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Meeting the Challenges

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Enhancing the early childhood development system in the Republic of Sakha (Yakutia), Russia: meeting the challenges

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The Yakutia Republic is currently working to update its early childhood development (ECD) system. Its goal is to ensure a high quality environment for early learning and child care and to enable higher enrolment levels.

The Yakutia Republic is Russia's largest sub-national region. Although its territory is comparable in size to that of India, it has a population of less than one million inhabitants. Most of the Republic's territory is located on permafrost soils and the temperature can vary from -60 C in winter to +40 C in summer. Currently the Republic is tackling the challenge of modernising its early childhood development (ECD) system; it plans to update pedagogical processes and support these with new yet economical architecture and interior design processes. It is hoped that work undertaken in Yakutia may also stimulate changes in the construction of preschool¹ facilities in Russia overall.

Currently, a high priority for the Government of Yakutia is to increase access to pre-school education, given the significant level of unmet demand in the Republic. This priority is reflected in its plans, which are supported by the World Bank, to renovate existing preschool facilities and increase capacity by building new ones. In this context, in September 2011 an international team of experts conducted a preparatory mission to Yakutia. It toured 13 of the region's kindergartens: some facilities were standard; others were new and about to open, while others were being renovated. Several meetings were held with the government's main architectural offices to exchange views on the existing conditions in kindergarten facilities and their design, as well as the possibility of optimising cost, quality and pedagogy. The team presented sample projects from Alaska, Greenland, Finland, Denmark, Canada and Norway.

While carrying out the on-site visits, the team was able to assess the conditions and capacity of the existing facilities, and take stock of current construction techniques and recent projects funded by the government. Existing facilities range from 75-year old dilapidated wooden buildings to state-of-the-art and costly constructions (see below). The newly constructed publicly funded facilities stand out clearly and the project aims to offer services of a comparable quality to as many children as possible.

1. The term "preschool" in Russia concerns the education and care of children aged one to seven.





The “Small Willow” kindergarten in Yakutsk dates from the 1970s. It will be reconstructed within the framework of the proposed project.

Photo: Tigran Shmis; © World Bank

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Aside from a large-scale plan to construct new kindergartens, other solutions are also being examined. In order to increase enrolment in child care facilities the project will also examine alternative methods of delivering services such as family kindergartens and subsidising families which use private services. In order to increase the number of early learning facilities, in many countries these are created within primary schools, community centres, libraries, town halls or within large companies, which is becoming increasingly popular; these initiatives will also be implemented within the framework of the project. The main drive, however, is focused on establishing new, high quality preschool facilities. In smaller communities in particular, these can be nested within other public services and have the additional effect of developing bonding within community members but overall, it is rural areas that are in most urgent need of upgraded preschool infrastructure. Appropriate training for staff and management, curriculum development and monitoring and evaluation systems will also become integral parts of the project.

Currently, given the vastness of Yakutia, kindergartens demonstrate a wide range of standards and there are huge differences between them. One of the ambitions of the project is therefore to provide the government with tried-and-tested models and approaches, designs and options from across the world which would minimise costs and maximise pedagogy and thus enable the government to expand access to preschool education. These designs and models will be presented to the government for approval and will be included in a set of new or revised guidelines destined for the architects and educators involved in the design of kindergartens.

Over the last 15 years many European countries, as well as Canada, the United States and Japan, have carried out extensive reforms of their preschool educational system, ranging from pedagogical processes to architecture. Their studies have identified shifts in various aspects of preschool education, stemming from changes in society, technology and pedagogy. As a result, new quality targets in relation to services for young children have been aligned with national and international levels (EC, 1996), promoting children’s well-being and development; standards in preschool facilities were also increased, in the best interests of children. For instance, larger classrooms were prescribed not only due to health considerations but also on account of the significant correlation between the allotted space per child and children’s behaviour (Prescott, 1967) and cognitive development (White and Stoecklin, 2003): larger playrooms give rise to fewer quarrels and allow children to form groups, while there is still enough room for calmer children to retreat to a quiet spot.



Photo: Tigran Shmis; © World Bank

The “Treasure Island” kindergarten in Yakutsk opened earlier this year within the framework of the Republic’s ongoing programme.



The World Bank team of experts’ study of Yakutia’s kindergartens has shown that there is still some leeway in Russian legislation to increase the size of playrooms, especially when combined with sleep areas within a single space. When they are separate (which is required by current regulations), sleeping rooms are comparable in size to playrooms, but since they are much less in use they constitute a reservoir, allowing for space optimisation. In addition, the study showed that cost and pedagogical approaches can be further optimised both in existing facilities and in newly planned constructions. One caveat and issue to be addressed, as noted by the government architects, relates to limitations imposed by existing federal legislation, sanitary standards and strict fire regulations that stand in the way of creating quality environments for children while maintaining low construction costs.

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Also in relation to cost optimisation, some processes in kindergartens should be reconsidered in line with recent procedural developments such as contract management. The possibility of outsourcing some services, such as medical care, laundry or food preparation should also be explored where feasible; this applies in particular to urban areas with a large number of kindergartens. As well as enabling teachers to quickly and easily reconfigure spaces, the introduction of multi-purpose spaces should also reduce the overall size (and cost) of running a kindergarten.

In relation to building materials for future kindergartens, light timber constructions are recommended as they present several important advantages. For example, timber is available locally (transporting other materials to remote regions is costly and timely), it is sustainable, there is local know-how in timber construction and it respects local building traditions. Wood is not only a good choice in terms of construction processes and costs, but it also has many other qualities such as creating a healthy environment with indoor microclimate conditions, making it almost the ideal material for preschool facilities.

In addition, many studies have underlined the importance and the influence of design on users’ behaviour, creativity and reactions. Research such as “Rethinking Education and Training Policy” (Schweinhart et al., 1993) have shown that positive kindergarten experiences have an equally positive influence on a child’s – and later an adult’s – development. This makes kindergarten architecture doubly important in the long run. Statistics show that, on average, adults with a positive kindergarten experience have a better self-image, are more successful in their professional life and are less likely to commit offences.

What is more, increased investment in kindergartens has a positive economic resonance. The same research found that investment designed to raise the quality of preschool education has multiple financial benefits for society. In the light of these findings, contemporary kindergartens, in Yakutia and elsewhere, should seek to adjust to the needs of today's children and try to accommodate their individuality. New teaching techniques and new programmes for pre-schoolers should be adopted, and many activities that used to be pass-time activities should be incorporated into their programmes.

The field visit to Yakutia's kindergartens resulted in a plan to identify five to six different sized designs, which would constitute cost-effective and economic construction models. Given that there are commonalities in educational and physical infrastructure, needs and construction site conditions, these various design models should meet the spatial needs of facilities with a capacity of 25 to 250 children, both in urban and rural environments. Despite this uniform construction framework, the design of each kindergarten would still allow for individualisation such as the colour of facades and its final layout, allowing also for the use of some local design elements. This type of construction system would also enable changes to be made to the architectural model in function of the specific needs of an individual kindergarten or school. In this way additional spaces can be added such as a gymnasium, swimming pool or other social infrastructure, which can also be used by the local community.

The project team will continue its work by expanding the provision of quality ECD services to make Yakutia's kindergarten system a best practice model for the other Russian regions. The project will be further elaborated over the coming years, so this opens a number of opportunities for research and development.

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