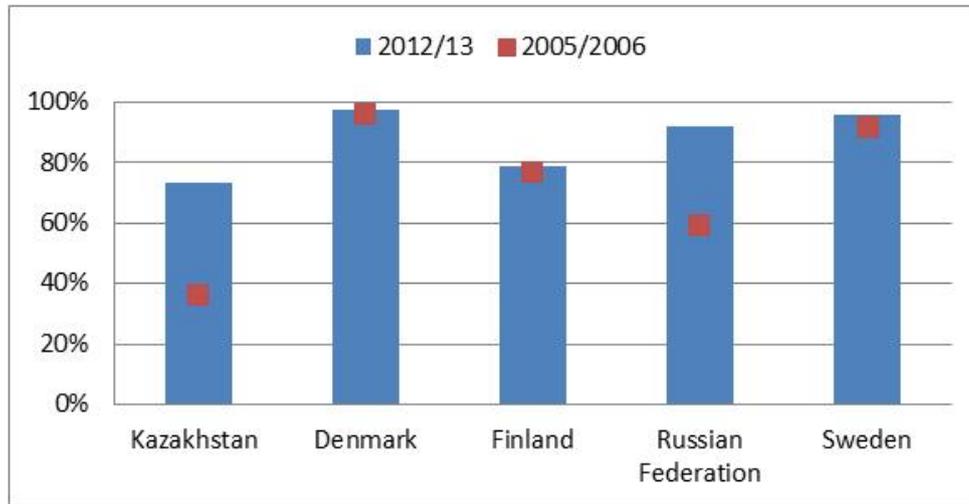


Sources: For Denmark, Sweden and Finland: Eurostat Statistics (2014), *Education statistics*, http://ec.europa.eu/eurostat/statistics-explained/index.php/Early_leavers_from_education_and_training#Further_Eurostat_information;
 For Russia: data provided by Rosstat - the Federal State Statistics Service, http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/en/figures/education/;
 For Kazakhstan: NCES (2014), *National report on the status and development of education of the Republic of Kazakhstan*, National Centre for Education Statistics, Astana; and World Bank Statistics (2014), *World Bank national accounts data*, <http://data.worldbank.org/>.

Low enrolment rates for under 3-year-olds contrasts with the policy focus of many OECD countries where the aim is to include the youngest children so that all children can benefit from ECEC at an early age and so that labour market participation is promoted for mothers. The explicit policies of many OECD countries target the early ages, as in

Denmark and Sweden, and these countries have far higher enrolment rates for children under the age of 3. While the enrolment of under 3-year-olds in Kazakhstan has increased significantly over time, it is still very low by comparison with OECD countries and with Kazakh children above the age of 3 (see Figure 3.2). To ensure that the needs of parents are met, and that all children have equal opportunities in life, access for under 3-year-olds needs to be expanded.

Figure 3.2. Enrolment rates of children from age 3 to primary school age, 2005/2006 and 2012/2013



Sources: For Denmark, Sweden and Finland: Eurostat Statistics (2014), *Education statistics*, http://ec.europa.eu/eurostat/statistics-explained/index.php/Early_leavers_from_education_and_training#Further_Eurostat_information. For Russia: data provided by Rosstat - the Federal State Statistics Service, http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/en/figures/education/. For Kazakhstan: NCES (2014), *National report on the status and development of education of the Republic of Kazakhstan*, National Centre for Education Statistics, Astana; and World Bank Statistics (2014), *World Bank national accounts data*, <http://data.worldbank.org/>.

Current regulations do not favour the efficient use of space and resources, thus affecting access

Kazakhstan's construction regulations, management of innovations, and the sanitary and safety regulatory framework present some efficiency issues. Kazakhstan is one of the former Soviet countries that is trying to balance expansion and quality of provision through strict control, a system inherited from Soviet times. The outdated regulations, though being renewed and reviewed, are based on prohibitive rather than performance-based principles. Sanitary, fire and construction regulations can be internally controversial or conflict with each other and do not take into account the educational needs of the children and ECEC staff. This is mainly a result of weak collaboration and co-ordination between the different ministries responsible for these regulations: the Ministry of Education and Science is in charge of the educational requirements; the Agency of the Republic of Kazakhstan on Construction, Housing and Utilities Infrastructure (which is with the Committee for Construction, Housing, Utilities Infrastructure and Land Management of Ministry of National Economics of the Republic of Kazakhstan in 2016) sets out the construction codes; the Committee for Emergency Situations of the Ministry of Internal Affairs of the Republic of Kazakhstan sets out fire

regulations; and the Ministry of Health and Social development of the Republic of Kazakhstan sets out sanitary standards. The review visits suggested that communication between the ministries could be improved to contribute to an efficient regulatory framework for the construction and expansion of ECEC provision.

A result of the complex, inconsistent and poorly co-ordinated regulations is that each ECEC setting generates space that is either unused (such as several corridors in a preschool) or not used very efficiently (such as rooms that are only used for certain activities, such as music classes, rather than for multiple purposes). The regulations drive up costs as settings must comply with so many requirements, and this ultimately limits the space for child development. While the construction of new ECEC provision is relatively cheap (given the relatively low cost of labour in Kazakhstan), as can be seen in Table 3.1, provision could be improved by making more efficient use of space, which could put less strain on financial resources and result in better quality environments.

Table 3.1 Average cost of constructing a kindergarten facility per USD 1 000

	United States	Reggio Emilia (Italy)	Denmark	Russian Federation	Kazakhstan
New construction - cost per place in USD (x 1 000)	10-30	20	13.8-29	25.8	12.2

Source: World Bank Statistics (2014), *World Bank national accounts data*, <http://data.worldbank.org/>.

The current budgeting scheme of per capita funding is not efficient

The government's effort to introduce a per capita funding (PCF) scheme for ECEC provision is a positive step. The purpose of a PCF system is to improve efficiency in the system and give more independence to ECEC settings in improving their own efficiency. However, Kazakhstan's per capita funding scheme is not yet fully implemented, and it is not widely appreciated or yet fully accepted by all professionals in the system. The review team learned that the capitation in the per capita funding scheme is based on previously existing budgets for construction, staff, etc., and divided by the number of children. Unfortunately, the amount of per capita funding is based on a calculation of past expenditures. Because of this, efficiency is not optimal and could be improved.

The acute problem of the per capita funding scheme in Kazakhstan is that the services provided by an ECEC setting are not clearly defined and accurately budgeted for. At present, an ECEC service is not appropriately compensated as its per capita amount is not based on a formula that accounts for the different services it provides and the budgetary categories it should receive funding for, such as education, care, utilities and subsistence. This obscures what different aspects of ECEC provision cost, who is responsible for them, and how much each setting should receive. For instance, the provision of education and care is the responsibility of the Ministry of Education, while utilities may be the responsibility of the regions (oblasts). Each should be compensated for the particular amount they are responsible for. This will increase transparency in public funding and financing because it will be known what each aspect of ECEC costs and where efficiencies can be gained. It can also contribute to better co-ordination between the

ministries involved, such as the Ministry of Economy and the Ministry of Education, since collaboration will be necessary to achieve a fairer and more efficient funding system.

Recommendation: Expand early childhood education and care policies to children under the age of 3, and strengthen inter-ministerial collaboration on funding

Actively promote ECEC for children under 3 and expand services to cover the youngest children to ensure more equitable access. Promote inter-ministerial collaboration to help implement cost-efficient ways of expanding the ECEC system for all children in Kazakhstan.

Supporting arguments: Expanding access is a cost-effective investment in early child development and can benefit Kazakhstan’s society, while efficiency gains through inter-ministerial collaboration can be used to enhance quality.

This recommendation is founded on two main arguments:

1. Research has proven that the early years are a cost-effective investment that can benefit children’s development, later school outcomes and society at large. Access should thus be expanded to benefit the youngest children.
2. Inter-ministerial collaboration can increase the efficiency of Kazakhstan’s ECEC system, which would result in better access. The gains in efficiency could be used to enhance quality in ECEC.

The early years are a cost-effective investment

It is strongly recommended that the youngest children be included in Kazakhstan’s ECEC policies. This would be a cost-effective investment (Heckman, 2006) with long-lasting benefits for children and society at large (OECD, 2006; 2012). The European Union has set the target for participation rates in ECEC of children under the age of 3 at 33%. The share of Kazakh children aged 1 to 3 attending an ECEC programme is 15%, less than half the target of the European Union. Best practices from other countries suggest several affordable ways to support young children and their families in early development and to increase interest in ECEC for this age group:

- Evaluation studies show that parenting education programmes can have a significant impact on child outcomes, especially when combined with sustainable quality ECEC programmes for children. Children who participated in programmes with a parenting education component, compared to children in non-treatment groups, demonstrated better abilities to learn and better scores in cognitive and socio-emotional tests. In addition, parents were found to implement more child-centred behaviours and less aggressive practices (Bekman, 1998; Liddell et al., 2011; Schweinhart, 2004; Walker, 2011). Examples of such programmes include the ACEV foundation in Turkey, Jamaica’s Home Visiting Programme, the Perry Preschool Program and Home Interaction Program for Parents and Youngsters (HIPPY) programmes in the United States. The US programmes have also been implemented in many OECD countries. These programmes are cost-efficient with significant rates of return (Heckman et al., 2010).

- Information campaigns that provide parents with information about ECEC, for instance through organising meetings in municipalities and making use of different media, including television, radio and the Internet. Such campaigns have been launched in Australia (Engaging Families) and Scotland (Play, Talk, Read) and Turkey (ACEV or the Mother-Child Education Programme).
 - The Engaging Families campaign in Australia is a social marketing strategy to encourage positive parenting, based on an understanding of the complexities of attitudes and behaviour and the barriers to parents creating an optimal environment for their young child. The project aims to engage parents and the community in understanding the importance of early childhood by increasing the awareness of key behaviours that parents and caregivers can adopt during the early years of a child’s life to enhance brain development and overall future life chances. Television, Internet, and social media were used to spread the message of the importance of early learning and development, and thus, participation in ECEC.
 - Scotland’s Play Talk Read programme was established to encourage and enable parents to have positive interactions with their children and to highlight the importance of early development and ECEC. Core elements of the programme are a mass media campaign, including some television advertisements that promote specific actions and the value of positive interactions on a child’s brain development; and a detailed website including practical activities to do with young children, a virtual community, and links to activities available in the local area (see www.playtalkread.org). It also involves the Play Talk Read bus that travels around Scotland to demonstrate activities parents and caregivers can do with their children.
 - In Turkey, the Mother-Child Education Programme provides mothers with children in the 3-11 age group with information and support about childrearing and development issues through participation in a course. A course typically lasts 12 or 13 weeks and has two separate modules: one for mothers with children in the 3-6 age group and one for mothers with children in the 7-11 age group. The courses are conducted by guidance counselors at schools, in collaboration with the Ministry of National Education’s General Directorate for Special Education, Guidance Counseling, and Consultation Services.
 - In the Netherlands, early child development health care providers are engaged in informing parents about ECEC. During early health consultations, families can be informed of ECEC settings and programmes for their children. This information is also provided in brochures that are available in several languages.
- Universal multi-sectorial programmes that include early health, early stimulation and targeting vulnerable groups of children (see Box 3.1).

Since early learning often involves other aspects besides education, and families can be effectively reached through other means besides ECEC settings, expanding access may require inter-ministerial co-ordination, for example, between the Ministry of Education and the Ministry of Health.

**Box 3.1. The Chilean experience:
Benefits of multisectoral policy design and implementation**

A multisectoral early child development (ECD) policy is a comprehensive policy framework that articulates what services are provided and which key stakeholders are involved. Chile introduced an intersectoral policy, Chile Crece Contigo (“Chile Grows With You”, CCC), in 2005. The document clarifies the responsibilities of service providers and policy makers, and the legal and regulatory framework in the country. It has a set of goals or objectives and an implementation plan that outlines how and when these goals are expected to be achieved. The preparation and design process requires stakeholders to contribute, which in turn promotes a more holistic, synergistic approach to ECD and identifies areas where efficiency or clarity can be improved.

Chile opted for a multidisciplinary approach to achieve high-quality learning opportunities for early stimulation and development. A core element of the system is that it provides differentiated support based on children’s and family’s needs, and guarantees children from the poorest 40% of households some key services, including free access to pre-primary school. In addition, providing access for orphans and vulnerable children, and children with special needs, became compulsory.

The creation and implementation of the CCC has been achieved using a multisectoral, synergistic approach at all levels of government. At the central level, the Presidential Council is responsible for the development, planning and budgeting of the programme. At each of the national, regional, provincial and local levels, institutional bodies are tasked with supervision, support and operative action, as well as development, planning and budgeting. One result of this policy is the Chile Crece Contigo Law (No. 20.379), which was created in 2009, and is mandatory for all authorities and ECEC settings.

Source: Website of Chile Crece Contigo, www.crececontigo.cl.

Inter-ministerial collaboration can improve efficiency and enhance the quality of early childhood education and care services

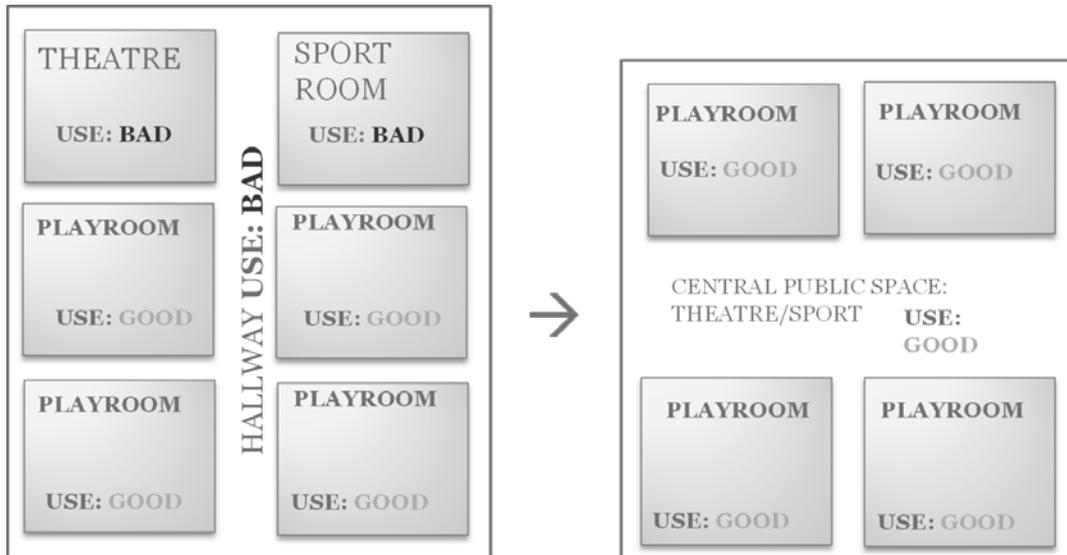
The Ministry of Education should be encouraged to become a champion in developing inter-agency and inter-ministerial co-operation on issues related to child development and well-being. Collaboration between departments working on ECEC can facilitate discussions and negotiations on changes regarding regulations, for example, and help make the shift from the current prohibitive regulations to more child-centred, performance-based regulations.

Visits to ECEC settings in Kazakhstan indicated that there is room for innovation and creating better places for children by increasing efficiency in the ECEC infrastructure, as discussed above. Stronger inter-ministerial collaboration can lead to improvements in efficiency, as illustrated in Figure 3.3. With certain adjustments in infrastructure requirements, more active space for children could be made available and savings on construction realised (see Figure 3.3).

Inter-ministerial co-ordination to boost innovation is typical in many countries, such as Russia, which has the Project of Innovative Development of Preschool Education in the Republic of Sakha (Yakutia), and in Belorussia (see Box 3.2). Kazakhstan could enhance inter-ministerial collaboration to achieve better partnerships with ministries and better outcomes on innovative construction, which would lead to improved provision and increased access. Again, this would require collaboration with the agencies and departments or ministries responsible for the different regulations for ECEC settings.

Additionally, Kazakhstan could join the OECD Centre for Effective Learning Environments (CELE) network of professionals, which focuses on modern architecture for kindergartens. This could introduce Kazakhstan to best international practices and contribute to innovation in ECEC construction and access capacity in the country.

Figure 3.3. An example of a modernised approach to education spaces



Source: World Bank (2013), *Guidelines for modern ECD infrastructure for architects in Yakutia*, World Bank, Washington DC.

In 2014, Kazakhstan initiated the construction of 73 kindergartens, creating nearly 20 000 places. Establishing a high number of ECEC settings with the structure that is used in Kazakhstan is likely to involve significant costs (JSC IAC, 2014). Increasing the efficiency of construction will reduce capital expenditure for both private and public providers, and the gains in efficiency could be used to invest in quality improvements in the ECEC system.

Box 3.2. An example of Belorussia's new concept for kindergartens

Belorussia has introduced a new concept of “sport and development kindergartens”. These include some elements Kazakhstan could take into account in future ECEC provision and construction:

- The settings have a child-centered design and the environment is regarded as a third teacher besides the actual teacher and the pedagogical materials. Open and flexible spaces are used to stimulate early child development.
- The settings will use available spaces for several purposes. One place may serve as a place for different activities.
- The kindergartens will be designed for children with different abilities and special needs.



This design (see image above) allows for more space per child, and more space for both individual and group activities. This type of kindergarten is smaller than the traditional ECEC settings in Belorussia, but is able to provide access to a similar number of children. In addition, it uses modern construction materials and is cheaper to construct than traditional kindergartens of the same size (Shmis, Kotnik, Ustinova, 2013).

Source: ECCE Conference (2013),
Materials of the annual international scientific conference on ECCE, Moscow,
<http://ecceconference.com/images/stories/sections/New-kindergarten-design-implementation.pdf>.

References

- Bekman, S. (1998), *A Fair Chance: An Evaluation of the Mother-Child Education Program*, <http://files.eric.ed.gov/fulltext/ED426765.pdf> .
- Chile Crece Contigo (2016), <http://www.crececontigo.cl> (accessed 11 August 2016).
- ECCE Conference (2013), Materials of the annual international scientific conference on E CCE, Moscow, <http://ecceconference.com/images/stories/sections/New-kindergarten-design-implementation.pdf>.
- Eurostat Statistics (2014), *Education Statistics*, http://ec.europa.eu/eurostat/statistics-explained/index.php/School_enrolment_and_early_leavers_from_education_and_training.
- Heckman, J. et al. (2010), *The Rate of Return to the High/Scope Perry Preschool Program*, <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3145373/>.
- Heckman, J. (2006), “Skill formation and the economics of investing in disadvantaged children”, *Science*, Vol. 312/5782, pp. 1900-1902.
- Huntsman, L. (2008). *Determinants of Quality in Child Care: A Review of the Research Evidence*, http://www.community.nsw.gov.au/_data/assets/pdf_file/0020/321617/research_qualitychildcare.pdf.
- JSC IAC (2014), *OECD Review of Policies and Practices for Monitoring Quality in Early Learning and Development: Country Background Report for Kazakhstan*, JSC Information Analytic Center of the Ministry of Education and Science of the Republic of Kazakhstan, Astana.
- Liddell, M., T. Barnett, F. Diallo Roost and J. McEachran (2011), *Investing in our Future; an Evaluation of the National Rollout of the Home Interaction Program for Parents and Youngsters (HIPPY)*, final report to the Department of Education, Employment and Workplace Relations, Brotherhood of St. Laurence, Melbourne.
- Ministry of Education and Science (2014), *Main indicators of ECEC system in 2013*, Ministry of Education and Science of the Republic of Kazakhstan, Astana.
- Ministry of Education and Science of the Russian Federation (2016), data available at: <http://mon.gov.ru> (accessed 11 August 2016).
- NCES (2014), *National Report on the Status and Development of Education of the Republic of Kazakhstan*, National Centre for Education Statistics, Astana.
- OECD (2015), *OECD Family Database*, OECD, Paris, www.oecd.org/social/family/database.htm.
- OECD (2012), *Starting Strong III: A Quality Toolbox for Early Childhood Education and Care*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264123564-en>.
- OECD (2006), *Starting Strong II: Early Childhood Education and Care*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264035461-en>.

- Schweinhart, L.J. (2004), *The High/Scope Perry Preschool Study through Age 40: Summary, Conclusions, and Frequently Asked Questions*, High/Scope Press, Ypsilanti, Michigan.
- Shmis, T., J. Kotnik and M. Ustinova (2013), “Creating new learning environments: Challenges for early childhood development architecture and pedagogy in Russia”, *Procedia - Social and Behavioral Sciences*, Vol. 146, pp. 40-46.
- Walker, S.P. (2011), “Promoting equity through early child development interventions for children from birth through three years of age”, in Alderman, H. (ed.), *No Small Matter. The impact of poverty, shocks and human capital investments in early childhood development*, World Bank, Washington DC.
- World Bank (2013), *Guidelines for Modern ECD Infrastructure for Architects in Yakutia*, World Bank, Washington DC.
- World Bank Statistics (2014), *World Bank National Accounts Data*, <http://data.worldbank.org/>.

Chapter 4

Equity in Kazakhstan's early childhood education and care system

This chapter explores the challenges Kazakhstan faces regarding the geographical, socio-economic, and special needs inequities of access to and participation in early childhood education and care (ECEC). Geographical inequity occurs due to large differences in the supply of ECEC, as well as places available. Socio-economic background affects participation rates in Kazakhstan, with children from richer households more likely to enrol in ECEC than children from poorer households. Large regional differences also occur regarding access to ECEC for children with special needs. A key recommendation for Kazakhstan is to develop a clear policy framework for dealing with equity issues in the provision and participation in ECEC across the country; equity policies benefit not only children and their later school outcomes, but also society at large.

Key points

- There has been a rapid improvement in access to ECEC in Kazakhstan, largely due to the range of government policies that have sought to improve ECEC provision and access throughout the country. However, some equity challenges exist linked to geography, socio-economic status (SES) and special needs.
- Large differences in provision between regions result in inequity in access to ECEC, with great disparities of enrolment rates between regions. For example, there is full enrolment in Kostanayskaya and Pavlodarskaya, whereas participation is below the national average in the cities of Astana and Almaty.
- In regions with a high share of young children in the ECEC age range (as in Astana and Almaty), enrolment rates are low compared to regions with a smaller share of young children. This suggests that it is still a challenge to provide sufficient services and ensure access for all in regions with a high share of young children.
- Access to ECEC is linked to a child's socio-economic background, despite government policies aimed at reducing the cost of ECEC for low-income families. About 52.4% of children in the fourth richest quintile households and 60.5% of children in the richest quintile attend ECEC programmes. This figure drops to 29.4% for the second poorest and 18.7% for the poorest quintile households. Low-income parents also devote more of their income to ECEC: almost half of their expenditure is on ECEC, while high-income families may spend less than 5%.
- ECEC staff in poorer regions are often less educated, which may impact the quality of ECEC provision.
- While all 16 Kazakh regions have specialised groups for children with special needs, not all have established specialised settings. This is likely to result in inequitable access to the support that children with special needs require, and thus, unequal opportunities for development.
- A clear policy framework for dealing with equity issues in the provision of services, as well as participation in ECEC services, can benefit children's early learning. Increasing access to ECEC through the expansion of services, and thus places, enhances equity. Participation in ECEC can reduce the effects of socio-economic status. The expansion of places for special needs can be strengthened by training more ECEC staff to work with special needs children. When more staff are available for, more places can be made available, and access will be improved.

The term “equity”, which refers to social inclusion, is abstract and political. The World Bank report “Inclusion Matters: The Foundation for Shared Prosperity” (2013) defines “equity” and provides a framework for policy development and action. The World Bank report defines social inclusion and equity in two ways:

1. The process of improving the terms for individuals and groups to take part in society.
2. The process of improving the ability, opportunity and dignity of people who are disadvantaged on the basis of their identity to take part in society.

Measuring social inclusion or equity is not an easy task. However, it is important to understand why outcomes differ for certain groups and to focus on the drivers and processes resulting in such inequities. Social inclusion has both intrinsic (moral) and instrumental (economic) value for development and shared prosperity. It is integral to human well-being, but it also matters because inequities between individuals and groups have substantial social, political and economic costs.

The World Bank report makes the case that change is not only possible, but also inevitable, and can be directed towards social inclusion and greater equity. It rejects the deterministic view that exclusion is immutable because it is embedded in norms and culture. Change will almost always be political, and dominant groups can push back when previously subordinated groups feel included and break the norms.

Challenges: Geographical, socio-economic and special needs inequities of access to early childhood education and care

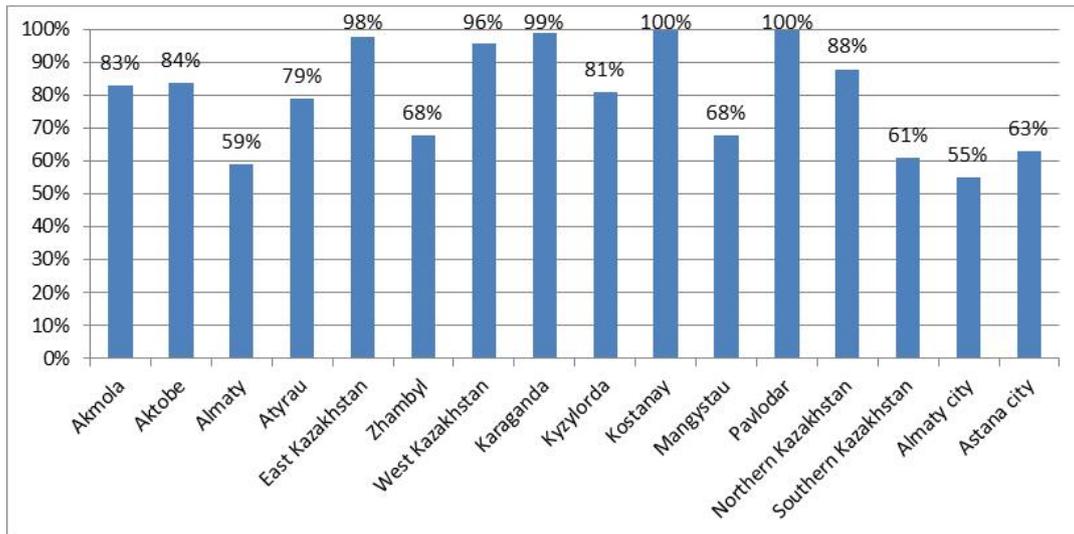
Kazakhstan has experienced rapid improvement in access to ECEC. This is largely due to the range of government policies that have sought to improve the provision of and access to ECEC throughout the country. However, some challenges regarding equity remain. These involve three different factors:

- geography
- socio-economic status (SES)
- special needs

Inequity of access to early childhood education and care services within regions results in regional differences in enrolment

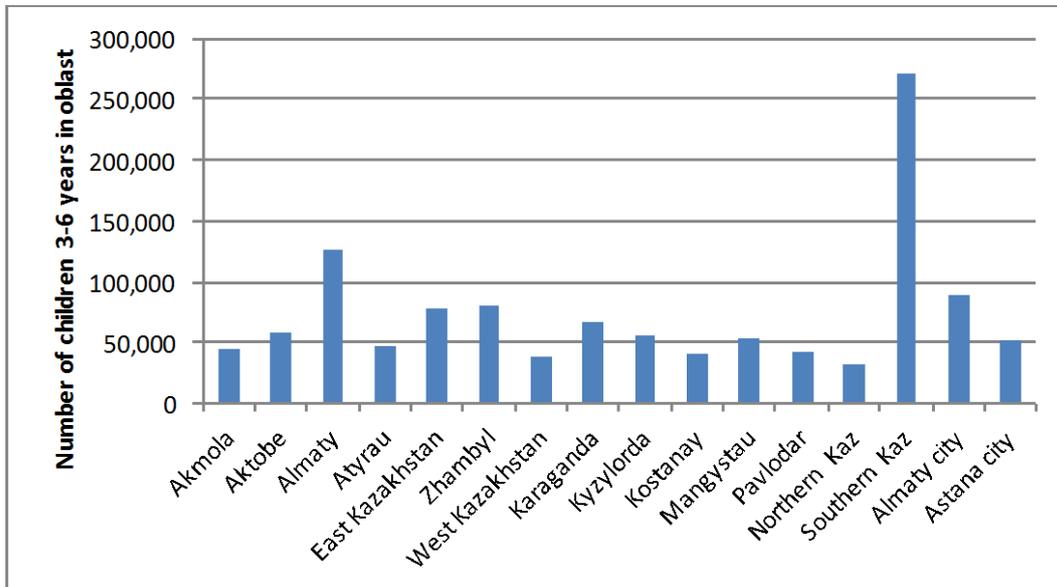
Almost half all children aged 1 to 6 in Kazakhstan receive some form of ECEC, but substantial regional variations in access and participation persist for both younger and older children in preschool. For children aged 1 to 3, the overall ECEC participation rate is 15.8%. However, the participation rate varies from 4.1% to 68.5% across regions. For children aged 3 to 6, the overall participation is 73.4% and again, participation differs from 55% to 100% between regions (see Figure 4.1). While the regions of Kostanay, Pavlodar, Karagandy and East and West Kazakhstan enjoy universal or near-universal enrolment, Almaty and Astana and Southern Kazakhstan have enrolment rates below 70%, which is below the national average (NCES, 2014). The overall average participation rate in ECEC for children between 1 and 6 years is 48.8%, with differences from 33.7% enrolment in the Almaty region to 90.6% in Kostanay (NCES, 2014).

Figure 4.1. Early childhood education and care enrolment rates of children aged 3 to 6 in Kazakhstan (2013)



Source: Ministry of Education and Science (2014), *Main indicators of ECEC system in 2013*, Ministry of Education and Science of the Republic of Kazakhstan, Astana.

Figure 4.2. Number of 3-6 year-olds in Kazakhstan, by region (2013)

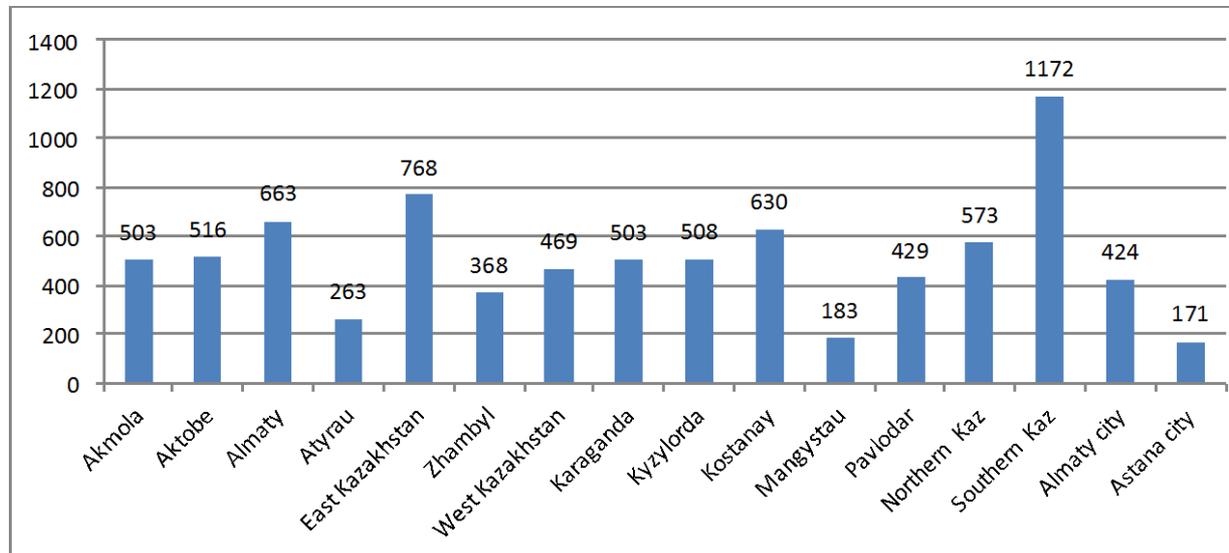


Source: Ministry of Education and Science (2014), *Main indicators of ECEC system in 2013*, Ministry of Education and Science of the Republic of Kazakhstan, Astana.

The number and share of young children in a region impact participation: where there are a higher number and share of children in the ECEC age range, enrolment rates are lower due to a lack of access and insufficient provision (see Figure 4.2). The number of children in the ECEC age range, and in the 3-6 year-old range in particular, is largest in regions with low participation rates, such as Southern Kazakhstan, Almaty region, and Almaty and Astana city. Kostanay and Pavlodar have full enrolment of 3-6 year-olds, but also have a low number of children in this age category and a lower share of the population in this age category (NCES, 2014).

Regions with a large number of young children face difficulties in providing ECEC to all children due to a lack of access and provision. Figure 4.3 illustrates that regions with high enrolment rates have a relatively large amount of ECEC provision compared to the number of children in the preschool age range. For example, East Kazakhstan has 77 223 children aged between 3 and 6 years. With 768 ECEC provisions (one ECEC provision for every 100 children), almost all children in the region attend some form of ECEC. On the contrary, while Southern Kazakhstan has a comparatively large number of ECEC settings (1 172), it also has a far larger population of young children (272 324). The number of settings in this region (one provision for every 232 children) is not sufficient to provide ECEC to all children. This has also implications for the youngest children (aged under 3 years) since regions with a lower provision and participation of 3-6 year-olds, tend to also have lower provision and enrolment of 1.3 year-olds (NCES, 2014). The lack of sufficient provision, and thus ECEC places, in certain regions creates inequity in access to ECEC, which partly explains the large differences in enrolment rates between regions.

Figure 4.3. Number of early childhood education and care settings in Kazakhstan, by region (2013)



Source: NCES (2014), National report on the status and development of education of the Republic of Kazakhstan, National Centre for Education Statistics, Astana.

Access to early childhood education and care is associated with socio-economic status, which suggests equity issues

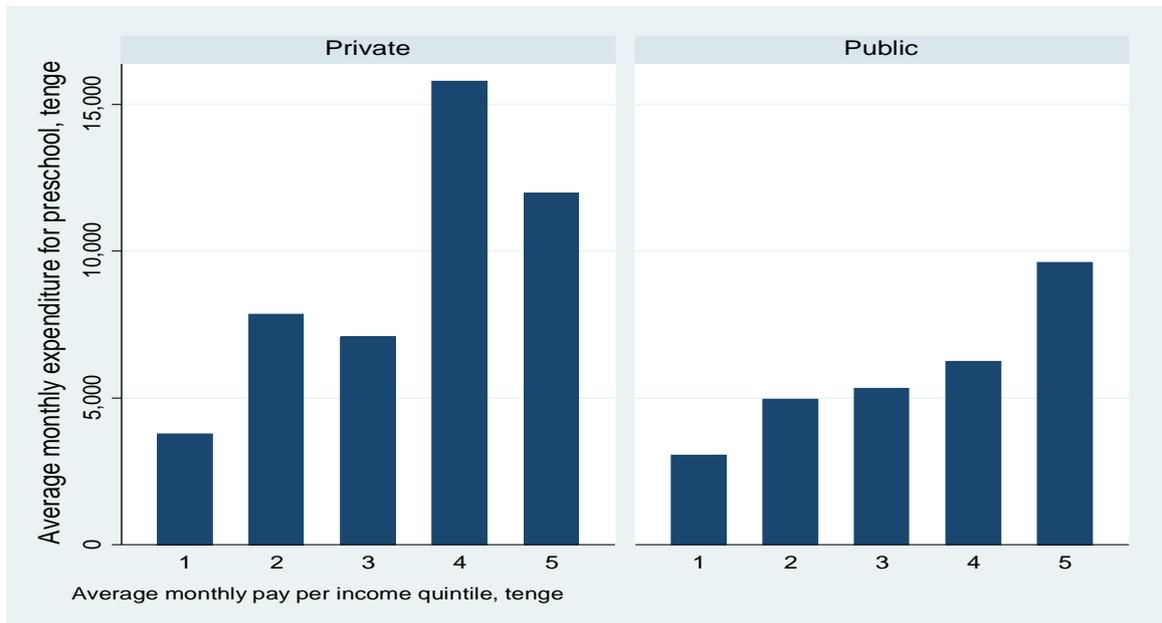
In every country for which evidence exists, parents' socio-economic status is associated with the level of educational attainment of their child. This is also true in Kazakhstan, where children with unemployed parents have lower educational attainment than their peers with employed parents (OECD, 2014a; 2014b).

Children suffer from poverty more than adults. Using data from 2009, Roelen and Gassman (2012) show that Kazakh children have a high risk of living in households with an average consumption below the minimum subsistence level. In Kazakhstan, 45% of all children below the age of 18 are living in poverty, compared to the average poverty rate of 33% for the whole population. The World Bank figure of 42% is even higher (World Bank, 2012). Poverty rates are slightly higher for young children aged 5 or below than for older children, and significantly higher than for adults. The situation is worst in the region of Mangystau, where almost 90% of children are considered poor. South Kazakhstan has the second-highest child poverty rate at 58%. Child poverty rates are high in these regions because of comparatively low wages. The lowest child poverty rates are observed in the two big cities, Almaty (18%) and Astana (22%), due to higher wages.

The socio-economic situation at least partly affects enrolment rates in the different regions (Roelen and Gassman, 2012). While the incidence of poverty in Kazakhstan has been reduced overall, largely as a result of a targeted social assistance programme and economic development, wide regional inequities persist and there are clear differences in participation in ECEC by socio-economic status. About 52.4% of children in the fourth richest quintile households and 60.5% of children in the richest quintile attend ECEC programmes. This figure drops to 29.4% for the second poorest and 18.7% for the poorest quintile households (UNICEF, 2012).

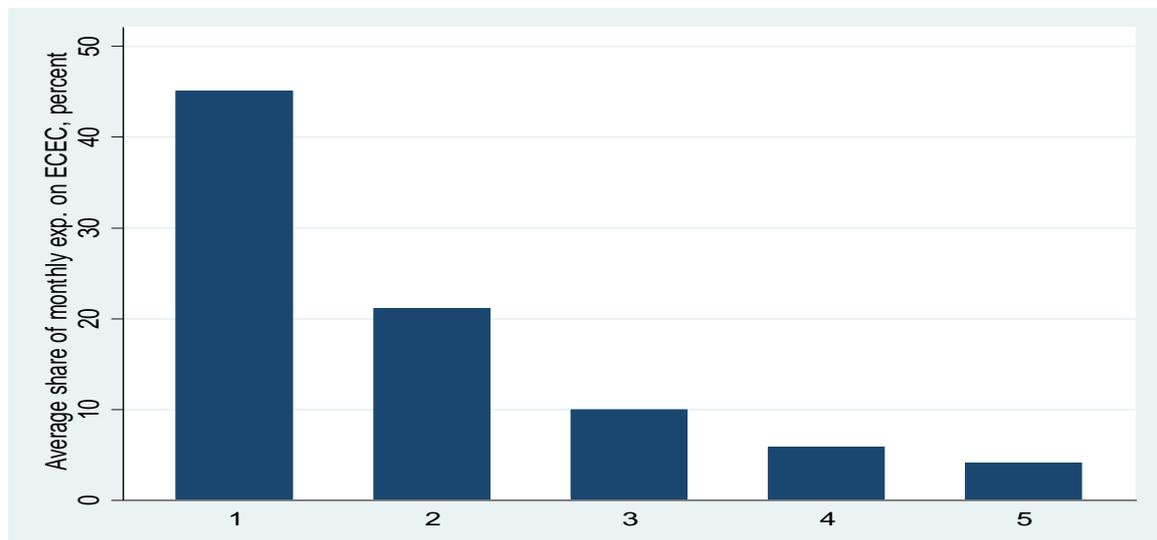
The share of income that richer and poorer households spend on ECEC also shows great inequity. The lowest average amount is paid by users of public services in the lowest income quintile (see Figure 4.4). This is because government subsidies are provided to the poorest households to cover part of the costs of ECEC, which significantly lowers costs for parents. However, the analysis of the share of ECEC expenditure versus all expenditure per quintile shows wide disparity: while the highest income quintile spends only 4.1% of expenditure on ECEC, the lowest quintile spends 45% (see Figure 4.5). This may be another factor for the lower participation rates of poor children as their parents either choose not or cannot afford to spend a large share of their income on ECEC.

Figure 4.4. Average monthly expenditure for public and private early childhood education and care in Kazakhstan, by income quintile (2010)



Source: The Agency of Statistics of the Republic of Kazakhstan (2010), *Kazakhstan Household Budget Survey of 2010*, <http://catalog.ihsn.org/index.php/catalog/4317> (based on author's own calculations).

Figure 4.5. Average share of household expenditure on early childhood education and care, by income quintile (2010)



Source: The Agency of Statistics of the Republic of Kazakhstan (2010), *Kazakhstan Household Budget Survey of 2010*, <http://catalog.ihsn.org/index.php/catalog/4317> (based on author's own calculations).

The level of quality regarding staff qualifications differs largely between regions

Research in several countries, such as the United States, England and Northern Ireland, has demonstrated that the quality of ECEC is related to long-term effects on children's outcomes; and that ECEC quality is affected by factors such as the qualifications and training of staff (Melhuish and Barnes, 2012; Melhuish et al., 2012; Sylva et al., 2010).

Data from the Ministry of Education and Science of the Republic of Kazakhstan reveal large regional differences in the qualification levels of staff working in ECEC, which are likely to affect the quality of ECEC. In kindergartens, 59.3% of teachers have qualifications in higher education, with the percentage ranging from 39% to 78.7% depending on the region. In preschool education, 20% of teachers have specialised qualifications, with regional differences of 7.4% to 38.2% (see Table 4.1). In mini-centres, 53.9% of teachers have higher education qualifications, with the range across regions between 35.1% and 79.9%. Finally, in preschool teaching, 17.4% of teachers have specialised qualifications, ranging from 2% to 49.2% depending on the region (Ministry of Education and Science, 2014).

Table 4.1. Educational level of early childhood education and care teachers (excluding teachers in mini-centres), by region (2013)

Region	Share of teachers (%) with higher education	Share of teachers (%) with specialised preschool education
Akmola	50.9	9.1
Aktobe	53.3	31.2
Almaty	58.0	38.2
Atyrau	53.6	37.6
East Kazakhstan	53.2	19.8
Zhambyl	62.8	13.9
West Kazakhstan	42.5	26.0
Karaganda	49.5	33.4
Kyzylorda	56.9	17.3
Kostanay	53.6	19.2
Mangystau	45.3	27.9
Pavlodar	57.0	14.6
North Kazakhstan	39.0	15.8
South Kazakhstan	78.7	9.8
Almaty city	70.6	30.6
Astana city	68.6	7.4

Source: Ministry of Education and Science (2014), *Main indicators of ECEC system in 2013*, Ministry of Education and Science of the Republic of Kazakhstan, Astana.

Inequity in early childhood education and care affects children with special needs and disabilities the most

A recent report from the World Health Organization (WHO) and World Bank (2011) finds that children with disabilities are less likely to start school than children without disabilities and have lower rates of staying in school (WHO and World Bank, 2011). The Kazakhstan Ministry of Education and Science and the National Centre for Education Statistics of Kazakhstan (NCES) has 2013 data on preschool provision for children with special needs that show some regional differences in approach in Kazakhstan. All regions have separate groups for children with special needs in their

preschool settings (see Table 4.2), but only 10 out of the 16 regions are reported to have one or more specialised preschool centre for children with special needs (ranging from 1 to 10 settings in a region). These specialised centres have varying numbers of groups for children with special needs (between 1 and 7 groups). Six regions do not have any specialised preschool centre for children with special needs. Such children are likely to miss out on important development opportunities (NCES, 2014).

While all regions provide some level of provision for children with special needs, the level of provision of specialised groups for children with special needs, either within specialised or general preschool centres, varies greatly. Provision of specialised groups varies between regions, from one specialised group for every 6 children with special needs to one specialised group for every 39 children with special needs (see Table 4.2). This indicates wide gaps in provision. It is possible that regions are fully integrating children with special needs into preschool groups for the general population, which may compensate, to some extent, for the level of inequity between regions. However, it would also mean that these children may not be receiving the support they need or the development opportunities that specialised groups or settings offer.

The OECD review visits found that where provision of ECEC for special needs exists it appears to be of high quality. Team members observed excellent examples in centres, but this may have been the highest provision available and thus not likely to be typical. However, it does demonstrate that Kazakhstan is capable of high-quality provision for special needs.

Table 4.2. Number of children (below primary school age) with special needs and availability of specialised early childhood education and care groups (2013)

Region	Number of children with special needs	Number of groups available for these children
Akmola	775	39
Aktobe	436	24
Almaty	111	6
Atyrau	0	0
West Kazakhstan	174	16
Zhambyl	1202	31
Karaganda	2258	96
Kyzylorda	373	10
Kostanay	136	25
Mangystau	24	2
South Kazakhstan	94	4
Pavlodar	384	27
North Kazakhstan	153	14
East Kazakhstan	112	6
Almaty city	2	2
Astana city	353	22
Total in Kazakhstan	6587	324

Source: Ministry of Education and Science (2014), *Main indicators of ECEC system in 2013*, Ministry of Education and Science of the Republic of Kazakhstan, Astana.

Recommendation: Increase opportunities for all children to access quality early childhood education and care

Develop a clear policy framework that deals with equity issues in the provision of and participation in ECEC services for all children equitably across Kazakhstan.

Supporting arguments: Equity policies benefit children's development, school outcome and society

Two arguments favour improving equity in the provision of ECEC:

1. There is a moral imperative to reduce inequality and make people's lives more fulfilled.
2. There is a social and economic imperative to reduce inequity, as societies where the population is more disadvantaged and has poorer skills are less able to adapt to a world that demands higher levels of productivity to maintain living standards. These problems are exacerbated over time, as increasingly technologically advanced societies need more adaptable and technically skilled populations.

In reality, the aims of equality and future productivity merge, and policies that recognise how learning capabilities are primarily formed during the first years of childhood, and that act to improve life chances, serve both moral and economic imperatives.

Participation in early childhood education and care can reduce the effect of socio-economic status

Underperformance related to social disadvantage remains too high worldwide, and the problem is greatest in countries with the greatest inequality (Machin, 2006; OECD, 2013; Perry and Francis, 2010). Efforts to improve schooling need to be preceded by high-quality, accessible and affordable ECEC.

Literacy, numeracy, mathematics and science are foundations for further learning and provide a gateway to employment and social inclusion, but non-cognitive skills are also important (Heckman, 2006). Wide disparities exist in the development of individuals associated with social origins. Children growing up in poor or low-income families are more likely to receive poorer health care, to attain lower educational outcomes and to reach lower levels of achievement in the labour market (Brooks-Gunn and Duncan 1997; Duncan and Brooks-Gunn, 1997). Children living in poverty are also more likely to become poor as adults (Corak, 2006; Esping-Andersen and Sarasa, 2002). The effects are more pronounced for children who experience persistent poverty and live in poor and vulnerable conditions for many consecutive years (Duncan and Brooks-Gunn, 1997). In addition, the stress of living in poverty can shape a child's neurobiology, leading directly to poorer outcomes in adulthood (Shonkoff and Phillips, 2000).

Participation in an ECEC programme can greatly impact a child's development. In 28 EU countries, it was found that students who attended ECEC outperformed those who did not by 35 points in the 2012 Programme for International Student Assessment (PISA), the equivalent of almost one full year of formal schooling (European Commission, 2012). Evidence from the Progress in International Reading and Literacy 2011 Study (PIRLS) (Mullis, Martin, Foy and Drucker, 2011) indicates that children who have spent longer periods in ECEC are better prepared to enter and succeed in primary education and show better literacy skills. In Kazakhstan, children who had attended an ECEC programme showed superior scores on the Early Childhood Development Index (ECDI) and the PISA assessment (UNICEF, 2012). On the 2012 PISA test, Kazakh students who attended more than one year of pre-primary education scored 35 points higher on the reading assessment than those who did not; 24 points more on the mathematics test; and 28 points more on the science assessment (OECD, 2014a). Although differences in score points decrease after accounting for students' socio-economic

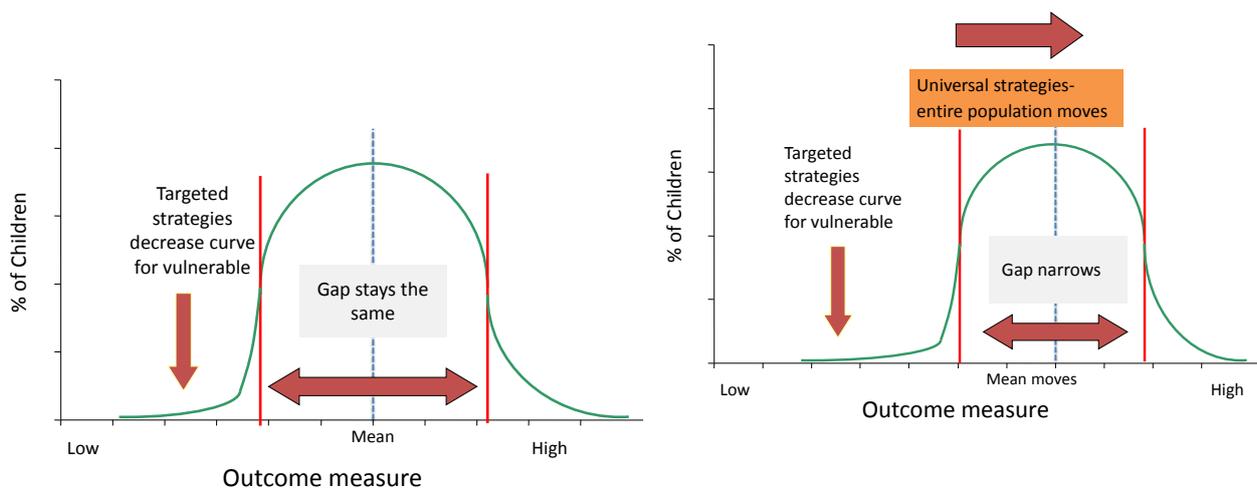
background, the benefits associated with pre-primary education remain statistically significant. It is thus important that all children can benefit from high-quality ECEC as it can positively impact their development and their chances in life.

Expansion of quality early childhood education and care services can nurture equity

Several studies (including Heckman, 2006) show that one of the most efficient investments for a nation is investment in early childhood development, especially for disadvantaged groups. When targeting services for disadvantaged children, policy makers should consider the concept of “progressive universalism”, as proposed at the recent World Bank Europe and Central Asia educational conference, which argues that the provision of services should be universal, with increased intensity of provision for disadvantaged children (see Figure 4.6). The argument in favour of universal ECEC policies is that it benefits an entire population (as the right-hand image in Figure 4.6. shows) since everyone has similar opportunities and the development gap can be narrowed, rather than reaching a small fraction of the population and failing to reduce the development gap.

The United Kingdom is an example of a country that has acted on such imperatives. In 2004, the government made free ECEC available to all children in England from their 3rd birthday, to ensure that all families could afford ECEC for their children. The government expanded the offer to children aged 2 and up for the 40% most disadvantaged children in 2013, recognising the particular importance of ECEC for disadvantaged children. The government also provides extra financial support to settings used by a large number of children from disadvantaged families to ensure that they can meet children’s needs (www.gov.uk/free-early-education). The Kazakh government could design a similar universal model and offer a modest extra payment for settings in communities with high concentrations of low-income families, for instance, to stimulate provision and access to ECEC in these regions and ensure that all children can benefit from an ECEC programme that meets their needs.

Figure 4.6. From targeted to progressively universal policies



Source: World Bank ECA Education Conference (2014), *From synapse to schools: measuring and improving population outcomes for young children*, presentation at ECA education conference, April 2014.

Broadening the skills of staff can increase access and participation for special needs children

The existing system of services for children with special needs does not fully satisfy its purpose, since many children with special needs in Kazakhstan have no access to ECEC services. This is partly because local authorities and the national government do not precisely know how many special needs children a region or the country has, and therefore do not reach out to these children. Identifying these children can help put policy into practice and ensure that they are supported from an early age.

Early identification can improve a child's chance of success in school as the child will receive the support needed for development from an early age (Sawhill and Karpilow, 2014). Training staff in special needs specifically can increase the availability of spaces and resources for special needs children. In most European countries, specific training to prepare ECEC staff for working with children with special needs or disabilities is integrated into initial training (i.e. pre-service education). This training may be compulsory, optional or left to the decision of individual training/education institutions (institutional autonomy).

In many countries, such as Austria, Belgium, Denmark, France, Slovenia, Spain and Turkey, training to work with special needs children is compulsory for all ECEC staff (OECD Network on ECEC, 2011). By ensuring that all, or at least more, ECEC staff teach and work with children with special needs, additional groups for special needs, or the integration of children with special needs into regular groups, can be strengthened. Such measures are likely to increase opportunities for participation, and thus encourage the early childhood development of children with special needs.

References

- Brooks-Gunn, J. and G. Duncan (1997), “The effects of poverty on children”, *The Future of Children*, Vol.7/5, pp. 55-71.
- Corak, M. (2006), *Do Poor Children become Poor Adults? Lessons from a Cross Country Comparison of Generational Earnings Mobility*, IZA Discussion Paper No. 1993, Institute for the Study of Labor (IZA), Bonn.
- Duncan, G. and J. Brooks-Gunn (1997), *Consequences of Growing Up Poor*, Russell Sage Foundation, New York.
- Esping-Andersen, G. and S. Sarasa (2002), “The generational conflict reconsidered”, *Journal of European Social Policy*, Vol.12/1, pp. 5-21.
- European Commission (2012), *Rethinking Education: Investing in Skills for Better Socio-Economic Outcomes*, <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52012DC0669>.
- Heckman, J.J. (2006), “Skill formation and the economics of investing in disadvantaged children”, *Science*, Vol. 312, pp. 1900–1902.
- Machin, S. (2006), “Social disadvantage and education experiences”, *OECD Social, Employment and Migration Working Papers*, No. 32, OECD Publishing, Paris, <http://dx.doi.org/10.1787/715165322333>.
- Melhuish, E. and J. Barnes (2012), “Preschool programs for the general population”, in: Tremblay, R.E, M. Boivin and R. Peters (eds.) (2012), *Encyclopaedia on Early Childhood Development*, Centre of Excellence for Early Childhood Development and Strategic Knowledge Cluster on Early Child Development, Montreal, Quebec, www.child-encyclopedia.com/Pages/PDF/Melhuish-BarnesANGxp1.pdf.
- Melhuish, E. et al. (2012), “Preschool affects longer term literacy and numeracy: results from a general population longitudinal study in Northern Ireland”, *School Effectiveness and School Improvement: An International Journal of Research, Policy and Practice*, Vol. 24, pp. 234-250.
- Ministry of Education and Science (2014), *Main Indicators of ECEC System in 2013*, Ministry of Education and Science of the Republic of Kazakhstan, Astana.
- Mullis, I.V.S., M.O. Martin, P. Foy and K.T. Drucker (2011), *Progress in International Reading and Literacy Study (PIRLS) 2011*, International Association for the Evaluation of Educational Achievement (IEA), Amsterdam.
- NCES (2014), *National Report on the Status and Development of Education of the Republic of Kazakhstan*, National Centre for Education Statistics, Astana.
- OECD (2014a), *PISA 2012 Results: What Students Know and Can Do (Volume I, Revised edition, February 2014): Student Performance in Mathematics, Reading and Science*, PISA, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264208780-en>.
- OECD (2014b), “Do parents’ occupations have an impact on student performance?”, *PISA in Focus*, No. 36, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5jz8mr7kp026-en>.

- OECD (2013), *Crisis squeezes incomes and puts pressure on inequality and poverty*, OECD, Paris, <http://www.oecd.org/els/soc/OECD2013-Inequality-and-Poverty-8p.pdf>.
- OECD Network on Early Childhood Education and Care (ECEC) (2011), *Survey for the Quality Toolbox and ECEC Portal*, OECD, Paris, <http://www.oecd.org/edu/school/star-tingstrongiiiaqualitytoolboxforecec.htm>.
- Perry, E. and B. Francis (2010), *The social class gap for educational achievement: a review of the literature*, RSA, London.
- Roelen, K. and F. Gassmann (2012), *Child well-being in Kazakhstan*, UNICEF, New York City.
- Sawhill, I.V. and Q. Karpilow (2014), *How Much Could We Improve Children's Life Chances by Intervening Early and Often?*, CCF Brief No. 54, Center on Children and Families, Brookings Institute, Washington DC.
- Shonkoff, J. and D. Phillips (eds.) (2000), *From Neurons to Neighborhoods: The Science of Early Childhood Development*, National Academy Press, Washington, DC.
- Sylva, K. et al. (eds.) (2010), *Early Childhood Matters: Evidence from the Effective Pre-school and Primary Education Project*, Routledge, London.
- The Agency of Statistics of the Republic of Kazakhstan (2010), *Kazakhstan Household Budget Survey of 2010*, <http://catalog.ihsn.org/index.php/catalog/4317>.
- UNICEF (2012), *Multiple Indicator Cluster Survey (MICS) in the Republic of Kazakhstan, 2010-2011. Final Report*, the Agency of Statistics of the Republic of Kazakhstan and the Republican State Enterprise Information Computing Center, Astana, www.childinfo.org/files/MICS3_Kazakhstan_FinalReport_2006_Eng.pdf.
- WHO and World Bank (2011), *World Report on Disability 2011*, World Bank, Washington DC.
- World Bank (2012), *World Bank – Kazakhstan Partnership Program Snapshot*, April 2012, World Bank, Washington DC.
- World Bank ECA Education Conference (2014), *From synapse to schools: measuring and improving population outcomes for young children*, presentation at ECA education conference, April 2014,.

Chapter 5

Providing quality early childhood education and care in Kazakhstan

This chapter highlights Kazakhstan's challenges in providing high-quality early childhood education and care (ECEC). The five quality issues identified include: quality assurance due to rapid expansion of the ECEC system; unfavourable minimum standards and the absence of a licensing system in the past, the lack of continuity in child development through the curriculum; expected staff shortages; limited research into ECEC and the lack of indicators for assessing the ECEC system and making global comparisons. For each of these challenges, policy recommendations with supporting arguments are presented.

Key points

- Kazakhstan has greatly expanded its ECEC provision and participation rates in a relatively short period. This was facilitated by the absence of a licensing or accreditation system, which made it easier to open new ECEC settings. In 2015, the government re-established a registration system for ECEC settings. Registrations are followed by an evaluation on whether the provision meets the national health, safety and hygiene standards after three years. After this evaluation, settings are inspected every five years. While provision has expanded access to early learning for a higher number of children, there are unfavourable minimum regulatory standards in place compared to OECD countries.
- Kazakhstan has a regulatory framework that sets out minimum quality standards for monitored settings. This includes standards for some important quality components, such as staff qualifications, safety and building requirements, but lacks a minimum standard for staff-child ratios, which are currently not favourable for early learning. Pedagogical quality and child development could be enhanced if ratios are included in the regulatory framework and set at an internationally competitive level.
- Kazakhstan has four nationally approved curriculum frameworks in place for different age groups that prescribe teaching content and pedagogical approaches, as well as materials. There is little flexibility for staff in implementing or experimenting with innovative practices and adapting the framework to the needs of the setting and the children. The different curriculum frameworks impede children's continuous development and can hamper transitions.
- An integrated, more flexible curriculum framework for the whole ECEC age range would conform to the international trend towards a single curriculum that combines care and early learning. Such a framework should guide ECEC staff, but also leave them some room for local adaptation. It could be based on the existing frameworks and should be developed in collaboration with relevant stakeholders to ensure support for implementation.
- Due to the rapid increase in ECEC provision and the growing population, especially of young children, an ECEC teacher shortage is likely in the near future. This will be exacerbated by unfavourable working conditions for ECEC teachers, including their low status, low salaries and insufficient preparation for the job. Possible solutions could include attracting more teachers by upskilling and retraining existing ECEC professionals who are not teachers. Prospective teachers could also be recruited through in-service educational programmes and by preparing them better for the teaching profession. Working conditions that make the teaching profession more attractive could be instituted, such as pay that is on a par with primary teachers and financial incentives.
- Research on ECEC is not yet widely conducted in Kazakhstan, and little information is available on how the ECEC system is performing. Earmarked funding, combined with a bidding approach; and collaboration with other countries, or at least the study of best practices, could help promote research interest in the ECEC field. It could also ensure that research helps guide policy and guarantee best value and competitiveness.

- Kazakhstan has a solid basis of data collection on a limited set of indicators. Compared to OECD countries, however, it does not track important ECEC indicators that can provide information on, for example, the level of quality, child development and the system's effectiveness. This lack of information will present challenges regarding Kazakhstan's capacity to project its resource needs in the future. Establishing an inter-ministerial database and data collection on a wider range of indicators, as collected by OECD countries, will benefit policy analysis and design. This could help to enhance policy making and provide the basis for international comparisons.

Challenge 1 – Quality assurance and minimum standards: Quality assurance due to rapid expansion of early childhood education and care system and unfavourable minimum standards

Kazakhstan’s concerted effort to promote participation in ECEC in recent years has resulted in a dramatic increase in the number of ECEC settings. Participation rates in kindergartens for children between the ages of 3 and 6 are now high. Providing affordable care and early education is likely to have benefited the female labour force and the ability of families to balance work and private life. It is also expected to have a positive impact on children’s development, as research indicates that ECEC can be beneficial to children’s early learning outcomes. However, the increase in the number of settings has also affected the quality of ECEC provision as comparatively low minimum standards have made it difficult for ECEC staff to provide high-quality care and education.

Unfavourable minimum standards influence staff’s ability to provide high-quality care and education

As indicated in Chapter 3, the number of ECEC settings in Kazakhstan has risen rapidly over the last decade. In 2005, Kazakhstan had 1 179 ECEC settings, this increased to 6 446 in 2010 (an increase of over 400%), and to 8 143 in 2013 (a further increase of 26%). In line with this expansion, participation rates have increased from 41.6% of all children of ECEC age in 2010, to 48.8% in 2013. In particular, the participation of 3 to 6 year-olds has increased, with now almost three-quarters (73.4%) of all children in this age category attending some form of formal ECEC (NCES, 2014). To ensure a good level of quality in all ECEC provisions, strong minimum regulatory standards are needed to help settings provide the optimal environment to enhance children’s development.

Minimum standards are the structural inputs that can enable ECEC settings to achieve satisfactory quality. Structural requirements may define the quality of the physical environment for young children, such as buildings, space, outdoors, and pedagogical materials, but also the training levels for staff, staff-child ratios, and work conditions (OECD, 2006). A certain minimum level of ECEC provision can be ensured by a clear formulation of standards and the enforcement of legislation or regulations (OECD, 2006).

Kazakhstan’s legislative framework stipulates what type of staff should be present in each ECEC centre, the design and safety of buildings, and the maximum number permissible in a group. Group size differs according to the age of the children, in nurseries, there is a maximum of 10 children up to the age of 2 years old, or no more than 20 children aged between 2 and 3. In preschool, the number of children is limited to a maximum of 25 for those aged between 3 and 7 (for groups of 3 to 4 year-olds, 4 to 5 year-olds and 5 to 6 year-olds). When age groups in a class are mixed, group sizes must be smaller: no more than 15 children are permitted in a class if children aged between 1 and 3 are mixed; and no more than 20 if the children are aged between 3 and 7. Depending on the number of professional staff that must be present in such a group, the staff-child ratio can be calculated. In Kazakh ECEC groups, at least one qualified teacher or practitioner must be present with the children at all times (JSC IAC, 2014).

Small groups are considered to be a predictor of more individualised attention and frequent interactions (NIEER, 2006; UNESCO, 2004). Younger and disadvantaged children tend to benefit most from smaller group sizes as they receive increased attention from staff and have greater opportunities for interactive dialogue. The maximum group size in Kazakhstan is somewhat high for children aged 2 to 3. In OECD countries, a

group of 2-year-olds usually averages 16 children. In Kazakhstan, 4 more children are allowed for this age group. For older children, the group size is just below the OECD average of 26 children.

Even more important than group size, research has found that staff-child ratios play a key role in ensuring quality for better child development (OECD, 2012). Favourable staff-child ratios increase the possibility of frequent and meaningful interactions (Pianta et al., 2009; UNESCO, 2004). A smaller number of children per ECEC staff member in a room has been associated with the possibility for improved developmental outcomes. Research has found that children perform better in cognitive (mathematics and science) and linguistic (language, reading and word recognition) assessments when ratios are lower (Huntsman, 2008; Sylva et al., 2004, Love et al., 2003). Good staff-child ratios can also ensure safer environments for children, since staff have fewer children to supervise. A lower staff-child ratio also improves the working conditions for caregivers and teachers, allowing more attention to be spent on different areas of development (NICHD, 1996; Pianta et al., 2009; Rao et al., 2003).

There are no regulations regarding staff-child ratios specifically in Kazakhstan, although there are requirements in place regarding the number of teachers and teacher assistants per group. Based on these requirements, the teacher-child ratio can be calculated. Groups in Kazakhstan are relatively large, with 20 children in a nursery group for 2-year-olds and a maximum of 25 children aged 3 years and older in preschool groups. There should be two teachers available for a nursery group or preschool group if the setting operates for nine hours per day for five days per week, which is comparable to most ECEC settings in OECD countries (for a complete overview of teacher requirements per group in Kazakhstan see Table 5.1). However, teachers split their work: one teacher works mornings and the other one the afternoon. Hence, this does not affect the teacher-child ratio.¹ Compared to OECD countries, teacher-child ratios in Kazakhstan are high. For example, in a nursery group of 2-year-olds with one teacher present, the teacher-child ratio² would be 1:20. For preschool settings the ratio is even less favourable at 1:25. Figures 5.1 and 5.2 show the regulated teacher-child ratios for 2-year-olds and 3 and 4 year-olds among OECD countries. The average ratio is 1:7 for children aged 2, which is far lower than the ratio in Kazakhstan. For older children the ratio is 1:18, also lower than the Kazakhstan ratio.

Table 5.1. The number of teachers per group in Kazakhstan, by operating hours

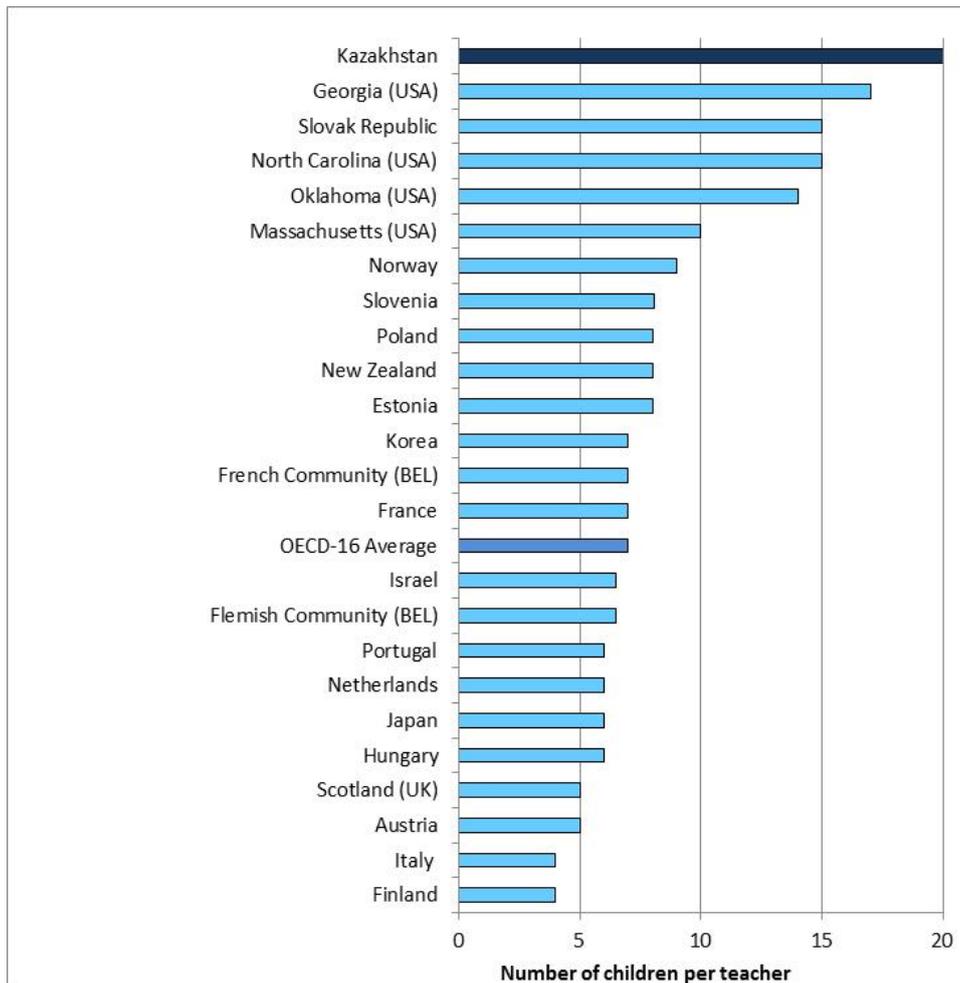
	When operating for 6 days per week				When operating for 5 days per week			
	9 hour day	10 hour day	12 hour day	24 hour day	9 hour day	10.5 hour day	12 hour day	24 hour day
Nursery groups (0-3 years)								
Teacher	2.25	2.5	3	5.5	2.0	2.25	2.5	4.5
Preschool groups (3 years – primary school)								
Teacher	2.25	2.5	3	3.5	2.0	2.25	2.5	3.0

Note: Any assistants or support staff are excluded from the above figures. In Kazakhstan, groups usually need to have one assistant present, although this assistant is not present in the group during the whole day of operating.

Source: Government of the Republic of Kazakhstan (2008), Resolution No. 77: On approval of the Model personnel establishment of public education institutions, and the list of positions of teachers and persons equated to them, Resolution of 30 January 2008, Astana.

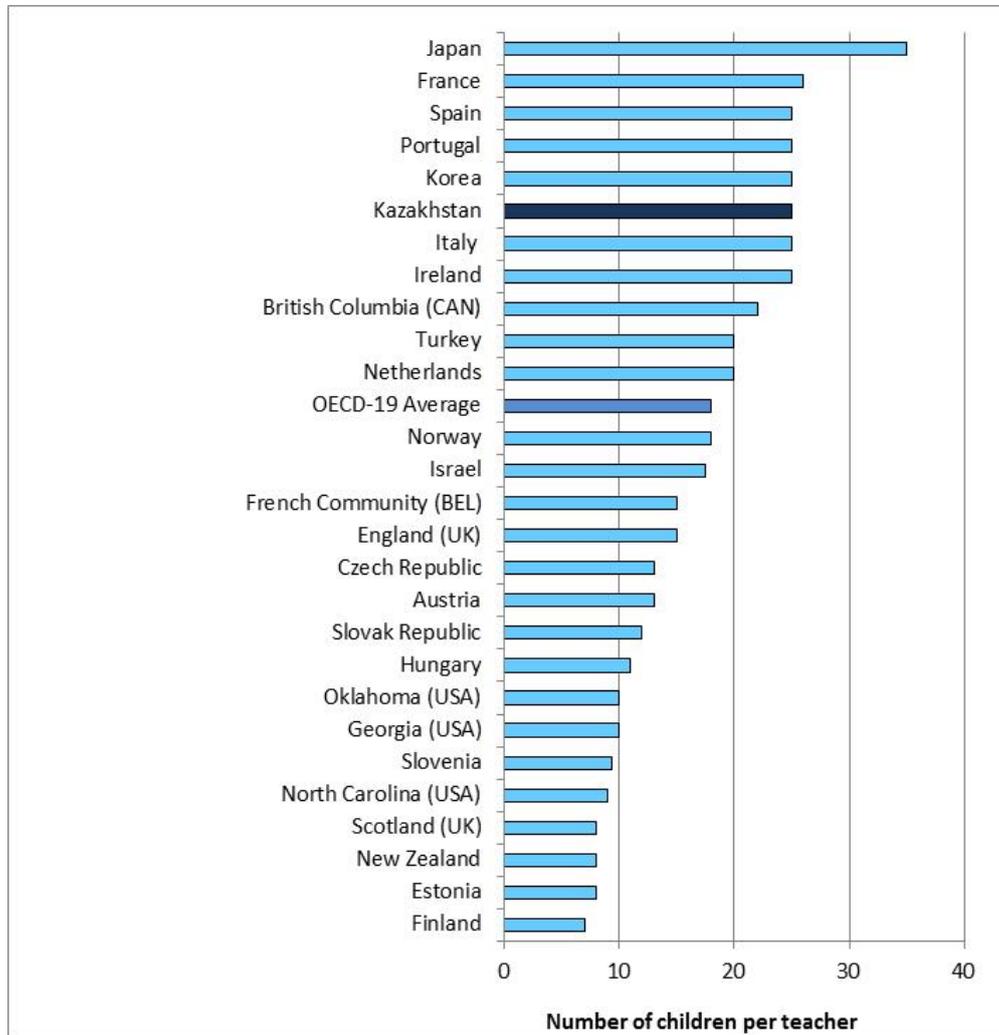
ECEC teachers in Kazakhstan can receive support from teacher assistants, as is the case in OECD countries. In many Kazakh settings, an assistant or other professional supports the teacher for at least part of the day, although the review team encountered settings and groups where extra help was not present for at least part of the day. Because nursery and preschool groups usually do not have an assistant present the whole day a setting is operating, these do not always contribute to a better staff-child ratio. A consistent provision of teacher assistants can not only aide teachers, but can also help children in their development by allowing them to receive more individual attention and additional support during activities.

Figure 5.1. Regulated teacher-child ratio for 2-year-olds in early childhood education and care



Note: Any assistant staff are excluded from the teacher-child ratios. Data for Kazakhstan refer to the number of teachers present in a nursery group operating for nine hours per day. Data for the Flemish Community of Belgium refer to subsidised facilities only.

Sources: OECD (2012), *Starting Strong III: A Quality Toolbox for Early Childhood Education and Care*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264123564-en>; For Kazakhstan: Government of the Republic of Kazakhstan (2008), *Resolution No. 77: On approval of the Model personnel establishment of public education institutions, and the list of positions of teachers and persons equated to them*, Resolution of 30 January 2008, Astana.

Figure 5.2. Regulated teacher-child ratios for 3 and 4 year-olds in early childhood education and care

Note: Any assistant staff are excluded from the teacher-child ratios. Data for Kazakhstan refer to the number of teachers present in a nursery group operating for nine hours per day.

Sources: OECD (2012), *Starting Strong III: A Quality Toolbox for Early Childhood Education and Care*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264123564-en>; For Kazakhstan: Government of the Republic of Kazakhstan(2008), *Resolution No. 77: On approval of the Model personnel establishment of public education institutions, and the list of positions of teachers and persons equated to them*, Resolution of 30 January 2008, Astana.

Based on the number of hours an ECEC setting in Kazakhstan operates per day, the number of teaching staff (as well as assistant staff) changes: the longer a setting operates, the higher the number of teachers a group is required to have (see Table 5.1). However, since teachers divide their hours, there is usually only one teacher present at all times in a group. This is to ensure that teachers have reasonable working hours and do not work for nine or ten hours per day. While rotating teachers is beneficial for working conditions, a frequent change in staff may affect child development. Stability in care has been found to be strongly and consistently positively related to child outcomes (Loeb et al., 2004). When children frequently work with different staff they may feel less attached to them

and may have lower quality staff-child interactions (OECD, 2012). In OECD countries, the number of staff present in a group and the number of children a teacher is allowed to be responsible for (i.e. teacher-child ratio) does not depend on the operating hours of a setting. Teacher-child ratios in OECD countries are usually based on what is financially feasible to ensure that the ratio benefits early child development and is favourable for both staff and young children (OECD ECEC Network, 2011).

Recommendation: Improve minimum quality standards to OECD international standards.

Kazakhstan can strengthen quality in ECEC and ensure an even level of quality across regions by using the existing minimum legal standards for ECEC settings. These should be used as a basis for licensing, accrediting and monitoring ECEC provision.

Supporting arguments: A solid basis of standards is available to be updated and expanded and used for a system of monitoring provisions.

Two arguments support this recommendation:

1. Strengthening minimum regulatory standards can ensure a minimum level of quality of all ECEC settings that is on a par with OECD countries.
2. Monitoring ECEC is an important means of protecting children and parents from low-quality ECEC provision and disreputable providers. It can also ensure a minimum level of quality of ECEC provision across the country before and during operation.

Revising minimum quality standards will better align the level of quality with international standards

Kazakhstan has made tremendous progress in economic development in recent decades, and there has been considerable investment in education and early education. However, to strengthen its early education sector in the international context, and to further promote child development, Kazakhstan should bring its minimum standards in line with those of OECD countries. This would bring the level of ECEC quality up to that of OECD countries. To achieve this, the country needs to expand its minimum standards to cover aspects similar to those used in OECD countries, and update existing minimum standards to ensure they meet the OECD average.

Kazakhstan has minimum standards in place for: staff qualifications; the ratio of staff with certain qualifications that should be present or work in an ECEC setting; group size, health and safety requirements; and structural setting requirements (such as the type of spaces a setting should include). However, the level of quality and pedagogy could be strengthened by including standards on staff-child ratios, for example. Currently, staff-child ratios are based on group sizes and the presence of one teacher in a group during the course of the day. While assistants may offer support for part of the day, Kazakhstan's staff-child ratios are less favourable than in most OECD countries (see Figures 5.1 and 5.2).

Research indicates that the staff-child ratios, in addition to good staff qualifications and professional development, are an important aspect influencing staff-child interactions and children's early cognitive and socio-emotional development (Burchinal et al., 2000; Burchinal et al., 2002; de Schipper et al., 2006; Huntsman, 2008; Litjens, 2010;

Whitebook et al., 2009). It is therefore recommended that minimum standards for staff-child ratios are developed and included in the regulatory framework. No formal, legally binding staff-child ratios currently exist, and the *de facto* staff-child ratio may not be favourable to child development. A lower number of children per teacher is of particular importance for very young children. A ratio of 1:20, the ratio in Kazakhstan for 2-year-olds, does not create optimum early learning conditions. For older age groups in ECEC, no regulated staff-child ratio is enforced. The *de facto* staff-child ratio for children aged 3 and 4 is above the OECD average, with 25 children per teacher, compared to 18 children in OECD countries.

When ratios are considerably lower than the OECD average, it is generally difficult to bring them up to the same level without regulated minimum standards. As it will be costly to bring the ratio closer to the OECD average, particularly in the case of the youngest children, interim solutions may be more feasible. For example, Kazakhstan could gradually revise regulatory staff-child ratios. In the Flemish Community of Belgium, the Flemish government decided to change the ratio of staff per ECEC places in subsidised day care from 1:7 to 1:6.5. However, it was not financially feasible to revise the ratio at one time. The government thus decided to implement the change in increments, lowering it from 1:7 to 1:6.8 in 2003, and reducing it again in 2005 to 1:6.5 (OECD, 2012). While more work must be done to bring staff-child ratios up to the same level as OECD countries, a gradual implementation plan, spread out over several years, could facilitate the transition.

Regular monitoring assures a minimum level of quality for all early childhood education and care settings in the country

Monitoring ECEC settings guarantees a minimum level of children's health, safety and well-being in ECEC environments as settings must comply with certain minimum standards. Regular monitoring can ensure the conditions of early learning in centres by defining structural standards, such as: staff qualification levels, the ratio of staff qualification levels, and staff-child ratio and minimum space per child (Burchinal et al., 2002; OECD, 2001). National regulatory monitoring frameworks with appropriate minimum standards can better level the playing field by ensuring that all children benefit from a minimum quality of education and care (Belsky, 2011; Eurydice, 2009; Vandebroek, 2011).

The risk that quality may be distributed unevenly across settings or regions increases when settings are not regularly monitored on how they meet minimum regulatory standards. In most OECD countries, settings are evaluated or inspected once every year to every three or four years. In Kazakhstan, settings are inspected for their level of service quality once every five years (OECD, 2015). As a result, low-quality ECEC settings may operate for months or years before quality issues are uncovered and addressed, thus potentially harming children's early development.

Strong regulations set the standard for quality of care and education. Research, science and practical experience have shown that children benefit most when they are in a developmentally appropriate setting, which can be ensured by licensing or accrediting all ECEC settings (OECD, 2012). Most OECD countries have licensing or accreditation system in place alongside a monitoring system. A licensing or accreditation system involves a setting being inspected before or shortly after opening to guarantee that it meets the minimum standards set out in the licensing/accreditation framework. When the setting meets the required standards, it receives a license or accreditation that ensures

regulatory standards have been met. Besides, in OECD countries, settings are monitored every couple of years to ensure that they still meet the minimum standards. This is also standard practice in Kazakhstan: each newly operating setting is inspected after three years of opening, and is then monitored every five years. However, regular and more frequent monitoring is necessary to ensure a high level of quality in the country, especially as provision has increased so rapidly. It is important that inspection and evaluation results are communicated to the public so that parents are informed of the quality of local settings and can choose one to their liking.

In North Carolina (United States), licensing has been regulated by state statute since 1971. The current system uses a five-star rating system that awards points based on programming quality. The more points a setting gets, the higher its rating and the more stars issued (with five stars being the highest rating or best license possible). Anyone who provides ECEC to more than two children they are not related to for more than four hours per day must be licensed by the state. Childcare centres are assigned ratings by the state of North Carolina based on standards developed by the North Carolina Rated License Assessment Project (NCRLAP). Each rating is valid for three years; however, centres can apply to be assessed for a higher rating at any time (www.ncrlap.org). The added advantage of a licensing system through rating settings is that it provides transparency to parents on the level of quality of an ECEC setting and gives them the chance to differentiate between settings. For policy makers it also offers a good overview of the level of quality of settings in a region or country (OECD, 2001). ECEC provisions can be licensed or accredited without being ranked or rated into categories based on performance. Many countries inspect the minimum standards with which a setting must comply, and settings that meet at least the minimum standards are licensed. However, rating or ranking systems like North Carolina's give a clearer picture of how well settings are performing.

Kazakhstan should prioritise the monitoring of its newly established settings (including those opened in recent years) as the rapid increase in the number of settings could jeopardise quality across settings and regions. Open information sharing about the monitoring results of settings, for instance through a quality rating system, would better inform parents of the quality of ECEC provision in their area.

Challenge 2 - Curriculum: Continuous child development, flexibility for staff and meeting children's needs.

To improve the competitiveness of the country and develop the human capital needed for its rapidly developing and changing economy, Kazakhstan has chosen to invest in access to quality education. The State Programme of Education Development in the Republic of Kazakhstan for 2011-2020 was developed in 2010 with this purpose in mind, and has expanded access and participation in ECEC. Model curricula have been developed to help ECEC settings provide quality care and early education; however, there are some challenges. With different curricula in place for different age groups and/or settings there is a risk of discontinuity of children's early development. In addition, the model curricula are overly prescriptive compared to those in OECD countries, leaving staff little flexibility for innovative approaches or for adapting the curriculum to meet every child's specific needs.

Different curricula impede the continuous development of children’s early learning outcomes and skills

From the 1990s onwards, a shift occurred in how many countries view the goals of ECEC. While it used to be regarded as a service to encourage female participation in the labour market and to look after young children, OECD countries nowadays view the care, upbringing and education of young children as the first stage in lifelong learning. As a result, educational plans and framework curricula have been formulated for ECEC facilities, starting in New Zealand and Norway in 1996. A curriculum framework guides staff practice and usually prescribes or recommends what areas or subjects a staff member is expected to teach. It can also contain a pedagogical approach, some recommendations regarding pedagogical practices, and/or developmental goals or outcomes. Countries have indicated that in their view (OECD, 2012; 2015), the introduction of a single nationwide framework secures greater consensus about the goals and purposes of ECEC; sets out minimal benchmarks (e.g. regarding staff-child ratios and the training and deployment of teachers and pedagogues); and demonstrates the complexity and importance of pedagogical work to the outside world, thus enhancing the status of the sector. In addition, a curriculum offers an orientation for the design of framework conditions and involves consequences for initial training, further training and continuing education of teaching staff (OECD, 2001).

Although Kazakhstan has an integrated ECEC system, four national curriculum frameworks for different age groups exist. This is in contrast with other integrated OECD countries, such as Australia, Chile, England and Slovenia, which usually have one national curriculum framework for the whole ECEC sector until compulsory schooling (see Figure 5.3). In 2009, Kazakhstan developed three new curriculum programmes: one for children between the ages of 1 and 3 (*Algashky Kadam*, or First Step); one for 3- and 4-year-old children (*Zerek Bala*, or Smart Child); and one for 5-6 year-olds (*Biz-Mektepke Baramiz*, or We Go to School). Together with the “State program of preschool preparation” for children aged 6 and 7 years, these are the mandatory frameworks ECEC settings have to implement. Settings can opt to use other curricula to complement the nationally mandatory frameworks, such as the “*Balbobek*”, “*Kainar*”, “Self-knowledge” and “*Karlygash*” curriculum programmes (JSC IAC, 2014). The four national curricula focus on similar developmental areas; however, they differ in terms of pedagogical approaches and practices and staff guidance (methodologies) on how to develop children’s knowledge and skills. For each of the four mandatory curriculum frameworks, different materials, books and methodologies have been approved and recommended (JSC IAC, 2014).

Different curricula and pedagogical approaches or methodologies can impede a child’s development as it can make it more difficult for them to adapt during the transition from one group to another (OECD, 2006; 2012). For children of a very young age, consistency is important for development: a stable environment and continuity can contribute to the early learning of cognitive and socio-emotional skills. When a different type of curriculum and different modes of teaching and learning are introduced to a child every few years, continuity is disrupted. An aligned curriculum for the whole ECEC age range (until children attend primary school) can ensure more holistic and continuous child development (OECD, 2012). An integrated curriculum shows that the development of children is seen as a dynamic and closely interwoven interaction between their physical and mental circumstances and the environment in which children grow up (Taguma, Litjens and Makowiecki, 2013).

Figure 5.3. Curriculum frameworks in place for early childhood education and care

Australia	Belonging, Being & Becoming - The Early Years Learning Framework for Australia		
Belgium-Flemish Community		Ontwikkelingsdoelen	
Belgium-French Community	Code de qualité (Oser/viser la qualité)		
		Le décret mission, le programme du réseau de l'école et le programme de l'école	
Chile	National curriculum for early childhood education		
Czech Republic		Framework Educational Programme for Pre-school Education	
Finland	National curriculum guidelines on early childhood education		Core Curriculum for Pre-primary education
France	Orientations code de la santé publique et projets d'établissements	L'école maternelle : un cycle unique, fondamental pour la réussite de tous	
Germany (Baden-Württemberg)	Orientierungsplan für Bildung und Erziehung für die baden-württembergischen Kindergärten und weichen Kindertageseinrichtungen		up to 40
Germany (Bavaria)	Der Bayerische Bildungs- und Erziehungsplan für Kinder in Tageseinrichtungen bis zur Einschulung		
Germany (Berlin)	Berliner Bildungsprogramm für Kitas und Kindertagespflege		
Germany (Brandenburg)	Grundsätze elementarer Bildung in Einrichtungen der Kindertagesbetreuung im Land Brandenburg		up to 40
Germany (Bremen)	Rahmenplan für Bildung und Erziehung im Elementarbereich - Bremen		
Germany (Hamburg)	Hamburger Bildungsempfehlungen für die Bildung und Erziehung von Kindern in Tageseinrichtungen		up to 45
Germany (Hesse)	Bildung von Anfang an. Bildungs- und Erziehungsplan für Kinder von 0 bis 10 Jahren in Hessen		up to 40
Germany (Mecklenburg-Western Pomerania)	Bildungskonzeption für 0- bis 10-jährige Kinder in Mecklenburg-Vorpommern. Zur Arbeit in Kindertageseinrichtungen und Kindertagespflege		up to 40
Germany (Lower Saxony)	Orientierungsplan für Bildung und Erziehung im Elementarbereich niedersächsischer Tageseinrichtungen für Kinder		
Germany (North Rhine-Westphalia)	Mehr Chancen durch Bildung von Anfang an - Grundsätze zur Bildungsförderung für Kinder von 0 bis 10 Jahren in Kindertageseinrichtungen und Schulen im Primarbereich in Nordrhein-Westfalen		up to 40
Germany (Rhineland-Palatinate)	Bildungs- und Erziehungsempfehlungen für Kindertagesstätten in Rheinland-Pfalz		up to 45
Germany (Saarland)	Bildungsprogramm für saarländische Kindergärten		
Germany (Saxony)	Sächsischer Bildungsplan - ein Leitfaden für pädagogische Fachkräfte in Krippen, Kindergärten und Horten sowie für Kindertagespflege		up to 40
Germany (Saxony-Anhalt)	Bildungsprogramm für Kindertageseinrichtungen in Sachsen-Anhalt. Bildung: elementar – Bildung von Anfang an		up to 45
Germany (Schleswig-Holstein)	Erfolgreich starten: Leitlinien zum Bildungsauftrag von Kindertageseinrichtungen in Schleswig-Holstein		up to 45
Germany (Thuringia)	Thüringer Bildungsplan für Kinder bis 10 Jahre		up to 40
Ireland	Early Childhood Curriculum Framework: Aistear		
Italy		National guidelines for the kindergarten curriculum: Indicazioni Nazionali per il curricolo (2012)	
Japan		Course of Study for Kindergarten	
	National curriculum of daycare centers		
Kazakhstan		Zerek bala	Biz mektepke
	Algashky Kadam		State program of preschool preparation
Korea	Standardised childcare curriculum	Nuri Curriculum	
Luxembourg	Bildungsrahmenplan für non-formale Bildung im Kindes und Jugendalter (0 - 129)		
	Plan d'études de l'école fondamentale (3 - 12)		
Mexico	Several curriculum frameworks for Early Childhood Education	Preschool Education Program	
Netherlands	2.5y	Development goals/competences	
New Zealand	Te Whāriki		
Norway	Framework Plan for the Content and Tasks of Kindergartens		
Portugal		The Curriculum Guidelines for Pre-School Education	
Slovak Republic		The National Education Programme	
Slovenia	Kindergarten Curriculum		
Sweden	Curriculum for the Preschool (Lpfö 98)		Curriculum for the Compulsory school, the Preschool class and the Out of school centre (Lgr 11)
United Kingdom-England	Early Years Foundation Stage Statutory Framework		
United Kingdom-Scotland	Pre-birth to three - staff guidelines	Curriculum for Excellence	up to 40

Source: OECD (2015), *Starting Strong IV: Monitoring Quality in Early Childhood Education and Care*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264233515-en>.

Descriptive curricula leave little room for flexibility in implementation and interpretation

A descriptive curriculum prescribes in detail what learning areas staff should address in their classes, what pedagogical practices are recommended or approved, a timeline or planning for each learning area, and what materials should be used. Kazakhstan's four national curriculum frameworks define what subjects (learning areas) the teacher is expected to implement and the materials for staff to use, which are prescribed in a list of approved books and toys. A planning schedule is also prescribed that sets out how much

time should be dedicated to subjects, such as early mathematics, and what pedagogical activities are recommended or required to be implemented with a certain curriculum or learning area. Such detailed curricula considerably support staff in implementing the curriculum and clearly define what is expected of staff and the desired outcomes of ECEC.

However, descriptive curricula leave little room for innovation and flexibility. Staff are given fewer opportunities to adapt lessons, and time spent on planning and activities, to the needs of the children in their care and to the context of the classroom or setting. A flexible curriculum helps ECEC settings provide learning experiences designed to meet the needs of each child in order to ensure that all children have the opportunity to reach their full potential. Such flexibility should allow staff to adapt the curriculum framework to take into account settings' local circumstances and the requirements of children, and help staff to meet the needs and expectations of learners, and the expectations of stakeholders and society in general (OECD, 2001; 2012; Wall, Litjens and Taguma, 2015). Flexibility in a curriculum implies that staff should be well-trained and educated on curriculum implementation and how it can best be adapted to fit children's and the setting's needs (OECD, 2012). Flexibility requires skilled staff, and time and resources spent on initial and in-service training and education.

To ensure that staff receive sufficient support, countries with a flexible curriculum complement the curriculum with documents that provide guidance and examples of pedagogical practices. In OECD countries, the guidance documents and booklets that provide examples are not usually legal documents, but they show staff how to implement the curriculum correctly, offer them ideas on the types of pedagogical practices they can implement, and help them adapt the curriculum to different needs and wishes. Research has found that curriculum implementation aids designed with ECEC staff in mind can help staff become more thoughtful and effective. Improved practice is a promising outcome of the development of materials that increase access to valuable teaching strategies and perspectives (Singer et al., 2000; Squire et al., 2003). Countries with a flexible curriculum include Sweden and Norway. To support the implementation of its Framework Plan (i.e. its national curriculum framework), Norway has developed short guides on relevant themes, such as pedagogy for the youngest children, multiculturalism, children's agency and participation, language and language stimulation, numeracy, outdoor activities and gender equality. These guides were commissioned by the Ministry of Education and Research and written by experts. The aim of the booklets is to promote reflection and discussion between staff on the framework and help achieve goals in local contexts (OECD, 2012).

While Kazakhstan's current curricula provide an anchor for ECEC staff, they are comparatively prescriptive and detailed and leave little room for flexibility and innovation.

Meeting all children's needs in early childhood education and care requires innovative approaches and the ability to adapt the curriculum

An equitable ECEC system should ensure that children's individual attributes, such as ethnicity and socio-economic background, do not limit their development opportunities, and that all children acquire a minimum level of skills (Field, Kuczera and Pont, 2007). Kazakhstan's ECEC population is of diverse socio-economic status (see Chapters 1 and 4 for further details) and ethnicity, and meeting their needs could raise overall performance. The diversity of today's ECEC population requires a flexible and innovative approach to

programme and curriculum design, i.e. a curriculum that can be adapted by the staff to the needs of individual children or the classroom. Flexible approaches to learning and development need to be addressed when programmes and curricula are designed, rather than trying to fit the child to the provision while the curriculum is being delivered. The approach to programme/curriculum design should focus on methods and practices that meet the needs of different children. Children do not all learn and develop at the same pace; they have different “starting points” for learning and all come to ECEC with a prior knowledge base. Research has shown that this prior knowledge is important in, for example, how children develop literacy and learn to construct meaning (Anderson and Pearson, 1984; Rigg and Allen, 1989).

With descriptive or detailed curricula, teachers often find it challenging to meet the growing range of children’s learning needs (NCCA, 2010; Tomlinson, 1999). A more flexible curriculum approach allows for experimentation that is relevant to individuals and local communities and thus, innovation. An adaptable structure allows each classroom to implement the overarching curriculum in a way that responds to individual needs, such as classroom pace or children’s abilities and interests (Squire et al., 2003). Research shows that rearranging the curriculum in novel ways is more appropriate for children (Squire et al., 2003), and that the most powerful opportunities for designing meaningful development experiences occur when staff can adapt curricula to meet the needs of the children and the local context (Randi and Corno, 1997). Learning research also shows that positive learning environments are sensitive to children’s individual learning needs, and take into account their knowledge, ability, conceptions of learning, learning styles and strategies, interest, motivation and emotions, as well their linguistic, cultural and social background (Dumont et al., 2010).

Interviews with ECEC staff members in Kazakhstan suggested that while staff are content with the curriculum frameworks in place to help guide them in their work, teachers, practitioners and specialists have little flexibility in adapting the curriculum framework to the context of their classroom. Staff did not seem familiar with implementing innovation in teaching and caring.

Recommendation: Develop an integrated early childhood education and care curriculum with flexibility and guidance for staff, in collaboration with stakeholders.

Kazakhstan has made significant efforts to enhance the quality of ECEC by developing several curricula. To promote continuous early child development, the existing curricula could be used as the basis for a more aligned and integrated curriculum framework for the whole ECEC age range. To gain support for an integrated framework and ensure effective implementation, stakeholders should be involved in the design process.

Supporting arguments: An integrated curriculum framework that provides a more continuous child development experience could be developed with the help of early childhood education and care staff, management, parents and researchers. Kazakhstan has a good foundation on which to base an integrated curriculum.

Research findings suggest that one overarching framework that supports holistic, continuous child development, is better able to ensure continuity in child development than different, separate curricula. Sufficient flexibility within the curriculum framework

should be provided and encouraged so that staff can adapt the pedagogical practices to individual learning needs. To ensure that the framework is widely supported and implemented and reflects the needs and wishes of society, collaboration on curriculum development should involve the most important stakeholders, such as ECEC staff and managers, policy makers, local or regional authorities, researchers and parents. Merging the frameworks could more effectively provide continuous learning experiences and better respond to the diverse needs of children, while being innovative and forward thinking.

Existing curricula can form the basis for an aligned and integrated curriculum framework

The Kazakh government has helped to improve the quality of its ECEC system by developing new curriculum frameworks. A strong basis is already in place for developing a single national overarching curriculum framework for ECEC. ECEC experts developed the existing curricula approved by the Kazakh government; the curricula are based on similar goals and areas of development, such as physical development, mathematical activities, culture, and theatre (JSC IAC, 2014). While content and pedagogy are different across curricula, common aspects can be used to construct a single national curriculum framework, with different sections for different age or development groups. This would help ensure that the framework is developmentally appropriate for all children in the ECEC age range and would ensure more continuous development for children moving between different groups in a setting or between different settings, in line with the well-developed OECD countries that have an integrated ECEC system.

An integrated curriculum framework would ensure that the content and pedagogical approach for different age groups is better aligned. It would also ensure that staff are better aware of the developmentally appropriateness of the content for different age groups, how content is aligned for different age groups, and possibly how it links to primary school. An integrated curriculum provides excellent opportunities to align ECEC with primary school. An overarching ECEC curriculum document for the whole ECEC age range can more easily establish explicit links with other frameworks. It can also clarify for staff what is expected of them and of children as children transition to primary school. For example, the New Zealand curriculum, *Te Whāriki*, has been developed for children from birth until they start school. To ensure the framework is age-appropriate, the content is tailored to three different age groups within ECEC: infants (birth to 18 months), toddlers (1 to 3 years-old), and young children (2 ½-years-old to school entry age). It is also aligned with the primary school curriculum as ECEC's expected goals and outcomes are linked to those of primary school (New Zealand Ministry of Education, 1996).

Korea has also constructed a national integrated curriculum framework based on existing curricula. The common curriculum for ages 3 to 5, the Nuri Curriculum, was implemented in February 2012. It is based on two separate curricula from kindergarten and childcare to ensure equitable quality in ECEC services for children in both types of provision. The curriculum emphasises children's well-being, safety, play activities and citizenship, rather than cognitive academic activities, and includes five development areas: motor skills and health, communication, social relationships, art and science. It aims to foster children's creativity through holistic development and is aligned with the curriculum in primary school (grades one and two) (OECD, 2012). There are plans to expand the integrated curriculum to cover children below the age of 3.

A national framework should allow substantial scope for curricular provision determined at the ECEC setting or community level, and even individual level, when needed. This could include additional subjects, such as those included in the framework, and also flexibility in teaching and pedagogical practices. However, any adaptation of the curriculum framework should be in line with the contents of the national framework to ensure equity in curricular content and a minimum level of pedagogical quality. An adapted curriculum for a classroom or setting should complement, not replace, the national curriculum framework. For example, Scotland allows 20% of time in ECEC to be used for activities of local relevance. This can make it possible to address issues of low achievement, poor motivation and behavioural problems, i.e. it can meet children's individual needs and gives room for innovative practices and ideas suggested by staff that can contribute to their motivation and feeling of ownership (OECD, 2007).

It is important to keep in mind that a more flexible framework approach to curriculum requires certain preconditions, such as well-trained staff. Training, both in-service for current and pre-service for future ECEC staff, is necessary to ensure that ECEC staff correctly interpret and implement the curriculum. To ease the transition to a new curriculum approach, the integrated curriculum framework could be piloted in a number of settings or regions before it is implemented nationwide. Based on the piloting experiences, the curriculum can be revised so that is better understood and implemented.

In Australia, the draft Early Years Learning Framework (the national curriculum framework) and its supporting documentation were trialled in 28 case study sites across Australia from February to April 2009 in order to test the framework and its application in early childhood settings before implementation. The sites represented a wide variety of early childhood settings and services, including: preschools; early childhood settings on school sites; long day care centres; family day care; multipurpose Aboriginal children's services; early intervention; and occasional childcare in metropolitan, regional and remote settings (OECD, 2012).

Scotland's draft integrated curriculum was also piloted before implementation. More than 600 early years establishments and schools took part in a formal process to test specific experiences and outcomes from the Curriculum for Excellence for children up to 18-years-old across all curriculum areas. Schools and centres chose experiences and outcomes to test based on their planned programmes of work. They submitted reports containing detailed feedback, which were used to inform the revision process (OECD, 2012).

Kazakhstan has considerable resources in place to train staff on a new curriculum, to inform staff and parents of the revised curriculum, and to collect any feedback on a draft version. There are 1 046 consulting offices in kindergartens, which could be the general points of feedback collection for a draft curriculum and the main information and dissemination points for parents and staff for a revised curriculum. Due to the extensive network of vocational schools offering training on ECEC (such as the National Centre for Professional Development, *Orleu*), additional opportunities are available to implement training for the revised curriculum on a broader scale.

Collaboration with stakeholders leads to greater appreciation, acceptance and ownership, and better implementation of a curriculum

The process by which a curriculum is developed and reviewed contributes to its credibility and effectiveness. The wide range of cultures, communities, settings and life experiences of young children make it essential to engage many participants in

developing and refining guidelines for their education (NAEYC and NAECS/SDE, 2002; STAKES, 2003). Engagement of stakeholders has been found to increase ownership of the curriculum and can improve the potential for effective pedagogical practices (Taylor, 2003). Participation of parents, ECEC staff and managers in developing the curriculum results in a system that meets the needs of children, families and the wider community (OECD, 2001). However, adapting a curriculum to the needs of children, parents and the community requires some level of flexibility, as noted in the previous section (Fiese et al., 2006).

In recognition of the importance and influence of different stakeholders in curriculum development, more countries are encouraging participatory curriculum development processes and involving ECEC stakeholders (OECD, 2012; Wall, Litjens and Taguma, 2015). When ECEC staff, management, parents and other possible stakeholders have the opportunity to express their opinions and provide feedback about the curriculum, the varying views on learning outcomes and processes can provide the basis for an ongoing, reflective dialogue. This also reduces the likelihood that content, processes and outcomes are dominated by a small, unrepresentative group (UNESCO, 2005). Additionally, when relevant stakeholders are involved in the design process, the curriculum is usually more commonly accepted by society and ECEC staff, which results in better implementation as staff have a sense of ownership of the document (OECD, 2001; 2006).

Korea involved various stakeholders when revising its curriculum in order to reflect different perspectives and needs. Typically, a curriculum development/revision team consists of 20 to 30 experts, including representatives of academic institutions. In Korea, these experts undertook research in order to set directions, goals and content areas in collaboration with 150 to 200 people in consultation/working groups (professors, researchers, superintendents, practitioners in ECEC, elementary school curriculum experts, etc.). As part of the process, national surveys for teachers and parents were undertaken to elicit their opinions and needs. After a series of seminars and public hearings, the curriculum framework and specifics were finalised (OECD, 2012).

In Scotland, everyone with an interest in education was invited to be part of the feedback and revision process of the Curriculum for Excellence. The draft experiences and outcomes were published online and accompanied by an online questionnaire that gave individuals, groups, schools and organisations the chance to offer their thoughts and views. Additionally, 37 focus groups were held to discuss the draft experiences and outcomes. The groups covered each curriculum area and involved practitioners, senior education managers, representatives from professional bodies, industry, parents and learners. The University of Glasgow was commissioned to analyse the feedback on the draft experiences and outcomes (OECD, 2012).

In New Zealand, the *Te Whāriki* curriculum was developed from, and built upon, experience with curriculum development by different early childhood services, together with findings in research, international literature and the shared knowledge and understanding of child development that have emerged in New Zealand over the past two decades. Feedback on the draft document from different stakeholders, including ECEC staff, local authorities, researchers and parents, has been taken into account in revising the draft version. The curriculum also considered findings from exploratory studies (OECD, 2012).

Countries that have engaged stakeholders have found it very useful in gaining wider awareness of the curriculum, as well as stakeholder buy-in (OECD, 2012). Kazakhstan

could make use of its consulting offices to disseminate a draft integrated curriculum and collect feedback from ECEC staff and parents.

Challenge 3 – Early childhood education and care staff: Expected shortages in staff

The rapid expansion of the early childhood education and care system requires a large inflow of staff

As part of the State Programme of Education Development, the number of ECEC places in Kazakhstan has rapidly increased, as discussed in previous chapters. To reach a 100% enrolment rate of all children above the age of 3, further expansion of the ECEC system is being implemented. This implies a large increase in participation (an increase of 25 percentage points), and thus the need for thousands of additional places for 3 to 7 year-olds. The OECD's estimation, which is based on 2014 figures on the number of places available and participation rates of 3 to 6 year-olds (NCES, 2014), indicates that at least 125 000 places are needed between 2015 and 2020 to reach full ECEC enrolment for children aged 3 years and older. This figure is based on the current number of children in the ECEC age range and does not include the expected increase in the number of children due to population growth. In addition, this calculation is based on the goal of reaching full enrolment for 3 to 6 year-olds and excludes any expansion in ECEC for children under the age of 3.

A large surge in spaces for 3 to 6 year-olds indicates a need for additional human resources in ECEC settings, mainly in the form of teachers as they work directly with children. In addition, psychologists and managers are needed for each setting. Kazakhstan's State Programme of Education Development indicates the country needs an additional 25 607 ECEC staff by 2020 to cover the expansion of ECEC for 3-6 year-olds, as well as for younger children, and to replace teachers who reach retirement age. The majority of staff needed are teaching staff, with 15 000 teachers needed by 2020. In addition, 2 700 psychologists, over 3 000 managers, and almost 5 000 other specialists, such as music teachers and speech therapists, will be needed. Currently, there are 67 096 teachers working in ECEC in Kazakhstan. An additional 15 000 teachers means that the teaching workforce will expand 22% in the next five years, which is likely to be a challenge. If Kazakhstan plans to improve current teacher-child ratios and bring them up to par with OECD countries, an even higher number of teachers and ECEC staff will be needed, particularly in the sector for 0-3 year-olds.

These calculations on the numbers of additional staff required are based on the assumption that additional teachers will be needed for the additional places that will be created in ECEC. However, current teachers may be given additional hours (they currently have a work week of 24 hours, the number of hours a child attends ECEC). This would result in additional pay, but could require the recruitment of fewer staff, depending on whether teachers can take on the new groups created by the additional places. If the current workforce cannot take on the new groups, for example due to scheduling conflicts, there would not be a decrease in the need for staff. These issues need to be carefully considered when addressing the question of staff shortages in the near future. To maintain or increase the current level of structural quality, new teachers and staff will need to be taken on.

New teachers and staff could be recruited from initial education schools, but also from within the system by retraining existing staff who are permitted to work with

children but are not yet trained as formal teachers. This would make more efficient use of existing ECEC staff.

Working conditions are not favourable for attracting new teachers

Despite the relatively good level of initial education of ECEC staff, and a strong network of professional development (discussed below), payment for the teaching profession is low in Kazakhstan, especially in ECEC. The average income in Kazakhstan is 120 455 Kazakh Tenge (2014 data) per month; the average salary in the early education profession is around 41% of this average wage. In addition, it is estimated that ECEC teachers earn almost 10% less than a primary school teacher (Data provided by Ministry of National Economy; Resolution of the government of the Republic of Kazakhstan, 2007: No. 1400). In most OECD countries, the remunerations, both starting and maximum salaries, of ECEC and primary school teachers are on a par: on average, pre-primary school teachers earn 97.8% of a primary school teacher's wage (OECD, 2014).

In countries such as Australia, Austria, Chile, Mexico, Portugal and Turkey, the pay of pre-primary and primary teachers is equivalent throughout their career, and wage increases are based on experience and level of training. In OECD countries, the difference between the starting salary and the top salary for pre-primary and primary teachers is almost 60% (OECD, 2014), which provides incentives to stay in the sector. In OECD countries, the wages of most pre-primary teachers are also above the minimum wage. Portugal pays pre-primary teachers almost four times the minimum wage, and Chile twice the minimum wage (OECD, 2012).

Low wages are associated with high staff turnover rates (Moon and Burbank, 2004; OECD, 2012), which influence quality “primarily by preventing qualified and committed individuals from considering working in child care or early education in the first place” (Manlove and Guzell, 1997). Staff turnover can influence children's language and socio-emotional development, as well as the relationships they form with practitioners (Whitebook 2002; Torquati 2007). Low wages are also correlated with the perception that working in the ECEC sector is not a high-status profession (Ackerman, 2006).

The planned expansion of Kazakhstan's ECEC system may pose some challenges, and attracting teachers to new kindergartens may not be easy given the unfavourable working conditions. Exact data for staff projections are not available at the governmental level because of the lack of data on turnover rates. However, based on the available data it is likely that Kazakhstan will experience issues in meeting the goals for the number of places called for in the state programme without compromising the current level of quality in ECEC.

Recommendation: Strengthen the existing education and training system while making the early childhood education and care sector a more attractive employer.

Kazakhstan's training system provides pre-service full teacher education programmes, as well as shorter in-service professional training modules in different regions of the country. This training system can be used to attract or upgrade staff to the ECEC teaching profession. It can also better prepare them for the job. Simultaneously, working conditions could be improved to encourage a larger inflow of staff and maintain staff in the sector.

Supporting arguments: Make the best use of the well-established pre- and in-service training and education system and update working conditions.

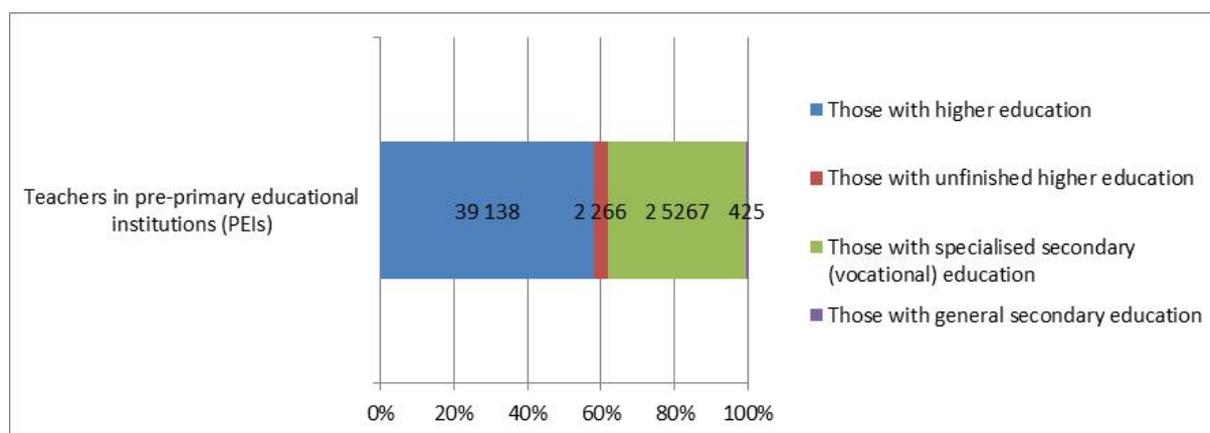
Pre-service and in-service education and training programmes are an ideal source for recruiting and attracting additional staff and creating wider interest in the ECEC sector. Three arguments support this recommendation:

1. The widely established training system for ECEC staff provides excellent opportunities for finding new teachers. This can be done both by recruiting new students and by upgrading current staff in ECEC who do not have teacher qualifications or who are not qualified to work independently with children. Using this method of recruiting could boost the numbers of teachers, while providing career opportunities for these staff members.
2. Education and training programmes could be used more efficiently to prepare staff for their pedagogical responsibilities, an issue that ECEC staff report is currently not well addressed.
3. Better working conditions are likely not only to attract staff, but also to improve the retention rate, resulting in fewer staff shortages in the future.

Make use of existing initial education and in-service training to attract staff

Teachers' pre-service training takes place in 32 higher educational institutions and 31 vocational schools in Kazakhstan (data provided by Ministry of National Economy of Kazakhstan). The duration of pre-service education is three to four years. In general, teacher qualifications in pre-primary educational institutions (PEIs) are of a good level: the majority of staff (58.3%) are university-trained, while most of the other teachers are vocationally trained (37.7%) (see Figure 5.4). While no data is available on staff qualifications for teachers in other ECEC settings and mini-centres, it is generally believed by ECEC staff in kindergartens that staff in mini-centres have lower qualifications; this was confirmed during the review visit.

Figure 5.4. Distribution of kindergarten teachers by level of education in early childhood education and care educational institutions in Kazakhstan (2013)



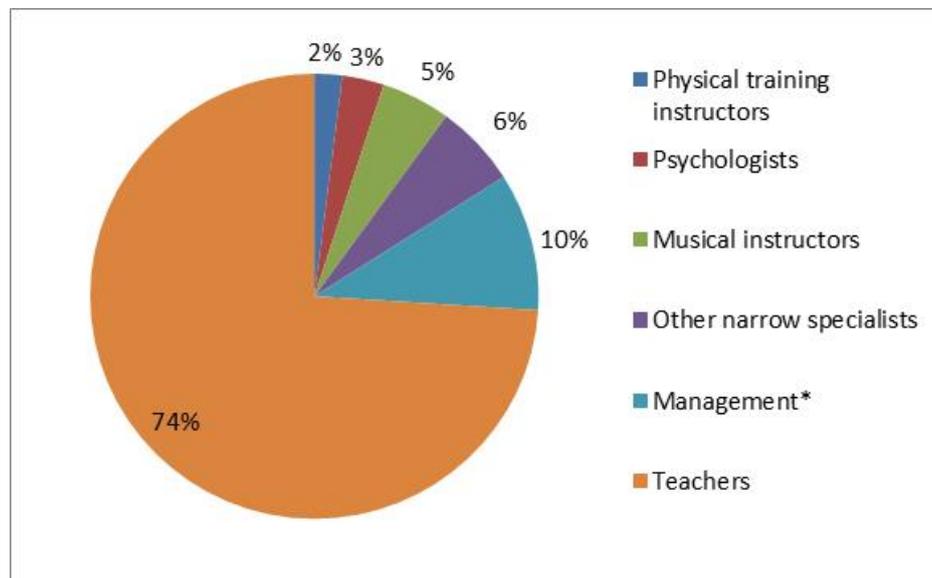
Source: NCES (2014), *National report on the status and development of education of the Republic of Kazakhstan*, NCES, Astana.

Pre-service education institutions, both universities and secondary vocational schools, are excellent gateways for recruiting ECEC staff. While the review visits showed that programmes to become an ECEC teacher are becoming more popular, with more students applying in the last few years, additional efforts could be made to encourage students to choose a specialised secondary vocational study or university degree programme for becoming an ECEC teacher. Orientation days for prospective students are important sources of information that could also be used to increase interest in ECEC teacher programmes. Intensive efforts to advertise ECEC teacher programmes among first-year students could help direct more candidates towards teaching. A forthcoming report on staff recruitment in ECEC for Kazakhstan will fully explore best practices from OECD countries in these matters (OECD, 2016).

The professional development (in-service) training network in Kazakhstan provides opportunities for increasing the number of professionals in ECEC. Teachers in Kazakhstan are required to take one specialised or “problem-related” course (72 face-to-face hours) every five years, and managers (directors) are required to participate in professional training once every three years. Professional development is provided through a network of in-service teacher training institutions, the National Centre for Professional Development (*Orleu*). *Orleu* has a network of one republican, two city institutions and 14 branches in municipalities. The institute trains thousands of teachers each year (5 739 in 2012 and almost 4 000 in 2013) both under government order (and paid by the government), and as part of reimbursable provision (NCES, 2014). The in-service teacher training system is partly decentralised, and the funds are distributed to ECEC settings through a per capita payment structure.

This extensive training network could be used to improve the skills of current ECEC staff. At present, staff in ECEC settings are not used very efficiently. The public system, in comparison with OECD countries, is significantly overstaffed. Many workers in the ECEC system are not in direct contact with children during their work hours. To benefit child development, and for greater cost-efficiency, the number of people working with children could be increased, and the number of those who do not work with children reduced. As shown in Figure 5.5, there is a significant proportion of ECEC staff with particular expertise or knowledge (around 16%) whose skills could be expanded and who could also be trained as general teachers. This training could be offered to musical workers and physical training instructors, for instance. Since they already have expertise in early child development through their education and practical experience, an additional training programme (provided by *Orleu*) could offer them opportunities to use their available time more efficiently by combining their specialised tasks with teaching responsibilities. The per capita payment structure could be extended to cover the training of such teachers. Paying for the training for these employees may encourage more people to take up this offer, making more teachers and assistants available for ECEC settings.

Another possibility would be to share specialised staff between different ECEC settings to reduce costs and decrease the number of this type of staff. Professional development programmes could also be used to retrain existing teachers working at other education levels (such as primary education) to work in the ECEC sector. Such possibilities, with public funding, could be further explored.

Figure 5.5. Distribution of staff in early childhood education and care educational institutions in Kazakhstan

Note: * The number of managerial staff is calculated based on the number of institutions, assuming that each institution has one manager

Source: Ministry of Education and Science (2014), *Main indicators of ECEC system in 2013*, Ministry of Education and Science of the Republic of Kazakhstan, Astana.

Ensure that future teachers are well prepared through their pre-service education programme

The review visits suggested that staff did not always feel well prepared to start teaching, a factor that may deter new recruits. To ensure that staff are better prepared for their job, intensive internship programmes should be made a larger part of teaching programmes and a strict requirement for graduation. Practical experience is key to successful teaching. While internships are a formal requirement in Kazakh pre-service education teacher programmes, the review visits revealed that, in practice, they were not undertaken by all students. It was mentioned during interviews that a lack of traineeship places was one of the main reasons for this lack of participation. The size of the issue is unknown as there is no formal data available on the percentage of students who have completed one or more internships.

Opportunities for practical experience for prospective teachers offer double benefits: interns are a relatively cheap labour force who can assist ECEC staff with their duties, while gaining relevant experience. Interviews with teachers and *Orleu* suggested that there are not enough incentives for ECEC settings to attract and train interns, and some ECEC staff felt that they are not appropriately compensated for the additional time spent on this task. Internship programmes can make the use of interns more attractive. For example, ECEC staff could be trained on mentoring interns so that they are better prepared and feel more confident. In addition, attractive incentives could be offered for mentoring an intern. Such incentives may be either financial to cover the additional time a teacher must invest in training an intern, or non-monetary, such as additional holidays or the possibility of undergoing extra training on a topic of interest. If implemented well, such measures can attract additional students to the ECEC sector as they will feel better

prepared for their teaching work. This could result in making the pre-service programme, and the teaching jobs, more appealing.

Improving working conditions could make an early childhood education and care career more attractive

The ECEC sector will only be attractive in the long term if its social status increases. One important aspect of this is the introduction of higher salaries for qualified staff, and the possibility of career progression. Policy makers in Kazakhstan should consider aligning ECEC teachers' salaries with those of primary teachers.

As already noted, in many OECD countries, the pay of pre-primary teachers is equal to that of primary school teachers (OECD, 2014), which makes the sector more attractive. Research has found that working conditions have a considerable impact on staff satisfaction and turnover rates (OECD, 2012). Currently, the pay of pre-primary teaching staff in Kazakhstan is not on a par with that of primary school teachers, even though they are also preparing the future generation and workforce. Increasing the remuneration of ECEC teachers will make the profession more attractive, raise the status of an ECEC teaching job, and ensure that teachers are paid at their qualification level (most have a university degree).

The current financial benefits that have been implemented, such as for staff moving to rural areas, could be expanded to regions with the greatest shortages and where a great expansion of ECEC participation is expected, such as in Kazakhstan's largest cities, which have growing populations and a teacher shortage. ECEC teachers who decide to work in rural areas receive a package of benefits such as additional pay, a lump sum when starting the job (similar to a bonus) or discounted housing options. The review visits revealed that these measures have been proven to work in Kazakhstan and have led to many ECEC teachers choosing to work, and stay working, in rural areas. Expanding such financial incentives to other areas in great need of ECEC teachers is likely to attract more staff at least in the short run, which is the timeframe in which most additional teaching staff are needed.

Career opportunities could also be expanded by providing ECEC staff with possibilities to become senior teachers, managers or even policy makers, which is a common approach in Nordic countries. In many countries, including Kazakhstan, teachers face limited or no career possibilities. This may explain why students avoid a teaching career path and why they leave the ECEC sector. In attracting and retaining staff it is important to ensure that the job remains interesting and that there are ample opportunities for growth. This will also raise the status of ECEC teachers. As noted earlier, in most OECD countries, staff salaries increase over a career pathway based on their experience and training. In addition, several OECD countries provide ECEC teachers the opportunity to climb further up the ladder. In Norway and Sweden, teachers may become head teachers, directors or policy makers on ECEC in the ministry responsible for ECEC (OECD, 2012). This is an added incentive for people to choose the ECEC teaching career path and can help to retain staff.

ECEC teachers need enough time to plan, reflect and document their pedagogical work. This is crucial to the ability to provide high-quality and stimulating learning opportunities and environments. During the OECD review visits, ECEC staff indicated that they work for 24 hours per week, but that preparatory time to prepare for their classes and activities is excluded from their formal (and therefore paid) work time. Several other countries already ensure extensive non-teaching time for staff at this level. Pre-primary

teachers in England, for instance, are required to work 1 259 hours in the school year, while their net teaching time of just 680 hours is one of the lowest among OECD countries, which leaves time to prepare and manage their pedagogical work. Their total required working time at school is 579 hours higher than the required teaching time. Spain has a similarly low net teaching time of 880 hours out of 1 140 total required working hours (OECD, 2014).

Challenge 4 - Research: Limited research on early childhood education and care inhibits analysis

Research can contribute to accountability and help evaluate effectiveness and the need for improvement

Research can be an influential tool to inform policy and practice. In ECEC, research has played a key role in: explaining the success or failure of ECEC programmes, prioritising important areas for ECEC investment, and informing ECEC practices through evidence (OECD, 2012). While research on ECEC is a relatively new phenomenon, OECD countries (the United States, the United Kingdom and Australia in particular) have undertaken an increasing amount of research on ECEC. Because public investment in ECEC is substantial, governments, researchers and the general public need to be informed on the outcomes, impacts and effectiveness of ECEC for accountability purposes (OECD, 2015).

ECEC policies are designed and implemented with certain goals in mind. Kazakhstan's main policy goals include providing equal development opportunities for all children and increasing early child outcomes (OECD, 2015). The extent to which these goals are furthered by ECEC policy in Kazakhstan is not known, since research on ECEC is so limited. Research studies can provide insight into what works in the country, and under what circumstances, and which areas need improvement. Without research, evidence-based policy making, which can lead to greater policy effectiveness and cost-efficiency, is impossible; and little will be known about the effects of ECEC policies and programmes. Policy and practice both need to be informed by research to enhance the quality of ECEC services for children, staff and parents (OECD, 2006).

Little research on ECEC has been conducted so far in Kazakhstan, in comparison with OECD countries, and the existing research is mostly qualitative. In the Netherlands, the Dutch Consortium for Child Care (NCKO) conducts, at the request of the government, large-scale studies on the process and structural quality of day care centres and playgroups. To assess process quality, elements and scales from the ITERS-R³ and the ECERS-R⁴ (see Box 5.1) have been used and adapted to the Dutch context. This is complemented by observational rating scales developed by the NCKO to assess the quality of interactions. Data on structural quality is collected through a survey and complemented by observations. This study is repeated every few years, and the aggregated results are published. NCKO has also developed a “quality monitor”, which is an instrument that childcare centres can use to self-assess their quality. The results provide an overview of the weaker and stronger areas of a provision, with the goal of enhancing the level of quality. The quality monitor uses checklists and rating scores to assess the interactions of all pedagogical staff and the quality of the care environment, as well as structural aspects of the provision. Special training modules have been developed to train staff and managers of childcare centres in using the monitor. There is also training available on analysing and improving staff-child interactions, which have been found to

be important for early child development (Helmerhorst et al., 2015; NCKO, 2015). Through these studies, the Netherlands has been made aware of the weaknesses and strengths of its ECEC system, which has provided relevant information for both policy makers and practitioners (OECD, 2015).

Box 5.1. Using rating scales to understand the quality of early childhood education and care services in the United States

The United States has not established a national monitoring system for its ECEC settings. Programmes serving children from birth to age 5 are overseen by the federal government and multiple agencies at the state and local levels. The wide range of quality in programmes has led states to take a cross-agency, systems-level approach to programme improvement, using what have become the Quality Rating and Improvement Systems (QRISs). QRISs are multicomponent assessments designed to make programme quality transparent and easily understood. Participating providers are assessed on each of the system's components, such as programme standards, support for programmes to improve quality, financial incentives and subsidies, quality assurance and monitoring, and outreach and consumer education. Programmes receive ratings (often 0-5 stars, or a rating of 1-4) that help parents, funders and other stakeholders make more informed choices about which providers to use and support, and which encourage providers to improve. QRISs also include support to help programmes meet progressively higher standards.

Launched in the 1990s, QRISs were supported through funding from the US Department of Health and Human Services (HHS) and built higher levels of quality upon state childcare licensing regulations, which set minimum requirements for health, safety and child development. Efforts have increased to include child outcomes as a component of the ratings. In 2012, the US Department of Education and HHS began supporting state QRISs through the Race to the Top – Early Learning Challenge (RTT-ELC) programme, which now funds 20 states. These grants require states to validate their QRISs to see whether the tiers in the state's QRIS accurately reflect differential levels of programme quality and the extent to which changes in quality ratings are related to progress in children's learning, development and school readiness. In 2014, there were 41 QRISs, (up from 26 in 2010), across 36 states.

Maryland

Maryland's QRIS, Maryland EXCELS, uses a five-level block rating structure to rate programmes on different categories: 1) rating scale and accreditation; 2) licensing and compliance; 3) staffing and professional development; and 4) administrative policies and practices. Maryland began field-testing the EXCELS Programme Standards in November 2012. The 330 programmes in the field test represented centre-based childcare, family childcare homes, public pre-kindergarten and school-age child care programmes that volunteered to participate and test the online system. On 1 July 2013, Maryland EXCELS opened for statewide participation. The number of programmes participating rose from 330 to 1 579 between 1 July 2013 and 31 December 2013. As of 31 December 2013, 221 programmes had published their ratings on the EXCELS website. As the evaluation of information gained from the field test was reviewed, the decision was made to enter into a revision phase of the programme standards. Programmes currently participating or published in Maryland EXCELS will have 12 months to meet the revised standards. Maryland is one of several states using financial incentives, training and technical assistance to promote quality improvements, such as meeting Maryland's revised programme standards.

Box 5.1. Using rating scales to understand the quality of early childhood education and care services in the United States (continued)

Washington state

Washington's QRIS, Early Achievers, began in 2012 and consists of five levels in a hybrid rating structure. Eligible programmes include all licensed centre-based and family childcare programmes. Once enrolled, programmes are rated on four categories: 1) child outcomes; 2) facility curriculum and learning environment and interactions; 3) professional development and training; and 4) family engagement and partnership. By the end of 2013, Early Achievers had reached all regions in the state, with 2 011 programmes registered, including 754 childcare centres, 1 042 family homes and 215 HHS Early Childhood Education and Assistance Programmes, serving 60 719 children in total. Washington has developed a strong coaching model for all early learning programmes to increase quality, with more intense coaching for programmes receiving a rating of 1 or 2. Additionally, the state is building a virtual coaching model that will complement on-site coaching work. As part of this virtual model, participants will be able to view and upload videos that demonstrate progress towards quality improvement goals.

Washington has begun an evaluation of this rating system, with final results to be completed in early 2016. The effects of Early Achievers will be assessed with a focus on child outcomes, parent and family profiles, and provider and programme organisation. The evaluation will help the state to understand the extent to which the Early Achievers standards and quality levels are related to child outcomes and school readiness, and which of the individual standard components are most predictive of positive child outcomes important for school readiness. Participants include randomly selected infants, toddlers and preschoolers. Standardised instruments will be directly administered, and indirect assessments in the form of parent and provider reports will be obtained for participating children. Secondary data will be collected from existing entities on children's gains in knowledge and skills over time.

Source: Case study prepared by the United States Department of Education and edited by the OECD Secretariat.

Recommendation: Earmark funding for early childhood education and care research through a bidding approach

Invest in the ECEC research field through providing earmarked funding to research institutions via a bidding approach to ensure that relevant ECEC research is conducted, such as longitudinal studies on child development, as well as research on the level of quality in ECEC settings. Collaboration with the international research field could further strengthen Kazakhstan's ECEC research sector by learning from best practices.

Supporting arguments: Assigning funding to specific research topics stimulates research development, while a bidding approach creates best value.

For research to guide policy and practice, it is important to set out a long-term framework for ECEC policy research (OECD, 2001). Without a stable infrastructure for research and long-term earmarked funding, it is difficult to inform policy and practice, especially when the aim is to contribute to national or international research on a large scale. The political will to invest in research and to guide policy and practice is needed. A bidding approach open to all research institutions in Kazakhstan would help to ensure that the country's research needs on ECEC are met, and that a reasonable price is paid for conducting the research work. It also stimulates research institutions to focus more on ECEC research and become more competitive. Kazakhstan can learn from, and possibly

collaborate with, the international research field to acquire knowledge and best practices on ECEC long-term research studies.

Earmarked funding for early childhood education and care research would encourage the research sector to work on ECEC topics

Funding for research on ECEC should be increased and existing research initiatives used as a stepping stone. Direct national funding should be provided to encourage research, especially on quality and child development in ECEC settings, which would result in broadly representative information on kindergartens in Kazakhstan. This funding should be spent specifically on ECEC-related research that is based on a national research agenda. It may be useful to convene a committee to advise the national government on research priorities and design. Such a committee could consist of researchers from higher education, local policy officials responsible for ECEC settings, and other stakeholders. In the United States in 1993, a national committee was assembled to advise the federal government on the quality of Head Start, a programme that provides comprehensive early childhood education, health, nutrition, and parent involvement services to low-income children and their families, and to recommend possibilities for expansion and further improvement (Paulsell et al., 2010; Advisory Committee on Head Start Quality and Expansion, 1993). Another committee was assembled in the late 1990s to advise on research and evaluation of Head Start (Advisory Committee on Head Start Research and Evaluation, 2012). In Ireland, a Scientific and Policy Advisory Committee has been established, as well as a Project Team and Steering Group comprised of key policy makers. This committee collaborates on the development of a research agenda for Ireland and has operational and strategic oversight of the research agenda (OECD, 2012).

Research can either be outsourced to existing research institutions, or a national ECEC research institute could be developed. In Portugal, the government often outsources research and external evaluation on ECEC to the research departments of universities. The Slovenian government finances research programmes in ECEC. In recent decades, several studies have been conducted, for example: the daily routine in preschool institutions and the first year of schooling before and after a curriculum reform; early development of early literacy and language; and self-evaluations of preschool education as a means to improve quality (OECD, 2012). Korea and Australia have set up national research institutes to advance work on ECEC research. The Korea Institute of Child Care and Education (KICCE) was established in December 2005 to take a systematic approach to promoting research on ECEC policy and supporting ECEC services more efficiently. Before its establishment, policy research on ECEC had been conducted separately by the Korea Educational Development Institute, Korea Women's Development Institute and the Korea Institute of Health and Social Affairs. This work is now merged into KICCE. KICCE conducts a range of policy research on ECEC, serves as a databank, and plays a role in bringing stakeholders from the education and the care sectors together to provide opportunities for dialogue. In Australia, the Australian Children's Education and Care Quality Authority (ACECQA), a national body, undertakes research and evaluation activities on ECEC. Its work drives continuous quality improvement and helps build an Australian evidence base on early childhood development that is used for policy and strategy development (OECD, 2012).

Studies from other countries focusing on different aspects of quality and children's development may inspire the development of research projects, such as the UK Effective Provision of Preschool Education (EPPE) study, a longitudinal research study that followed the developmental progress of more than 3 000 children aged 3 and 6 years old

across England between 1997 and 2003 (Wall, Litjens and Taguma, 2015), and the work of the Dutch NCKO studies on child care, as noted above.

A bidding approach leads to competition, best value and ensures that research needs are met

A bidding approach in research refers to a public call for tender to conduct a research study, for which interested research institutions can bid by providing a research proposal and cost estimate. The advantage of such an approach is that it does not require a national research body, although it is best to involve a strong network of research institutions. A bidding approach creates incentives for research bodies to conduct research on ECEC. It can be useful, for example, where there is the knowledge in house to study the effects of ECEC but where financial resources are not sufficiently available. The use of a bidding approach also contributes to competitiveness between institutions, allowing them to strengthen their expertise in this field and encouraging them to be cost-efficient. In addition, it ensures that research is policy driven, since the proposal is set up by a ministry or other government-related agency. It is therefore relevant for policy makers and avoids wasting research funding on studies that are less policy-relevant or which generate little public interest. A bidding approach is common practice in the Netherlands (OECD, 2012).

International collaboration on research can further research development

Participation in international research studies on ECEC could stimulate the development of ECEC research in Kazakhstan. Kazakhstan has a great interest in learning from the best practices of OECD countries and participates in international studies such as PISA, which enhances the knowledge base in the country. Kazakhstan can strengthen its collaboration with the international research field by adopting research frameworks and methodologies, such as on longitudinal studies, from countries that have more experience in this field, such as England and the United States. It is not uncommon to adapt the research methodologies of one country to another country's context and implement a similar study. The Dutch Consortium for Child Care (NCKO) research is, for instance, based on the methodologies of the QRIS in the United States (explained above). Norway's Better Provisions for Norway's Children in ECEC (BePro, 2012-2017), a study that focuses on the effects of quality in kindergartens on children's development and well-being, is inspired by the EPPE project in the United Kingdom, and also draws on the NCKO, which studies the effects and levels of childcare quality in the Netherlands (Moser, 2014).

Policy makers in Kazakhstan should further strengthen the role of the Ministry or the Information Analytic Centre (JSC) to collect, translate and publicise international and Kazakh research on ECEC, with particular attention to replicating findings and their implications for policy and practice. The goal would be to transfer this information on ECEC into useful formats for policy makers, practitioners and the public, in order to strengthen the link between theory and policy and practice.

Challenge 5 - Data: Lack of important indicators to adequately assess the early childhood education and care system at national and international levels

Data contribute to accountability, improved early childhood education and care services, and can impact child development

The recent global economic crisis, and pressure on education funding, emphasise the need for accountability and “value for money” in the education sector, including ECEC. They also highlight the need for evidence-based policy development, as discussed in the previous section. To achieve evidence-based policy making, government administrations need to organise data collection in the ECEC field and cover important areas of ECEC policy, such as: demand, supply and the use of ECEC places; the volume and allocation of public financing; the status of children (demographic, health, socio-economic, etc.) within and outside ECEC services; the structural quality of ECEC settings; and the recruitment and training levels of staff, as well as staffing needs (OECD, 2006).

Data collection can help establish facts and evidence about the ECEC sector (for example, whether children have equitable access to high-quality ECEC), and can ensure accountability regarding the quality of ECEC systems. Several studies have found that the collection of quality data can lead to increased programme quality, as reflected by the adoption of higher standards, improved classroom environment ratings and more credentialed teachers (Office of Child Development and Early Learning, 2010; RAND, 2008).

Improvements in programme quality can have a meaningful impact on child development (Dearing et al., 2009; Pianta et al., 2009). Collection of data can provide feedback on what works and help identify areas of improvement, especially if combined with research analysis. For example, in New Jersey, the introduction of a quality rating score allowed practitioners and management to improve their practices. Data were collected on staff practices and children’s outcomes, and staff practices had a statistically significant effect on children’s literacy skills. Aggregated data at the national level can provide highly relevant information regarding funding needs and emphasise which areas need more policy attention (Frede et al., 2007, Frede et al., 2011).

Data on early childhood education and care in Kazakhstan is limited

Very limited information is available on the characteristics of Kazakh ECEC settings, the quality of ECEC, and subsequent child development outcomes. It is therefore hard to evaluate how well ECEC settings are doing in providing good quality care and education and development for young children. More public expenditure increases the need for better data to understand whether resources are being invested wisely or whether they can be invested more cost-effectively.

Better data could be provided systematically by collecting data at the national level through annual surveys to ECEC settings. This is currently being undertaken in Kazakhstan, but only on a limited set of indicators and does not include data collection on: the background of children and their parents, the de facto staff-child ratios in classrooms, group sizes, and other indicators relevant to assessing the quality of programmes.

Data on quality and child development over time could be collected from a representative sample of ECEC programmes and children. To assess how these children develop over time, cohorts of individuals can be tracked through ECEC and further

education programmes. Such data collection needs to be supported by an institutional capacity to analyse and make use of the data.

In Kazakhstan, the data currently available are not sufficient to evaluate whether different ECEC programmes or regions are yielding good outcomes, or the level of programme quality. This data would show whether a particular programme is working or not working for children, parents and society and policy makers. The OECD team visiting Kazakhstan for this report noted that those responsible for ECEC were conscious of this necessity.

Recommendation: Develop a national, inter-ministerial database in line with international standards

Expanding current data collection to cover more indicators that can contribute to national assessments of the ECEC system will require inter-ministerial collaboration. Data collection should be on par with OECD countries to ensure that Kazakhstan can be compared internationally and learn from best practices.

Supporting arguments: Inter-ministerial efforts can strengthen current data collection in Kazakhstan and provide opportunities for international comparisons

This recommendation is supported by three arguments:

1. Relevant data on the ECEC sector are generally collected by different ministries. These data collection efforts could be combined to set up a national inter-ministerial database that would avoid duplication of efforts and lead to greater efficiency, while strengthening information sharing and increasing knowledge.
2. Current data collection through, for instance, the National Centre for Education Statistics or the education statistics department of JSC, could be expanded to cover data collection on other relevant indicators. Kazakhstan seems to have the resources and knowledge available to expand data collection efforts.
3. Strengthening current data collection efforts to bring them up to the level of OECD countries will provide Kazakhstan with opportunities for better international comparative analysis. This will lead to increased national and international knowledge and opportunities to learn from other countries' best practices, while gaining recognition for Kazakhstan.

Early childhood education and care is an inter-ministerial field

Data collection requires the capability to co-ordinate a strategic collection of data and to maintain high standards of reliability over time across multiple data collectors and geographical regions (Zaslow et al., 2009). It is challenging for countries to collect appropriate data on ECEC, often because ministries and agencies collect different data, which are not shared or aligned. Early child development, and thus ECEC, is an inter-ministerial field. For example, in the United States, although states collect data on early education, their efforts are often uncoordinated. This makes it difficult for a state to understand, for example, how its workforce policies or professional development investments are related to children's learning and development, despite the fact that a solid body of research indicates that workforce is a critical quality indicator for enhancing child development. Furthermore, almost all states are unable to determine which children are simultaneously enrolled in multiple ECEC programmes. When this cannot be

determined it can lead to duplication of services and present barriers for ECEC programmes to co-ordinate and build on each other's efforts when working with the same children (Early Childhood Data Collaborative, 2011).

The US example highlights the importance of co-ordinating data collection across ministries and linking databases, so as to ensure that relevant indicators for early child development can be accessed, shared and used. The best solution would be to start collaborating with other ministries that collect relevant ECEC indicators, and combine the efforts into one inter-ministerial database for which the different ministries provide the relevant input. For example, the Ministry of Finance could provide the input on any relevant financial data, such as public funding invested in a certain region for ECEC settings, while the Ministry of Education could collect and provide data on enrolment rates and structural quality aspects, such as staff qualifications and the staff-child ratio. The development of an inter-ministerial national database of this kind would result in a strong knowledge base for policy makers and contribute considerably to policy and research.

The development of ECEC policy depends not only on good data and information, but also on the analytic and research capacity to make use of data to conduct evaluations of policy and policy reform. Such a foundation is essential to ensure that policy can be guided by a strong evidence base. Many countries have dedicated research centres designed to conduct analysis on ECEC issues, for example the Australian Children's Education and Care Quality Authority (ACECQA) and the Korea Institute of Child Care and Education (KICCE).

A database could be set up and strengthened using existing indicators

A comprehensive database should collect data on the context of the programme and the child, programme components, and child outcomes. This would inform stakeholders about the relationship of certain aspects or characteristics (e.g. minimum standards or family income) of child development. The data would allow researchers to form clearer conclusions about who benefits and under what conditions. US research institutes have identified several indicators as “fundamental” for ECEC data collection (Early Childhood Data Collaborative, 2011):

- A unique state- or region-wide child identifier to allow governments to track ECEC participants over time if they change provision or move to another city.
- Child-level demographic and programme participation information, including details on family background.
- Child- and group-level data on child development.
- Ability to link child-level data with school and other key data systems.
- Unique programme site identifier with the ability to link with children and the ECEC workforce.
- Programme site data on structure, quality and the work environment (such as staff-child ratio).
- Unique ECEC workforce identifier that can be linked with programme sites and children.

- Individual ECEC workforce demographics, including education and professional development information.

An example of a database collecting information on these indicators is the Dutch Pre-Cool database. This is a large-scale national cohort study of about 5 000 children from ages 2 to 5 that assesses the short- and long-term effects of participation in different provisions of ECEC. Data are collected every two years on children's background and their developmental outcomes, as well as details on their parents, setting and staff. The database provides an overview of the state of ECEC in the Netherlands. Data are used for quantitative analyses of quality and outcomes, and the results are used to inform policy making. The study is followed up by COOL 5-18. Pre-COOL was set up by the Ministry of Education, Culture and Science in the Netherlands and is being conducted at the request of the Dutch Organisation of Academic Research (OECD, 2012; 2015).

Kazakhstan does not have data available on many of these indicators, while OECD countries are expanding their ECEC data, and most have data available at the national level on structural quality, demographics and the ECEC workforce. Most OECD countries also have data that helps them conduct projections to better respond to future needs and formulate suitable policy responses in advance. Building on available data, Kazakhstan could boost indicator development and data collection through, for instance, the National Centre for Education Statistics or the education statistics department of JSC, the country's main sources of ECEC data collection. Building on this knowledge and expertise, data could be collected that is on a par with OECD countries.

A careful and internationally comparative selection of indicators can help improve programmes and the workforce, increase access (especially in under-served communities) and improve practice and child outcomes (Early Childhood Data Collaborative, 2011). Information on structural indicators helps increase knowledge of the level of quality provision; while information on the demographic and background details of the children served can be included in data systems to determine the current state of play of ECEC, and how programmes affect target groups. In addition, data on relevant ECEC indicators can help create projections of trends or expectations in the ECEC system, which can improve policy responses (OECD, 2012). Such projections are not common in Kazakhstan, but OECD countries regularly use them to assess their future financial and policy needs.

Participating in international data collection efforts gives Kazakhstan a comparative perspective

At the international level, more data on a wide range of ECEC indicators are being collected (OECD, 2012). Kazakhstan could expand its current data collection to these new indicators, for example through participation in the OECD's international data collection efforts such as Education at a Glance. Once this is done, a comparative analysis of Kazakhstan's early education system can be drawn up. Internationally comparative data offers countries the advantage of being put on the same footing as other countries, which helps to put the state of their ECEC system into perspective. Internationally comparative data can point to development needs and arguments for investment in certain areas, but can also inform policy makers and provide opportunities for learning from best practices in other countries. Participation in data collection efforts worldwide could put Kazakhstan's ECEC system on the map internationally.

Notes

1. Teacher-child ratios refer to the maximum number of children a teacher is (allowed to be) responsible for by him or herself. Any assistants or support staff are excluded from the teacher-child ratios.
2. The calculated teacher-child ratio for Kazakhstan is based on ECEC settings operating 9 hours per day.
3. The revised ITERS (ITERS-R) is an Infant Toddler Environment Rating Scale designed to assess center-based child care programmes for infants and toddlers up to 30 months of age. It includes 39 items on a wide range of topics such as environment, space, activities and interaction.
4. The revised ECERS (ECERS-R) is an Early Childhood Environment Rating Scale that contains inclusive and culturally sensitive indicators for man 43 items including interaction (staff-child, child-child and discipline), curriculum (nature/science and math/number) and health and safety, and parents and staff. It can be used to assess the quality of ECEC settings and their staff.

References

- Advisory Committee on Head Start Research and Evaluation (2012), *Advisory Committee on Head Start Research and Evaluation: Final Report*, US Department of Health and Human Services, Washington DC.
- Advisory Committee on Head Start Quality and Expansion (1993), *Creating a 21st Century Head Start - Final Report of the Advisory Committee on Head Start Quality and Expansion*, US Department of Health and Human Services, Washington DC.
- Ackerman, D.J. (2006), “The costs of being a child care teacher: Revisiting the problem of low wages”, *Educational policy*, Vol. 20.
- Anderson, R.C. and P.D. Pearson (1984), “A schema-theoretic view of basic processes in reading”, in: P.D. Pearson, R. Barr, M.L. Kamil and P. Mosenthal (eds.), *Handbook of reading research*, White Plains, Longman, New York.
- Belsky, J. (2011), “Child care and its impact on young children”, *Encyclopedia on Early Childhood Development*, Centre of Excellence for Early Childhood Development and Strategic Knowledge Cluster on Early Child Development, Montreal, www.child-encyclopedia.com/pages/PDF/BelskyANGxp3-Child_care.pdf.
- Burchinal, M.R. et al. (2002), “Structural predictors of child care quality in child care homes”, *Early Childhood Research Quarterly*, Vol. 17/1, pp. 87-105.
- Burchinal, M.R. et al. (2000), “Relating quality of centre-based child care to early cognitive and language development longitudinally”, *Child Development*, Vol. 71/2, pp. 339-357.
- de Schipper, E.J. et al. (2006), “Effects of child-caregiver ratio on interactions between caregivers and children in child-care centers: An experimental study”, *Child Development*, Vol. 77/4, pp. 238-256.
- Dearing, E. et al. (2009), “Does higher quality early child care promote low-income children’s math and reading achievement in middle childhood?”, *Child Development*, Vol. 80/5, pp.1329-1349.
- Dumont, H., D. Istance and F. Benavides (eds.) (2010), *The Nature of Learning: Using Research to Inspire Practice*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264086487-en>.
- Early Childhood Data Collaborative (2011), *10 Fundamentals of Coordinated State Early Care and Education Data Systems*, Inaugural State Analysis, Berkeley.
- Eurydice (2009), *Early Childhood Education and Care in Europe: Tackling Social and Cultural Inequalities*, Eurydice, Brussels.
- Field, S., M. Kuczera and B. Pont (2007), *No More Failures: Ten Steps to Equity in Education*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264032606-en>.
- Fiese, B.H. et al. (2006), “Family contexts in early childhood: A look at practices and beliefs that promote early learning”, in: B. Spodek and O.N. Saracho (eds.), *Handbook of research on the education of young children (Second edition)*, Mahwah, Lawrence Erlbaum Associates, New Jersey.

- Frede, E. et al. (2007), *The Abbott . Preschool Program Longitudinal Effects Study (APPLES)*, Interim Report, National Institute for Early Education Research, New Jersey.
- Frede, E. et al. (2011), “Assessing accountability and ensuring continuous program improvement: Why, How and Who” in: E. Zigler, W. Gilliam and W. S. Barnett (eds.), *The pre-K debates: Current Controversies and Issues*, Brookes Publishing, Baltimore.
- Government of the Republic of Kazakhstan (2008), *Resolution No. 77: On approval of the Model personnel establishment of public education institutions, and the list of positions of teachers and persons equated to them*, Resolution of 30 January 2008, Astana.
- Hanushek, E. and L. Woessmann (2007), “The Role of School Improvement in Economic Development”, *NBER Working Papers Series*, No. 12832, National Bureau of Economic Research, Cambridge, www.nber.org/papers/w12832.
- Huntsman, L. (2008), *Determinants of Quality in Child Care: A Review of the Research Evidence*, Centre for Parenting and Research, Ashfield, New South Wales, Australia.
- Helmerhorst, K. et al. (2015), “Child care quality in the Netherlands over the years: A closer look”, *Early Education and Development*, Vol. 89/1, pp. 89-105.
- JSC IAC (2014), *OECD Review of Policies and Practices for Monitoring Quality in Early Learning and Development: Country Background Report for Kazakhstan*, JSC Information Analytic Center of the Ministry of Education and Science of the Republic of Kazakhstan, Astana.
- Litjens, I. (2010), *Revised Literature Overview for the 7th Meeting of the Network on Early Childhood Education and Care: A Review on Quality*, OECD, Paris.
- Loeb, S. et al. (2004), “Child care in poor communities: early learning effects of type, quality and stability”, *Child Development*, Vol. 75/1, 2004.
- Love, J.M. et al. (2003), “Child care quality matters: How conclusions may vary with context”, *Child Development*, Vol. 74/4, pp. 1 021-1 033.
- Manlove, E.E. and J.R. Guzell (1997), “Intention to leave, anticipated reasons for leaving, and 12-month turnover of child care centre staff”, *Early Childhood Research Quarterly*, Vol.12/2.
- Ministry of Education and Science (2014), *Main indicators of ECEC system in 2013*, Ministry of Education and Science of the Republic of Kazakhstan, Astana.
- Moon, J. and J. Burbank (2004), *The early childhood education and wage ladder; a model for improving quality in early learning and care programs*, Policy Brief, Economic opportunity Institute, Seattle.
- Moser, T. (2014), *Brief research and development presentation*, presentation at the roundtable of OECD Country Policy Review for Norway in Oslo, 11 June 2014, Norwegian Directorate for Education and Training.
- NAEYC and NAECS/SDE (National Association of Early Childhood Specialists in State Departments of Education) (2002), *Early learning standards: Creating the conditions for success*, National Association for the Education of Young Children, Washington DC.

- NCCA (2010), *Assessment in Aistear: the Early Childhood Curriculum Framework*, NCCA, Dublin.
- NCES (2014), *National Report on the Status and Development of Education of the Republic of Kazakhstan*, National Centre for Education Statistics, Astana.
- NCKO (2015), *NCKO Kwaliteitsmonitor*, NCKO, Amsterdam
www.kinderopvangonderzoek.nl/drupal/content/ncko-kwaliteitsmonitor-0.
- New Zealand Ministry of Education (1996), *Te Whāriki*, Learning Media, Wellington.
- NICHHD (1996), “Characteristics of infant child care: Factors contributing to positive care giving”, *Early Childhood Research Quarterly*, Vol. 11/3, pp. 269-306.
- NIEER (2006), *Increasing the Effectiveness of Preschool Programmes*, Policy Brief, NIEER, New Jersey.
- OECD (2017), *Early Childhood Education and Care Staff Recruitment and Retention: A Review for Kazakhstan*, OECD Publishing, Paris, www.oecd.org/edu/school/Early-Childhood-Education-and-Care-Staff-Recruitment-Retention-Kazakhstan.pdf.
- OECD (2015), *Starting Strong IV: Monitoring Quality in Early Childhood Education and Care*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264233515-en>.
- OECD (2014), *Education at a Glance 2014: OECD Indicators*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/eag-2014-en>.
- OECD (2012), *Starting Strong III: A Quality Toolbox for Early Childhood Education and Care*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264123564-en>.
- OECD (2008), *Reviews of National Policies for Education: Scotland 2007. Quality and Equity of Schooling in Scotland*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264041004-en>.
- OECD (2006), *Starting Strong II: Early Childhood Education and Care*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264035461-en>.
- OECD (2001), *Starting Strong: Early Childhood Education and Care*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264192829-en>.
- OECD Network on Early Childhood Education and Care (ECEC) (2011), *Survey for the Quality Toolbox and ECEC Portal*, OECD, Paris.
- Office of Child Development and Early Learning (2010), *Keystone Stars: Reaching Higher for Quality Early Education*, Program Report, Pennsylvania Department of Public Welfare, Pennsylvania.
- Paulsell, D. et al. (2010), *Assessing Home Visiting Quality: Dosage, Content, and Relationships*, Zero to Three, Washington DC.
- Pianta, R.C., W.S. Barnett, M. Burchinal and K.R. Thornburg (2009), “The effects of preschool education: What we know, how public policy is or is not aligned with the evidence base, and what we need to know”, *Psychological Science in the Public Interest*, Vol. 10/2, pp. 49-88.
- RAND (2008), *Assessing Child-Care Quality: How Well Does Colorado’s Qualistar Quality Rating and Improvement System Work?* Policy Brief, RAND, Santa Monica.

- Randi, J. and L. Corno (1997), “Teachers as innovators”, in: B.J. Biddle, T.L. Good and I.F. Goodson (eds.), *The International Handbook of Teachers and Teaching*, Kluwer, Dordrecht, The Netherlands.
- Rao, N. et al. (2003), “Predictors of preschool process quality in a Chinese context”, *Early Childhood Research Quarterly*, Vol. 18/3, pp. 331-350.
- Rigg, P. and V.G. Allen (1989), *When They Don’t All Speak English. Integrating the ESL Student into the Regular Classroom*, National Council of Teaching of English, Illinois.
- Singer, J. et al. (2000), “Constructing extended inquiry projects: Curriculum materials for science education reform”, *Educational Psychologist*, Vol. 35/3, pp.165-178.
- STAKES (2003), *On Early Childhood Education and Care in Finland. National Curriculum Guidelines on Early Childhood Education and Care*, STAKES, Finland.
- Squire, K. et al. (2003), “Designed curriculum and local culture: Acknowledging the primacy of classroom culture”, *Science Education*, Vol. 87/4, pp. 468-489.
- Sylva, K. et al. (2004), *The Effective Provision of Pre-School Education (EPPE) Project: Final Report*, DfES, London, <http://eprints.ioe.ac.uk/5309/1/sylva2004EPPEfinal.pdf>
- Taguma, M., I. Litjens and K. Makowiecki (2013), *Quality Matters in Early Childhood Education and Care: Norway 2013*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264176713-en>.
- Taylor, P. (2003), *How can Participatory Processes of Curriculum Development Impact on the Quality of Teaching and Learning in Developing Countries?* Institute of Development Studies, London.
- Tomlinson, C. (1999), *The Differentiated Classroom: Responding to the Needs of All Learners*, Association for Supervision and Curriculum Development, Alexandria, Virginia.
- Torquati, J.C. (2007), “Teacher education, motivation, compensation, workplace support, and links to quality of centre-based child care and teachers’ intention to stay in early childhood profession”, *Early Childhood Research Quarterly*, Vol. 22.
- UNESCO (2005), *How can participatory processes of curriculum development impact on the quality of teaching and learning in developing countries?*, background paper prepared for the Education for All Global Monitoring Report 2005, UNESCO, Paris.
- UNESCO (2004), *Curriculum in Early Childhood Education and Care*, UNESCO Policy Brief on Early Childhood, No. 26, UNESCO, Paris.
- Vandenbroeck, M. (2011), “Diversity in early childhood services”, *Encyclopedia on Early Childhood Development*, Centre of Excellence for Early Childhood Development and Strategic Knowledge Cluster on Early Child Development, Montreal, www.child-encyclopedia.com/pages/PDF/VandenbroeckANGxp1.pdf.
- Wall, S., I. Litjens and M. Taguma (2015), *Early Childhood Education and Care Pedagogy Review: England*, OECD Publishing, Paris, www.oecd.org/unitedkingdom/early-childhood-education-and-care-pedagogy-review-england.pdf
- Whitebook, M. (2002), *Early Education Quality: Higher Teacher Qualifications for Better Living Environments: A Review of the Literature*, Center for the Study of Child Care Employment, California.

Whitebook, M. et al. (2009), *Effective Teacher Preparation in Early Care and Education: Toward a Comprehensive Research Agenda*, Center for the Study of Child Care Employment, Berkeley.

Zaslow, M. et al. (2009), *Multiple Purposes for Measuring Quality in Early Childhood Settings: Implications for Collecting and Communicating Information on Quality*, OPRE Issue Brief, Office of Planning, Research and Evaluation, Administration for Children and Families, US Department of Health and Human Services, Washington DC.

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

The OECD is a unique forum where governments work together to address the economic, social and environmental challenges of globalisation. The OECD is also at the forefront of efforts to understand and to help governments respond to new developments and concerns, such as corporate governance, the information economy and the challenges of an ageing population. The Organisation provides a setting where governments can compare policy experiences, seek answers to common problems, identify good practice and work to co-ordinate domestic and international policies.

The OECD member countries are: Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The European Union takes part in the work of the OECD.

OECD Publishing disseminates widely the results of the Organisation's statistics gathering and research on economic, social and environmental issues, as well as the conventions, guidelines and standards agreed by its members.

EARLY CHILDHOOD EDUCATION AND CARE POLICY REVIEW

KAZAKHSTAN

For the past decade, Kazakhstan has made enormous efforts to improve and enhance its early childhood education and care (ECEC) system. The country has put in place major policy reforms, in particular to expand access to ECEC. The report explores the strengths and challenges of Kazakhstan's ECEC system from an international perspective, focusing on access, equity and quality. It provides a number of recommendations and policy actions, helpful to the Kazakh ECEC authorities, as well as to practitioners and stakeholders. Key recommendations include: strengthening the quality of ECEC provision in all regions by upscaling existing standards to international OECD levels; developing an aligned and integrated curriculum framework for ECEC to stimulate continuous early child development; improving the training and working conditions of staff to better prepare them for the job and attract and retain them in the sector. The report draws on comparative analysis of the aspects of ECEC policy and practice examined in the review, and includes two visits to the country by a team of international experts, including Edward Melhuish (University of Oxford and University of London) and Tigran Shmis (World Bank). The report will be of interest to other OECD member and partner economies that are also debating on the effective use of resources to provide high-quality ECEC services.

For further information please visit our website:

www.oecd.org/edu/earlychildhood

or contact us at:

ecec@oecd.org

