



Kazakhstan

HUMAN DEVELOPMENT REPORT



KAZAKHSTAN 2004



Kazakhstan

HUMAN DEVELOPMENT REPORT

**Education for All:
the Key Goal for
a New Millennium**

ҚАЗАҚСТАН 2004

The Expert club “Strategic vision” and Association “Education for all in Kazakhstan” were commissioned by the United Nations Development Program for production of the National Human Development Report for 2004

UNDP is the UN's global development network, advocating for change and connecting countries to knowledge, experience and resources to help people build a better life. We are on the ground in 166 countries, working with them on their own solutions to global and national development challenges. As they develop local capacity, they draw on the people of UNDP and our wide range of partners.

Report materials could be reproduced in other publications, without prior permission of UNDP, provided proper reference is made to this publication

The views expressed in this report are those of the authors and do not necessarily represent the views of UNDP

TABLE OF CONTENTS

ABBREVIATIONS	5
EXECUTIVE SUMMARY	6
FOREWORD BY DANIAL AKHMETOV THE PRIME MINISTER OF THE REPUBLIC OF KAZAKHSTAN	9
FOREWORD BY YURIKO SHOJI UN RESIDENT COORDINATOR/ UNDP RESIDENT REPRESENTATIVE	10
MESSAGE FROM THE AUTHORS	11
ACKNOWLEDGEMENTS	12
Chapter 1. EDUCATION AS THE BASIS OF HUMAN DEVELOPMENT	13
1.1. Influence of education on human development	14
1.2. New social requirements for the education system	14
1.3. International conventions and declarations	16
1.4. National development documents and programmes	19
Chapter 2. HUMAN DEVELOPMENT IN KAZAKHSTAN	21
2.1. Status of human development in kazakhstan	21
2.2. Effects of different factors on the level of human development in Kazakhstan	24
2.2.1. Poverty	24
2.2.2. Health	27
2.2.3. Environment conditions	28
2.2.4. Gender disparities	29
2.3. INFLUENCE OF HUMAN DEVELOPMENT LEVEL ON DIFFERENT FACTORS	30
2.3.1. Education level and living standard	30
2.3.2. Education level and life expectancy	31
2.3.3. Education for the sake of education	32
Chapter 3. ANALYSIS OF THE EDUCATION SYSTEM IN THE REPUBLIC OF KAZAKHSTAN	33
3.1. Legal basis for the national education policy	33
3.1.1. Stages of legal regulation of the education system in the Republic of Kazakhstan	36
3.1.2. Governance in education system	36
3.2. Analysis of current situation in education system in Kazakhstan	38
3.2.1. Development level of the network of education institutions and enrolment of students	38
3.2.2. Analysis of basic parameters of education quality provision	45
Chapter 4 EDUCATION IN KAZAKHSTAN AS A GUARANTEED HUMAN RIGHT	53
4.1. Measures to improve upbringing and care of early childhood group	54
4.2. Measures to ensure access of all children, especially those from troubled families and ethnic minorities to free compulsory education by 2015	55
4.3. Education for children with special needs	56
4.4. Measures to ensure equal and fair access to basic and continuous education by adults especially women; increase of adult literacy by 50% in 2015	58
4.5. Elimination of the gap between boys and girls in obtaining primary and secondary education by 2005; ensuring universal and equal access of girls to quality basic education by 2015 and its completion; equality of males and females in obtaining an educ	61
4.6. Increase in the quality of education and the assurance of good progress by all students in achieve the recognised and assessable results of education, in particular literacy, numeracy and the most essential life skills	62
Chapter 5. ESTABLISHING A KNOWLEDGE-BASED SOCIETY IN KAZAKHSTAN: REALITY AND PROSPECTS	68
5.1. Life-long learning	69
5.1.1. Basic principles and objectives of life-long learning	69
5.1.2. Urgent problems of life-long learning development in a transition economy	69

5.2. Information and communication technologies for quality education	77
5.2.1. Education information programme: expectations and outcomes	77
5.2.2. Main constraints for the success of implementation of the national ICT policy and methods of eliminating them	80
Chapter 6. MAIN AREAS FOR IMPROVEMENT OF EDUCATION SYSTEM IN KAZAKHSTAN TO ENSURE QUALITY EDUCATION FOR ALL	83
6.1. Improvement of education efficiency for human development.....	83
6.2. Search for national consensus	84
6.3. Improving the education system	85
6.4. Ways of improving basic aspects of educational process	87
CONCLUSION	90
GLOSSARY	92
APPENDIX	95
APPENDIX 1. TECHNICAL NOTES	96
ANNEX 2. STATISTIC DATA	99
BIBLIOGRAPHY	131
MAPS	
Maps 1. Human Development Index in oblasts of the Republic of Kazakhstan and its factors (in 2003)	23
Maps 2. Human Poverty Index in oblasts of the Republic of Kazakhstan and its factors (in 2003)	25
Maps 3. Number of educational establishments and the population density in oblasts of the Republic of Kazakhstan and its factors (in 2003)	39
Maps 4. 2004 results of the Unified National Test in Kazakhstan	52
FIGURE	
Figure 2.1. Change for the worse of HDI of CIS countries in 1995 and 2002 compared to 1990	21
Figure 2.2. Classification of regions by human development	22
Figure 3.1. Structure of the governance bodies implementing national policy in education sector	37
Figure 3.2. Structure of pre-schooling network.....	38
Figure 3.3. The network of general secondary schools during the school years from 1990/91 to 2003/04	41
Figure 3.4. Number of pupils in general secondary day schools during the school years from 1990/91 to 2003/04	41
Figure 3.5. Average number of school pupils per school in the 2003/04 school year	41
Figure 3.6. Network of private secondary day schools	42
Figure 3.7. Number of pupils in private secondary day schools	42
Figure 3.8. Dynamics of the current number of students, entrants and graduates of primary vocational institutions	43
Figure 3.9. Dynamics of college network development	44
Figure 3.10. Dynamics of college students, entrants and graduates	44
TABLE	
Table 2.1. Population by the status of entrepreneurship and education as of the end of 2003	27
Table 2.2. Dynamics of Human Development Index Components and HDI Disaggregated by Gender in Kazakhstan in 1998-2000	29
Table 2.3. Dynamics of Human Development Index Components and HDI with and without Gender Factor Adjustments in Kazakhstan based on UNDP methodology in 1998 – 2000	29
Table 3.1. Balance of education system development in Kazakhstan	34
Table 3.2. Number of teachers in vocational education	47
Table 3.3. Breakdown of teachers by ownership of institutions	47
Table 3.4. Number and structure of professors and teachers in higher education institutions, number of people	48
Table 3.5. Distribution of public expenditures by sectors, 1999 - 2003	49
Table 3.7. Public expenditure on education by educational levels	49
Table 4.1. Percentage of children covered by pre-school programmes (pre-school institutions + pre-school classes)	55
Table 4.2. Number of special rehabilitation educational organizations and number of children in them.....	57
Table 4.3. Average Monthly Nominal Wages in the Republic of Kazakhstan	62
Table 4.4. Number of 1-6 year-old children at the year start	63
Table 4.6. Technical condition of the buildings for day-time secondary education schools	64
Table 4.5. Composition of primary vocational trainees ('000 people)	64
Table 4.7. Number of schools with gymnasiums	65

ABBREVIATIONS

ADB	Asian Development Bank
CD	compact disk
CIS	Commonwealth of Independent States
CSAWR	Center for Social Adaptation and Work Rehabilitation
CSR	Center for System Research
DL	distance learning
EFA	Education for All
EG	E-government
EIMS	education information management system
GDP	gross domestic product
H&S	hardware and software
HDIHDF	Human Development Index Human Development Gender Factor
ICT	information and communication technologies
KEA	Kazakhstan Education Academy
KSWTTI	Kazakhstan State Women Teachers Training Institute
LLL	life-long learning
MEBP	Ministry of Economy and Budget Planning
MES	Ministry of Education and Science
MOF	Ministry of Finance
MOI	Ministry of Interior
NB	National Baccalaureate
NCTNES	National Center for Testing and National Educational Standards
NFE	non-formal education
NGO	non-governmental organisation
OECD	Organisation for Economic Cooperation and Development
PEA	personal educational account
PEO	professional educational organisations
PI	poverty index
PISA	Programme of International Students' Assessment
PSVE	primary and secondary vocational education
PVI	primary vocational institutions
RIEPU	Republican Institute for Education Professional Training
RK	Republic of Kazakhstan
RSCEI	Republican Scientific Center for Education Information
SARK	Statistics Agency of the Republic of Kazakhstan
SRI	Scientific Research Institute
SV	Expert Club "Strategic Vision"
TUI	Teachers Training Institute
UN	United Nations Organisation
UNDP	UN Development Programme
UNESCO	UN Education, Science and Culture Organisation
USSR	Union of Soviet Socialist Republics
VS	vocational school
VTs	Vocational technical school

EXECUTIVE SUMMARY

Education is today the only real capital. The development of public education is the most important tool for the generation of capital and the number of educated people, quality of their knowledge and utilization of the knowledge is the most important indicator of the ability of the country to generate wealth.

Peter Drucker

The United Nations Development Programme (UNDP) has developed and presented the annual Human Development Report for the Republic of Kazakhstan for 9 years. These reports have become an integral record of the development of Kazakhstan reflecting the successes and problems along the way.

The 2004 report is devoted to the education sector in Kazakhstan. The authors of this document have tried to show the problems faced by the education system and to provide a comprehensive set of recommendations for future development of the education system for the benefit of public discussion. The approach taken balances a discussion of processes taking place both in the education system in Kazakhstan and in the region based on global trends.

Recently, education has been highlighted as one of the key factors in economic development through training and retraining workers and thus increasing the efficiency of the labour force. This approach to education is set out in the programme documents of the Ministry of Education and Science of the Republic of Kazakhstan as the public and national obligations of the education system.

On the other hand, in terms of education as a factor of human development, even though economic growth is a component of the Human Development Index (HDI), a key position of UNDP in this respect is that **the education system should, first of all, aid the development of the capacity of persons to make a conscious choice.**

This comprehensive analysis regards education as a public system, as a process and, finally, as a social institution affecting the formation of human capacity. During the process of education a person acquires the knowledge required to form and refine his or her public and personal social status, choose a suitable profession, and create a social identity. Today society values not only the state and society, but also the individual and his or her social status

and individual economic activity. This is the main principle that guided the consideration of problems that underlies this entire National Human Development Report.

The objective of this report is to identify the mutual influences that education and human development have on each other through analysing the current status of the education system in Kazakhstan and providing recommendations for its improvement in order to ensure quality education for all.

By setting equal access to quality education as an objective, the state will be able to ensure the constitutional right¹ of citizens to guaranteed secondary education and to establish equal starting conditions for all people so that they might have access to higher education and a successful career in the future, irrespective of their place of residence, household income level, ethnic identity or physical ability. Throughout independence, the national education system has been in the process of permanent reform.

As stated by the President of the Republic of Kazakhstan at the Third Congress of Education and Science Professionals, "The education sector faces a set of systematic problems that the government has been trying to resolve for 10 years by undertaking the modernisation of some sectors of the education system... First, the measures taken haven't brought improvements to the quality of education. Second, a serious problem is that the general secondary school system has reacted badly to the demographic growth in society: we haven't built new schools and kindergartens for a long time, which has resulted in the overload of the existing ones. Third, measures taken have not resulted in the domestic education system adapting and conforming to international education standards."²

¹ Constitution of the Republic of Kazakhstan, Article 30.

² Speech of the President of the Republic of Kazakhstan at Third Congress of Education and Science Professionals, 12 October 2004, <http://www.inform.kz/showarticle.php?lang=rus&id=96898>

Education for all: the key goal for a new millennium

In this age of information, the notions of knowledge and literacy have changed. New methods and tools of transfer, acquisition, processing and storage of information and knowledge are appearing. Under these conditions the education system of the 20th century cannot operate efficiently and satisfy the demands of the society. The education process is no longer limited to secondary schools and higher education but now includes the process of gaining and updating knowledge and skills during one's whole life. As a result, in addition to formal education, there are now appearing new methods of informal and spontaneous education, carried out in the informal environment and daily life, which do not result in formally recognized certificates. There is a need for building new relations to satisfy the education needs and interests of every individual of the country and ensure the successful development of the country in the future.

Widening traditional limits on education and the natural evolution of the education system speaks to the fact that today the state cannot increase the human development level in Kazakhstan and begin the process of building a knowledge-based society on its own. All citizens of this knowledge-based society should have equal access to knowledge since freedom of access is protected and enabled by public standards, laws and technology and, in turn, access to formal education will increase the level of economic activity and mobility of citizens. The educated person should be regarded as one who is interested in his own development and accountable for himself and his actions, who is able to make decisions and rational choices, and who feels a sense of social responsibility and strives to be of use to society.

Modernising Kazakhstan's society and adapting the national educational system to current global changes is only possible with the involvement and support of all stakeholders: representatives of central and regional governments, private businesses, the non-governmental sector, teachers, parents and students. Education that includes a wide variety of content, diverse structures and forms of institutions, multiple sources of funding and innovative concepts of ownership requires constant community involvement in strategic decision-making in the education sector. **This presumes the state's natural adaptation to a new concept of relationships in which the state recognizes the need to, and learns to, share responsibility for education with other members of society.**

This report is based on existing surveys and analyses conducted by national organizations and international organizations such as UNDP, the World Bank, British Council, UNESCO, UNICEF and the Asian Development Bank in the areas education, economic development and human development. On this basis the report considers how the Republic of Kazakhstan can change the substance and form of the education system to successfully resolve both old issues and an entire set of new issues taking into account both domestic and global education development processes.

The structure of the National Human Development Report includes six chapters which together comprise a

detailed analysis of human development from the point of view of the education system.

The **first chapter** considers the role of education in the formation of human capital. During this period of social, economic and national transformation, the role and functions of education are changing. The education system faces new socio-economic requirements. All of these domestic changes are taking place in parallel with shifting trends in global education, which, in turn, demonstrates the very need for these national reports. The first chapter then considers relevant international declarations, the UN Millennium Development Goals (MDGs) and the education policy and programme documents in Kazakhstan.

The **second chapter** discusses the Human Development Index (HDI) and its components in Kazakhstan. The HDI consists of three indicators: life expectancy at birth, the level of adult literacy and total share of students at various educational levels, and gross domestic product (GDP) per capita. Each component in the HDI is weighted differently. The analysis of the HDI presented in Chapter 2 shows major differences in human development by regions of the country and from year to year, which is largely explained by major differences in levels of income per capita. The chapter also discusses the relation between education and other socio-economic factors such as poverty, infant mortality, the healthcare status in general, environmental conditions and environmental awareness, and gender equality. In general, equal access to education is the key driver of human development, which further affects the social and economic well-being, moral and spiritual development, and equal opportunity of people irrespective of their ethnicity, religion, sex, age, social status or health condition.

An analysis of the existing education system in the Republic of Kazakhstan is presented in the **third chapter**. The chapter focuses on national education policies with special attention given to legal regulation and mechanisms for managing public education. Equally important is the survey of the education system at all levels. The quality of the education system is analysed based its products: for example, the enrolment of schools and number of students with access to education. Availability of professional teachers is analysed in detail because of the important role that qualified teachers play. Important criteria in analysing the education system are literacy rates and other indicators of the quality of education. Infrastructure and facilities are also analysed with a focus on the funding for education.

The **fourth chapter** discusses the notion of "Education for All" (EFA). It considers and compares the key conventions and declarations regarding education. The chapter also summarizes the objectives of the Dakar action framework. This framework provides the fundamental principles of the global "Education for All" movement, reflecting the intention of the world community to ensure the right of quality education for all and recognizing the learning activities of a person as a natural part of life at any age. This chapter provides a new and expanded notion of literacy that includes the ability of students to independently solve problems, acquire new information and knowledge, think critically and creatively, and be enterprising and inventive. This new understanding of literacy also covers adults and

thus the need for continuous learning, regular improvement of individual abilities and upgrading existing skills. Indeed a key criterion of literacy is adult education. This chapter therefore deals with literacy among the entire population of Kazakhstan and ways to improve the situation given the above definition of “literacy.” The chapter also analyses the key actions required to achieve the objectives set out in the “Education for All” documents. Six EFA objectives are related to the content of key human development principles.

The **fifth chapter** discusses the notion “life-long learning” (LLL). There are two equally important facets of the LLL concept: increasing and improving civic involvement and improving employment opportunities. Under this concept, the provision of basic education to people is a necessary pre-condition for the successful adaptation of a person to a knowledge and market environment. The LLL concept identifies three main categories of targeted learning: formal education, informal education and spontaneous education (or casual education). Compared with formal and informal education, spontaneous education is not necessarily deliberate and people may not recognize that such learning has an effect on widening their knowledge and skills. In life-long learning, an important factor is the need for complementary forms of formal, informal and spontaneous

education. Due to the accelerating development of technology, access to knowledge has become the most important condition for participation in the global economy. Thanks to new information and communication technologies (ICT), the process of collecting, using and disseminating knowledge has significantly accelerated. The use of ICT to improve education quality suggests the need for regular surveys to monitor the performance of electronic tools and teaching activities and to make adjustments as necessary.

The **sixth chapter** includes recommendations to resolve those problems identified throughout the report. An independent assessment of the status of national education and recommendations for its improvement are particularly needed now when major investments in the education system are expected under the 2010 National Education Development Programme that was adopted in October 2004. The sixth chapter contains conclusions for all previous chapters. The chapter provides recommendations covering each educational level and also covering content and quality indicators, such as how to ensure equal access to education, improve the quality and efficiency of education, promote the wider involvement of society in education system reform and other similar considerations.

The **Conclusion** includes common recommendations.

FOREWORD BY DANIAL AKHMETOV THE PRIME MINISTER OF THE REPUBLIC OF KAZAKHSTAN

Dear friends!

We've all witnessed the impressive results that independent Kazakhstan has achieved. Today the crucial goal for our young state is to become a dynamically developing country. Achieving this goal very much depends on creating a qualitatively new economy based on knowledge.

In all strategic documents the President of Kazakhstan, Mr. Nursultan Nazarbayev, has highlighted the importance of quality education in making our country, economy and nation competitive and sustainable.


In recent years there has been a significant increase in financial support to education and science leading to the implementation of fundamental and technological research programs. Education is vitally important in the implementation of various national programs such as the Industrial and Innovation Development Strategy, the National Rural Development Program, the Public Health Development Program as well as program on development of the Kazakhstan's Caspian Sea region. The recently approved National Education Development Program up to 2010 is also aimed at solving these problems.

In this context, it is quite timely that this year's Human Development Report for Kazakhstan, prepared under the aegis of the UN, is dedicated to education.

Today the whole world understands that education is not limited to formal studies in schools and universities alone but forms the basis for social self-realisation of the individual.

I believe that this publication will be of practical importance to everyone in Kazakhstan and will be a valuable source of information for those who are interested in our country and its positive changes.

With best wishes,



D. Akhmetov

FOREWORD BY YURIKO SHOJI UN RESIDENT COORDINATOR/ UNDP RESIDENT REPRESENTATIVE

This year's National Human Development Report is devoted to education as a crucial motor of human development. The special attention to this issue is determined by the impact education could have on the future of a human being, her/his well-being, health, success and, eventually happiness.

A person can develop her/his abilities only in a harmonious society where all aspects of human development including economic, political, social, and gender factors are interlinked and create a foundation leading to a conscious choice. Harmony in society as a whole can be achieved only through understanding of education as a basis for raising and developing an advanced person. This approach was highlighted at the global conference in Dakar that strengthened the Education for All movement and recognized education as a "fundamental human right."

The Republic of Kazakhstan recognizes the vital importance of education for further development of the country and its role in the international arena. In this respect, much work has already been done and much remains to focus on to ensure equity, quality, and efficiency of education system. This becomes even more relevant in transitional countries balancing in their development where education provides opportunity for a comprehensive vision. In such understanding education is seen as a force for social and economic change allowing people to become more empowered and more productive. The Government's efforts in reforming education have to be supported by the practical implementation of such a vision with the broad involvement of different parties.

The main challenge for education in Kazakhstan is to ensure that all people have the knowledge, skills, competencies, and values needed for improving human and economic development. There is robust evidence that knowledge and skills are important determinants of economic growth and social development. Education plays a crucial role in fostering the development of the human capital needed. As we all know today's labour market demands new skills that help to foster social networks, norms and values that are essential for well-functioning democracies with the active participation of citizens. To achieve this the education and training should be available to as many people as possible including those with disabilities, members of vulnerable socio-economic groups, ethnic minorities and others facing disadvantages.

I believe this Report will be useful to all levels of government, to civil society organizations, to the academic world as well as to the donor community and international organizations in discussing the role of education and fostering constructive dialogue in Kazakhstan.

On behalf of UNDP, I would like to thank all those who contributed to writing this report, especially the authors for the impressive analytical output they produced. I also hope that the report will help different stakeholders in the development and implementation of educational policy to achieve higher human development in Kazakhstan with UNDP support.



Yuriko Shoji

MESSAGE FROM THE AUTHORS

This annual National Human Development Report is devoted to Education in all its different connotations: education as an institution of social development and education as the process of learning, developing and improving human beings. These notions have different senses. We have tried to analyze the influence of education on human development from both perspectives.

We would like to admit that most of us are not experts in analysis of the education system in Kazakhstan. We are experts in different sectors: macroeconomics, sociology, innovative management, governance, psychology, and so on. While preparing this report we tried to follow the same “new” requirements that we have described in this document: we were in the continuous process of learning, regularly updating information which became obsolete within two or three months, positively reacted to criticism and opinions differing from ours, and responded in a flexible and quick manner to events that caused radical revision of some chapters of the report. This report has become one of the first major projects of the survey of the social sphere in Kazakhstan for the Expert Club Strategic Vision, which is only at the formative stage.

This report results from the partnership of the “Strategic Vision” Expert Club and “Education for All in Kazakhstan” Association. It is the result of cooperation synthesizing the enthusiasm of Expert Club’s youth and the many years of experience of the association members who are the authors of numerous education surveys and analyses.

Our confession will probably lead to a negative evaluation of the work that we have done. However, we believe that an independent view of the problems and prospects of education development in Kazakhstan from outside makes it possible to impartially analyze and evaluate the existing condition of the education system. It is the independent view and our experience in different areas that helped us to profoundly and comprehensively analyze the influence of education on human development, and the influence of new social requirements and globalization trends on education.

We made an attempt to understand what education is, understand our origins and the history of global civilization, modern trends in education, and to understand why the world is changing and what changes this results in. Responding to these and other questions we came to the understanding that as human development issues are closely related to new knowledge and new methods of teaching so education problems are closely related to the methods that are used to solve them – new or old. Education problems cannot be now solved by direct formal

measures only. Society as well as individuals should also recognize and, bear the responsibility for, development and for the level of education, which in turn influence the well-being, health, success and, eventually, happy life.

We came to such ideas not just to gratuitously promote the significance of education in our life. This is clear and recognised. Trying to describe the changed conditions of humanity, the development of civilisation, and the place for every one of us, we would like the readers to think of the responsibility for education reform, its compliance with our own requirements and the new role of knowledge in the life of every person. Working on the report and working under another project – formation and development of the national innovation system – our experts spent a huge amount of time analysing current trends of economic and social development. Kazakhstan, making efforts to enter the global environment and be competitive, maximises the use of innovations and advanced technologies in development. In this respect this report covers the terms of a knowledge-based society and new social requirements, which will help the readers to come to a new understanding of the role of knowledge and education.

The authors of the report made an attempt not only to find definitions of the new processes but also to respond to the questions that were raised long ago in the most diverse sections of society. The most important issue within “Education for All” concept: what is being done in Kazakhstan to make basic education equally accessible for all in the society? The state allocates education grants to rural school graduates to get higher education, thus trying to offset the inadequate teaching levels at rural schools, though it should be recognized that this measure couldn’t level the difference in education between rural and urban school graduates. Equal starting opportunities for an adequate education level can achieve getting basic knowledge and education at all schools. This would then provide equal conditions and chances for access to higher education. This and other problems are covered by this work.

However we understand that this report is not enough to cover all education problems and its influence on human development. Not only publications, but also active measures are necessary. And dozens of years to see the outcomes of the reforms undertaken.

We hope that the report would be of interest and use for the wide diversity of readers: from schoolchildren and students to government institution professionals.

The Authors

ACKNOWLEDGEMENTS

Authors of the Human Development Report “Education for All: the Key Goal for a New Millennium” and UNDP Task force would like to thank all those who helped and contributed to this Report’s production: representatives of public associations and professional education community, national and local governments, Statistics agency of RK, international organizations and consultants, teachers and students of schools and higher educational institutions.

Special gratitude is expressed to the **Deputy Head of the Administration of the President of RK Mr. Yerbol T. Orynbayev** for the support and cooperation in collecting the required information on educational institutions in the regions of Kazakhstan and to akimats and heads of oblast departments of education for the supply of information on education system condition in the regions.

We are grateful to the **UNDP Deputy Resident Representative in Kazakhstan Mr. Gordon Johnson** for the guidance and to the UN Development Programme staff for the professional assistance in preparing the Report.

Additional thanks are to UNESCO, UNICEF, World Bank, Asian Development Bank, British Council and other international organizations whose information and analytical materials were used in developing the report. Special thanks are to **Isaac D. Froumin, coordinator of education projects of Moscow office of the World Bank** for valuable comments and information for the report.

We must also thank **Irina Teleshova, deputy dean of the economic faculty of the Moscow State University named after M.Lomonosov** for the comments and suggestions provided.

We would also like to thank the specialists who have contributed a lot in the discussions of the Report and the participants of the round-table in Astana for the comments provided.

It is unfortunately impossible to thank everyone whom the authors consider the participants and helpers. Education is the sector that, somehow or other, affects all categories of population and the authors of the Report felt the valuable assistance of very many people.

Chapter 1. EDUCATION AS THE BASIS OF HUMAN DEVELOPMENT

The objective of a child's education is to make him able to develop further without the assistance of a teacher

E. G. Hubbard

Before the middle of the 20th century, education was a rather strict and closed system that was a key element of the public structure of any given country. Its main objective was to prepare the younger generation to take their place in society, i.e., to pass on to students a set stock of social expectations from previous generations intended to constitute the only education they would need for their entire lives. Education fulfilled two functions – economic (training the labour force) and social (comprehensive development and socialisation of the young generation). Since the 1960s the objectives, tasks and functions of education and forms of teaching, the role of education in the life of a person and society, and the nature of relations between education, the person and society have been gradually changing. The current level of mankind's socio-economic development and the acceleration of scientific and technological revolutions require more diversified education at multiple levels, allowing individuals to adapt at a minimum cost to the rapid changes in economic, social, political and cultural life.

Thus the vision of the role of education changed in the course of several centuries from the Age of Enlightenment up to now. Starting with a narrowly-focussed economic view of education as a tool in labour formation, training and improving the qualifications of workers, humanity has come to understand the wide social implications of education and has begun to put education within the context of broader approaches to human development.

The concept of human development acknowledges the wide and manifold social functions of education and gives it a key role in resolving fundamental problems in society. In other words, the modern function of education is to establish the conditions needed for a person's development to ensure the

realization of his or her life objectives, taking into account the needs and conditions of society. Education should comprehensively prepare an individual for life in all of its manifestations, serving also as a catalyst and tool for social mobility and providing wider choices in different life events.

Irrespective of which country, long-term trust in the education system by society and the people – the taxpayers who finance the education system – can only be ensured if the education system is capable of adapting to economic, political and social reforms taking place in the country and instilling the knowledge and values needed by the population for prosperity. This chapter covers the deep influence of global economic and social transformation on the education system.



1.1. INFLUENCE OF EDUCATION ON HUMAN DEVELOPMENT

Education is the most important element of human capital development for every country in the world. A citizenry that receives the required training can develop knowledge and analytical skills, move the national economy forward, form the basis of civil society, educate the next generation, lead an effective government and make important decisions influencing the life of the entire society.

Being the most important factor of human development, education has a highly significant and probably essential influence on the achievement of a whole set of social, economic, political and humanitarian goals. These include achieving a level and quality of life adequate to modern civilisation, eliminating poverty, ensuring an efficient workforce, reducing social disparities, eliminating gender and racial inequality, reducing criminality, combating the spread of HIV/AIDS, preventing political and ethnic conflicts, promoting sustainable development, strengthening civil society, and ensuring the enjoyment of human rights. In sum, education can create the conditions needed for the complete realization of an individual's capacity.

Changes in the approach to education clearly reflect the trends of modern social development. The traditional understanding of education as the organised process of systematically transferring and acquiring knowledge, abilities, skills, characteristics and moral values has changed. Education now is regarded as the development and self-development of an individual in mastering the collective social experience of humanity. Such development is expressed in knowledge, abilities, creative activities and emotional and value-based attitudes towards the world. As such, it is a pre-condition for the actions of the individual and society to develop and protect its own material and spiritual culture.

Education as a social phenomenon and process, as a social system and, finally, as a social institution is connected to practically all changes taking place in society. This is even more so with regard to education in societies undergoing profound qualitative transformations, as is the case in Kazakhstani society today. The transitional nature of the processes taking place in this country – dominant place of market relations cannot fail to influence the social institution of education as a whole and its subparts in particular. Thus, while considering the impact of education on the development of human capital, one should take into account its relation with the individual and society as a whole.

The significance of education as the most important factor in developing the new face of the economy in particular and society in general is now well understood in the modern world, and the influence of education on the formation of human capital is also increasing. Though the notion “human capital” has come into technical use rather recently, economic analysts have rather a clear understanding of its meaning.

For the purposes of this document, “human capital” is defined as the aggregate ability of individuals, society and the state to use human resources to solve specific

problems and achieve set objectives. Human capital includes both inborn abilities and talents as well as the skills and knowledge acquired through education. In coming to understand the idea of human capital, a different vision of education was developed as a result of recent global changes. During the education process, the individual should not only acquire knowledge but also increase his or her abilities to solve problems, with higher levels of education presumably indicating increased abilities in this regard.

Modern society lacks a unanimous and consistent understanding of the role of education in the development process of the individual and the country as a whole. For most people studying at a higher institution is primarily an opportunity to develop his or her own intellect or to secure an interesting career. However there are many others who link higher education mainly to the possibility of gaining higher future incomes.

The primary task of education policy in Kazakhstan at present is to achieve modern standards of quality and to meet the actual and future demands of the individual, society and the state. The education system is obligated to ensure equal access for all to rigorous education irrespective of income, place of residence, ethnic identity or physical ability.

Therefore considering education as the most important ingredient in human capital (both as an individual and as social being), the concept of human development gives wide-scale and manifold social functions to education and entrusts it with a key role in resolving the fundamental problems of today's society. It is the education sector in the Republic of Kazakhstan that is assigned the difficult, responsible, but also noble mission of being the driving force of progress and future prosperity of the country.

1.2. NEW SOCIAL REQUIREMENTS FOR THE EDUCATION SYSTEM

During the transition of Kazakhstan to its status as a legal state, democratic society and market economy, problems have arisen related to changes in the system of values and social priorities and to economic and political hardships during this transition. The fundamentally new spiritual, moral, economic and social requirements need to be met by education.

With the increasing use of satellite technologies, personal computers and the Internet, mankind's standard of living has undergone changes both at the level of civilisation and the individual. Many of these changes reflect the fact that the information-innovation society is playing a more dominant role in civilization today. The challenge of bringing the education system into compliance with these new forms of social development, production forces and production relations is becoming of higher importance.

In the age of information, social power comes from and is exercised through managing resources and flows of information. In this kind of society, there is a threat that the individual's thoughts could be highly influenced by the constant flow of information persistently penetrating

the individual's brain, which could then to a large extent predetermine a person's reactions, thoughts, and behaviour. This in turn could significantly undermine the stability of the social structure. Because of this threat, the new social requirements of the education system include bringing up a person who is able to live in constantly changing social conditions, take in the surrounding world in an appropriate way and with a stable holistic outlook, and adequately perceive, analyse and use the rapid flow of information.

As information and knowledge play a key role in modern society, the main characteristics of modern individuals are:

- ✦ Free and unlimited access to a wide spectrum of information and knowledge.
- ✦ Growing mobility available to all through easy-to-get formal education.
- ✦ Equal access to knowledge.

Taken together, these three characteristics will make society highly competitive both for the benefit of the country as a whole and for the individual. Although information technologies will be just one of the many novel characteristics of the "new" knowledge-based society, they are already producing one extremely important effect: they allow knowledge to be disseminated and be accessed almost instantaneously.

In the light of the new emerging social requirements of the education system, the two component objectives of education – and the two equally important objectives of the state, which are still valid – can be worded in the following way:

1. Formation of capable and responsible citizens able to make rational choices and independent decisions for their nation, society and themselves;
2. Formation of enterprising, competitive and economically active citizens able to improve themselves, take care of themselves and their families, and easily adapt and adjust to new ideas.

The ability of society to create, select, adapt, use and profit from all forms of knowledge is a decisive factor both to increase the people's living standard and promote the sustainable growth of the country.

The process of globalisation is accelerating these trends as knowledge is regarded as being of paramount importance in establishing the competitive advantage of a country. Comparative advantages of countries are to a lesser extent determined by their wealth of natural resources or cheap labour and to a greater extent by their technical innovations and competitive applications of knowledge, or both.

In this respect another social peculiarity of the existing education system has been its interrelation with the so-called "new economy." The new economy is a combination of sectors characterised by the high input of human capital as compared to physical capital. It includes the education, information and communications markets, the production of technology, and so-called intellectual services. This has also been called the knowledge-based economy.

Kazakhstan is fully aware that the lack of creative individuals prepared to run risks could be the biggest obstacle to the build-up of a knowledge-intensive economy

in Kazakhstan. Knowledge at this stage of social and economic development means that a person should have:

- ✦ Diverse knowledge allowing quick adaptation to changes taking place in the society and economy;
- ✦ Profound basic knowledge and skills facilitating future education;
- ✦ The ability to analyse information and make choices and decisions on the basis of analysis;
- ✦ The ability to respect generally accepted standards of social behaviour and entertain different views on problems and situations.

During the process of gaining knowledge, students need to learn to be independent, resolve problems on their own, acquire skills for finding new information and knowledge, think critically and creatively, and show initiative and inventiveness. The future belongs to countries with people who use information, knowledge and technology more productively.

Another aspect of this new understanding of knowledge related to new social requirements is the need for continuous education and regular upgrading individual abilities and qualifications. Continuous education entails the retraining required to increase the level of individual qualifications – and therefore competitiveness in the labour market – and to keep up with the introduction of new products and services. The concept of life-long learning issued in 1996 by the ministers of education of the Organization for Economic Cooperation and Development (OECD) member countries is based on the new vision of policies in education and vocational training as a basis for knowledge-based development. Continuous learning is covered in more detail in Chapter 4 of this report.

The problem of education in society is not only related to economic development and increasing efficiency and competitiveness. In the overall international context of shifting to a post-industrial society, with a world of many ethnicities and faiths establishing democratic civil societies, educational reform is a decisive condition for forming modern social values and lifestyles for the Kazakhstani people. Education should play the lead role in uniting different values and lifestyles with national and ethnic traditions to form a new system of values of society – open, diverse, spiritually and culturally rich, tolerant – and ensure the establishment of authentic civic spirit and commitment to democracy.

The education system should ensure equal access for all young people to full education, irrespective of income, place of residence, ethnic identity, or physical ability. The education system should also use engage in the social protection of children and adolescents deprived of their parents' care. Other important objectives are to develop competent professionals and to allow the most talented and gifted children and adolescents to achieve their full potential.

The education system should ensure efficient use of its resources – human, information, material and financial. The state should give priority to supporting education. The implementation of contemporary social requirements in the education system and the promotion of its social role require, on the one hand, modernization of the education system itself and, on the other hand, changing attitudes

on the part of the state, society and individuals to be educated.

Apart from the growth of the information society, the education system also remains the most important social institution for informing public culture. This system provides historical and socio-cultural continuity, and preservation of the multi-faceted ethno-cultural identity of Kazakhstan and its citizens is impossible without it. As in centuries past, education encourages respect for the past and responsibility to the future. It should facilitate development of the people's historical memory in the youth, which, if lost, could cause the younger generation to repeat the mistakes of the past.

Preservation of cultural sources, native languages and spiritual traditions absorbed through the education system should provide the growing generation with some protection from the all-absorbing, all-unifying and assimilating globalisation processes. However "national baggage" should not hinder the integration of new generations of Kazakhstan citizens into global education or reduce their competitiveness. A new public mentality should be developed to see eye to eye with the principles of the reforms being undertaken in the country. It should undoubtedly incorporate elements of overall human culture and modern knowledge as well as national and ethnic traditions.

Informal education in the 21st century should stimulate the development of all aspects of human and intellectual capacity. It should not only focus on access to the world knowledge base in terms of both content and organization, but it should also facilitate preservation of national culture and values founded on the humanitarian and social sciences preserved through the ages and ever valuable, including philosophy, literature and art.

By transferring democratic values and culture, the education system should help to form society's place in the world, contribute to improvement of the state, and promote social unity. This in turn serves as the basis for forming and strengthening social capital, which is normally understood as the benefits that people acquire by being members of a society, including access to resources and guaranteed protection during crisis.

Institutions, relationships and patterns introduced by the education system should serve as effective mechanisms to influence the quality of social relations, supporting economic, political and social development. Sitting at the juncture of social cooperation among all participants in the process of education (state, civil society, private business, teachers, parents and students), educational institutions can promote stronger communities, stimulate social activities, and facilitate the development of different forms of training and implementation of innovative practices.

This cooperation can eventually result in more efficient governance, facilitate civil involvement, mitigate inequality, and reduce social isolation and corruption – for the sake of society, the state and market.

Therefore despite the changing world and the new social requirements for education, the objective of the education system remains the same – to form capable and competitive citizens. One objective of this report is to consider the role of knowledge not only in view of profit but also from the point of view of educating future generations – responsible, rational citizens.

1.3. INTERNATIONAL CONVENTIONS AND DECLARATIONS

During the last quarter of the 20th century the education system in the world underwent major changes, called the "education revolution". Initially it was considered as a side effect of "social effects" of the scientific revolution, but later consequences turned into causes. Education has become a key factor not only in economic and scientific progress, but also in the development of social culture and the achievement of social status and welfare.

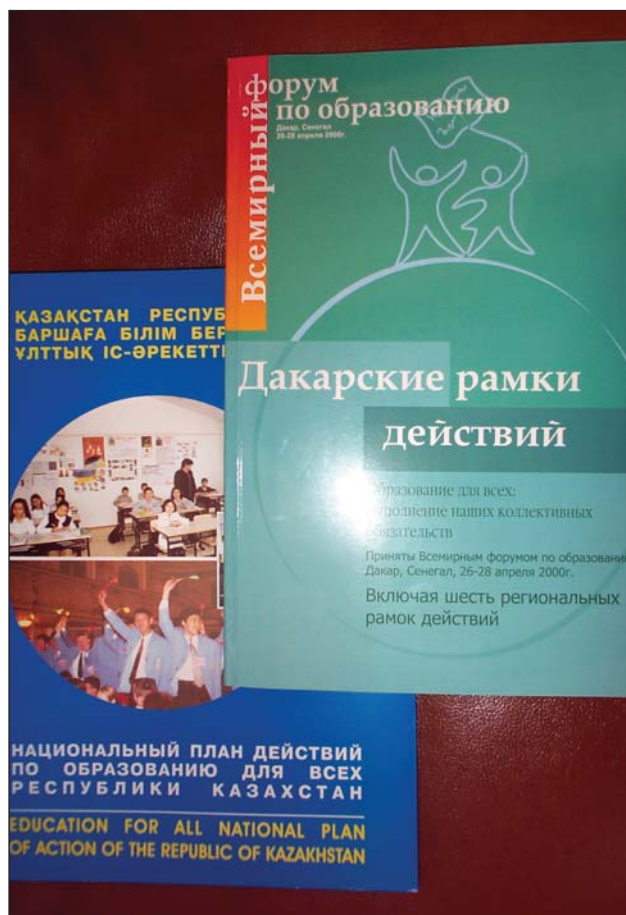
The first outcome of the education revolution was the radical democratisation of education that swept over most developed countries and some developing ones as well. In most developed countries the task has been set out to make universal the growing access to higher education.

These changes have been reflected in the emergence of a new and quite revolutionary understanding of the role of education in society that has a direct impact on both the public mind and national policy: education has turned not so much into a means for training specialists for the economy, but a method of increasing the overall intellectual, technological and cultural level of the society, supporting its capability for innovation, progress, and establishing a modern lifestyle. This implies that it is possible to improve education without a necessary link to economic issues.

At the same time, the education revolution, like the scientific one, touched different countries and regions differently (see Annex 2, table 12). It has made the gap between the developed and developing countries even wider. While the former achieve almost universal higher and general continuous education, the latter still have the challenge of universal literacy on their agendas.

The international community has developed a strategy for dealing with issues related to the role of education in human development: the "Education for All" (EFA) movement. Its basic principles were formed at a conference held by UN in March 1990 in Jomtieng, Thailand. The conference issued the "World Declaration on Education For All" based on the Universal Declaration of Human Rights and Convention on the Rights of the Child. This declarations, states that any child, youth or adult, as a human being, is entitled to education, meaning satisfaction of his or her basic education needs in the highest and fullest sense of the word: education giving him or her the option to learn to think, act, and live together with others. The declaration proclaimed the end of strict, prescription-based education systems and the start of the age of flexible systems. It called upon all countries to bring their education systems into compliance with the needs and requirements, and cultural and historic conditions, of the students. Such education aims to develop the talents and capacities of every person and develop the personalities of students so that people can improve their lives and reform their societies.

In April of 2000 the World Education Forum in Dakar summed up the outcomes of implementing the Education for All strategy during ten years. The Dakar forum strengthened the focus on education as the most important component of human development. The main document of the forum, "Education for All: Compliance with Our Commitments," stresses that education is a basic human



right. It is a key to sustainable development and peace and stability in domestic affairs and between nations. Thus it serves as an essential tool for effective participation in the social and economic life of the 21st century as influenced by accelerated globalisation.

Principles on basic education established by the Jomtieng and Dakar forums are organically complemented by the ideas and principles set forth by the World Higher Education Conference held by UNESCO in Paris in October 1998. The conference recommended that governments of all countries make access to higher education – including equal opportunities – a primary goal of education policy. It was clearly stated that higher education should collaborate with the “World of Work” and not adjust to it.

Thus the world community opposed the restriction of education functions to only training labour or educating professional personnel. In this respect, the Paris conference expressed serious concern with the weakening general cultural and moral functions of higher education.

Many analysts have noted that the most important link in the chain of crises and problems that mankind faced at the turn of the millennium was a crisis in the competence of modern people. The main threat to mankind today is that the ability of people to cope with changes in the world lags behind the speed of such changes. These analysts suggest that one way out of this situation is, in addition to training the younger generation, constantly improving adult competence.

The challenge of developing adult education is a global issue and as such was given special consideration at international conferences in 1960 in Montreal, in 1972

in Tokyo, in 1985 in Paris and in 1997 in Hamburg. This challenge was one of the highest priority issues for the UNESCO General Assembly in 1976 in Nairobi. All these forums stressed the decisive role of adult education in the socio-economic, moral and cultural progress of mankind. The World Conference in Hamburg issued a declaration stating that the education of adults is not only a right but also a key to open the door to the 21st century.

Educating adults includes the entire system of education (including informal and spontaneous education) helping adults to develop their abilities, enrich their knowledge and improve their professional qualifications or apply existing skills to new areas in order to satisfy their needs and the needs of society. Like education for children and adolescents, an integral part and a necessary element of the new education concept is life-long learning. The key objective of life-long learning is to facilitate individual development so that people can actively, sufficiently and efficiently participate in the economic and social spheres of public and private life.

Education cannot be a separate area of global or national policy. Education in the modern world is becoming an underlying component of the entire development process, addressed in social, economic, political and ecological areas of modern society based on respect for human rights, well being and efficient management. The holistic character of the development process was reiterated at one of the important international events in modern history – the Millennium Summit – where 189 states came to an agreement on joint work to achieve specific development targets as a world community by taking national actions, the most important of these being to cut in half the number of people living in poverty. The Millennium Declaration signed by all UN member-countries notes the extremely non-uniform character of development in the world and accepts “joint responsibility for establishing principles of human dignity, fairness and equality at the global level”. The world leaders included in the declaration a set of general objectives known as Millennium Development Goals (MDGs):

- Goal 1:** Eradicate extreme poverty and hunger
- Goal 2:** Achieve universal primary education
- Goal 3:** Promote gender equality and empower women
- Goal 4:** Reduce child mortality
- Goal 5:** Improve maternal health
- Goal 6:** Combat HIV/AIDS, malaria and other diseases
- Goal 7:** Ensure environmental sustainability
- Goal 8:** Develop global partnership for development

Successful achievement of these goals depends on a comprehensive approach to deliberation and implementation. Education issues are covered by MDGs 2 and 3: ensuring universal primary education and promoting the rights and opportunities of women by encouraging gender equality in education.

The report “The UN Millennium Goals in Kazakhstan”³ shows that the MDGs on education have already been

³ National report “The UN Millennium Education Goals in Kazakhstan”, Almaty, 2002.

achieved in the country. This means that Kazakhstan needs to identify other development targets as the national goals in human development for the short term:

- ✦ Increasing equal access to quality education;
- ✦ Forming a model national education system that is integrated into the global education system and ensures the sustainable development of the society.

Two major factors can be identified as global practices in education system development that have a rather strong effect on educational practices: first, an avalanche-like flow of information in all areas of knowledge; and second the need for flexible and adaptive education systems that provide for the possibility of quick professional reorientation,

The process of education system development in the modern world is characterized by⁴:

- Growth of the level of general education of the population;
- Increase in requirements for cultural awareness and levels of professional qualifications of all citizens;
- Establishment of system of continuous education;
- Increase of the period of general secondary education (to 12 years).

retraining, and self-development at any stage of human life. Therefore modern society today needs a person able to see and creatively solve emerging problems.

The transition to a market system is driving countries to replace their traditional education paradigm. This means that the main concepts and curricula and in fact the entire idea of education at different levels need reviewing. Many states have already passed this period of constructing a knowledge-based society corresponding to the needs of the times, namely, to take into account the need for innovation capacity development.

Three major, closely interrelated tasks of the global community can now be identified:

- ✦ First, to take into consideration the principles of independent activity and rational minds as the leading principles of education and training. Thus, "intellectual and moral human development on the basis of involvement in diverse independent reasonable activities in different areas of knowledge"⁵ is accepted as the key area of education reform in the leading economies of the world (USA, UK, France, Germany, etc.).
- ✦ Second, to orient the school system more towards training persons capable of independent thinking and resolving diverse problems, with creative minds and rich intellects based on a deep understanding of human knowledge, who are in demand in the labour market.
- ✦ Third, to integrate information technology tools into the education process. The new technology already provides access for many people to the

"avalanche-like" flow of information. In the short run, these technologies will be implemented in classes and make global information accessible to teachers and students. Therefore the task of developing students' abilities to orient to and interact with huge volumes of information is already a concern.

A separate chapter in the textbook "Human Development in Kazakhstan"⁶ considers different education models. There are a great number of national education models. However, they can be divided into basic models, and then variations on basic models. The main or basic education systems can be classified on the following basis:

- ✦ Role of the state
- ✦ Correlation of the roles of national and local governments in managing and funding education
- ✦ Proportion of paid and free education
- ✦ Correlation between "education for the masses" and elite institutions
- ✦ Proportion of fundamental and practical orientation in the structure and content of higher education

Based on these characteristics, two education systems can be identified that could of interest – the American system (with the Japanese) and the European system (the Soviet education system, taking into account the full nationalization of economy and ideology, used to be a variant of it).

The American education system is a complicated system where one educational institution can use the resources of several different institutions, both public and private. However this system is still characterized by a major role on the part of the state in funding education but with high involvement of the private sector. Schools are managed by municipal bodies, financed by taxes that are collected and allocated by the treasury of the state; in general, local sources prevail over federal ones. Quantitative parameters indicate approximate equality between private and public higher institutions. Secondary education is mostly free, and higher education is mostly for-fee, but with an established system of assisting students with payment for education services. Education quality in elite and ordinary institutions differs greatly. The degree of independence of education institutions in identifying the content of education is very high, with national institutions playing no leading role.

The European system has predominantly public and free education with institutions enjoying the right of independent handling of finances. The status of "grant-managing schools" makes the schools free of intrusive stewardship under local education bodies and at the same

⁴ "World trends of education development" included in the draft "Concept of structure and content of general secondary education", materials scientific and practical conference "All-Russia August Teachers' Council – 2000" available on site www.2000.pedsovet.alledu.ru

⁵ Polat E.S. "Basic trends of education systems development in the world" available on site www.edu.km.ru

⁶ Human development in Kazakhstan: Textbook/General edition by N.K.Mamyrov and F.Akcura – Almaty: Ekonomika, 2003, pp. 184 - 195

time strengthens the role of parents and their influence on the development strategy of the school. The European system also operates with the principle of autonomy of universities, which is deeply rooted in history. However the general centralization level of the education content is much higher than in the American system. The role of academicians in managing education institutions is significant, while in the USA these functions are mostly implemented by tutorial boards. The basic level of education is much higher than that of the American system.

1.4 NATIONAL DEVELOPMENT DOCUMENTS AND PROGRAMMES

In 1997 the European region issued the “Lisbon Convention on Recognition of Qualifications” related to higher education, which was joined by 33 member countries. In 1999 European countries signed the Bologna agreement on the establishment of an “integrated education area”.⁷ Based on this, by 2010 the entirety of western Europe should have a unified system of higher education. Kazakhstan ratified the Lisbon convention in 1997 and, since then, the process of integration into the world education community as an equal member has started. The integration process requires the gradual improvement of educational quality standards on the one hand, and building up the competitiveness of the education system on the other hand. To implement these goals, Kazakhstan has already done a lot: two-step higher education has been introduced – baccalaureate and magistrate; internationally recognized credit-based technology is being implemented in the national curricula to ensure the mobility of students, teachers and professors; the “Concept of Development of the Education System in the Republic Of Kazakhstan up to 2015” was issued reflecting progress in the education system in line with general world education standards.

However some factors need to be taken into account during the implementation of these processes. There are some misperceptions among the education community of Kazakhstan regarding the importance of the Bologna process for the country. The processes taking place in the East European countries under the Bologna agreement have no direct relation to the education reforms taking place in Kazakhstan. The Bologna process is an internal European process of education unification and regional movement under the Lisbon Convention.

Therefore the reforms in Kazakhstan should focus on adapting and modifying the requirements of the Lisbon convention to suit Kazakhstan’s unique characteristics. This process can be initiated through developing standards for Eurasian education within the framework of the Eurasian economic community. Blindly adopting other education systems is probably not the most suitable approach for Kazakhstan. Instead the country should take the best from both the old and the new systems to establish the most successful model adapted to the development conditions and requirements of Kazakhstan.

Centuries-old wisdom, international experience in education sector reform with advanced socio-economic development, and the indisputable value of the heritage of

the basic socialist education system can serve as the basis for building an efficient education system in Kazakhstan capable of forming a new generation of citizens of the country, prospering and harmoniously developing a nation with competitive advantages.

The reasons for education reform in the independent state of Kazakhstan are fundamentally different from the pre-conditions for economic and political reforms. The latter were related to a profound economic crisis, the historical inadequacy of political relations, a serious lag behind advanced countries in terms of the structure and outcomes of production, the level and quality of life of population, and inefficiency in governance.

The evaluation of the education system inherited by Kazakhstan from the Soviet Union is rather ambiguous. Most indicators of economic development of the country at the beginning of 1990s were above many developed countries, including the level of education and people’s qualifications, the efficiency of the education process, scientific capacities, etc.. Universal literacy of the population, full enrolment of secondary education and a high degree of accessibility of higher education, free education at all levels, the academic character and level of general education programmes, and the diversity of topics were impressive according to any international measures. The capacity of staff in education and science is the indisputable historic achievements of the Soviet period. Education and science were subjects of particular interest under the Soviet state.

However, strict regulation leaving no “gaps” for penetration of market forces, even in the shadow market, made the intellectual area the most vulnerable to the economic and political collapse resulting from the termination of the USSR. Thus, the first and most basic task of education reform in Kazakhstan is the need to survive and develop in the new conditions by adapting to the market.

At the same time, the tasks of restructuring and modernization should both be implemented in terms of repairing the “defects” of the Soviet system and adapting to the new character of the economy and social relations and to new political, cultural and moral values. A third task also emerged – integration with global education through implementing international standards.

The solution of these problems has become a key strategic development priority of the country before 2030. The strategy “Kazakhstan 2030: Prosperity, Security and Improvement of the Well-Being of all Kazakh Citizens” states that “health, education and the well-being of citizens” are the main components of human development (in addition to market-based economic growth, the efficient use of energy resources, and the development of modern infrastructure and a professional government). Implementation of this priority is specified in the strategic task of increasing access of the population to quality education at all levels and stages based on the principle of continuous education.

In 1998, education reform became more systematic. It is noteworthy that the new stage of reform started with rectification of errors made during the previous years of independence of Kazakhstan. Small-scale schools were restored. Local governments took actions to encourage all

⁷ S.A.Abdymanapov “Bologna process and prospects of higher education of Kazakhstan” (Report at Academic readings of ISA HS), 2004 available on site www.emu.kz

school-age children to return to classes. Attention was given to vulnerable communities and their access to education.

In August 1998 the government issued a resolution “On Measures of Further Reform of Secondary Education System in the Republic of Kazakhstan” according to which universal education funds were established at all schools. These funds were to be used to buy clothes, shoes, textbooks, manuals, stationary, school meals, cash assistance and tickets to sanatoriums, resorts and rest camps, and also to provide financial support for cultural and sports events. Thus the priority of the national policy for education reform was the achievement of universal accessibility to secondary education. This understanding is also reflected in the Poverty Reduction Programme where specific measures are provided to resolve the education problems of poor communities.

The National Information Programme of Secondary Education, issued in September 1997, played a certain role in the development of the education system. The programme and action plan provided for both direct public involvement and wide business participation. In terms of education content, a leading area was implementing new standards and issuing a new generation of textbooks.

A system of public grants and loans and the practice of centralized organization and public certification of entrance exams were bravely adopted from the experience of developed countries and quickly demonstrated tangible advantages. In addition, public higher institutions were privatised to some extent resolving the problem of accessibility of education for the population of the country.

Progress in education facilitates development of the legal and regulatory framework of the education system. The Education Law of the Republic of Kazakhstan issued in June 1999 determined the structure of the national education model, increased the independence of institutions, and fixed the constitutional principle of mandatory and free secondary education. The law proclaimed a programme for mandatory free enrolment for pre-schooling for all 5-

6-year-old children, putting priority on instilling general human values combined with national traditions.

Since 1999, the well being of the teaching profession has improved. The economic rise that began at the time made it possible to eventually ensure timely salary payments to public employees including – and primarily – teachers. This strengthened the stability of teaching staff everywhere. The year 2001 marked a long-awaited break for funding in the education sector: the first time in many years that it increased significantly, by KZT 19.3 billion.

Special attention was given to providing education services in rural areas (the “Aul Mekteby” programme). The national rural development programme sets a specific task to develop the rural education infrastructure as well as accessibility and quality of water, roads, and utilities.

As was stated by the President of the Republic of Kazakhstan at the Third Congress of Education and Science Professionals: “[today] Kazakhstan started a new stage of development when it becomes possible to resolve many problems in all areas of life including education and academics. The economic growth of the country requires not only financial investments. To a greater extent it is requires the human factor and intellectual investments.”⁸

For the next stage of reforms of the education system in Kazakhstan, the State Program on education development - 2010 was issued aimed at increasing the efficiency of the education system. The necessity and importance of this document is related to the fact that it is aimed at developing the education system infrastructure and sets up funding of the system, which in turn will have positive effects on education development.

Thus, the development strategy of Kazakhstan in the 21st century has defined a new role of the state in the development of the education system. Implementation of the concept of sustainable development in the education system will serve as the guarantor of national security, future economic, intellectual and social prosperity, and further democratic development of the country.

⁸ Speech of the President of the Republic of Kazakhstan at the Third Congress of Education and Science Professionals of RK, 12.10.2004, <http://www.inform.kz/showarticle.php?lang=rus&id=96898>

Chapter 2.

HUMAN DEVELOPMENT IN KAZAKHSTAN

Being human is not only having knowledge but also doing for future generations what was done for us.

G. Lightenberg

Improving the level of human development is a process that includes not only increasing incomes but also increasing literacy rates and life expectancies. Wider choice is the key objective in the sustainable development of human capacities.

2.1. STATUS OF HUMAN DEVELOPMENT IN KAZAKHSTAN

The current population of Kazakhstan is 15 million people representing about 130 ethnic groups including 8.6 million (57.2%) Kazakhs and 4.1 million (27.2%) Russians (see Annex 2, table 1). Other nationalities make up 15.6% of the population or 2.3 million people. Following more than a decade of falling population levels, the population of Kazakhstan increased by 100 000 people between 2003 and 2004. This increase was due to the stabilisation of mortality rates in recent years, the growth of average life spans of the population, and an increase in birth rates. In 2003 the average life expectancy at birth was 65.9 years and the birth rate increased to 16.7 per 1000 population, which is an increase of 1.4 over the same figure of 2002. In general, the population grew about 0.3% in 2003 compared with 2002.

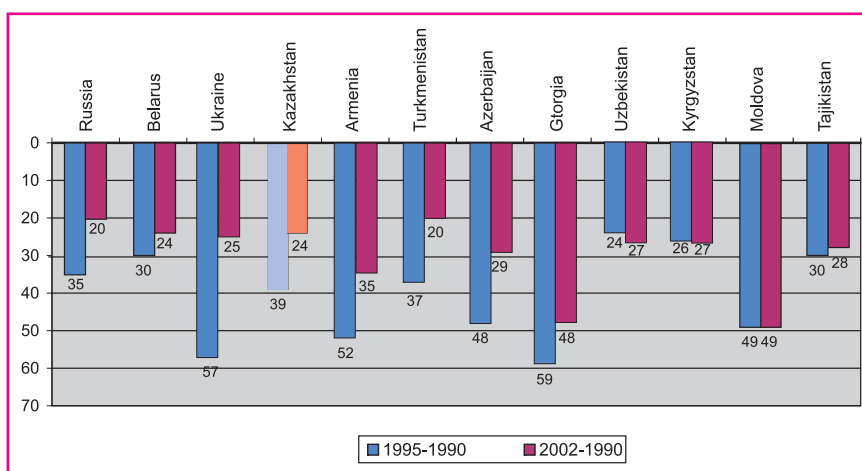
Global human development reports have seen two distinct stages of human development in Kazakhstan and other CIS countries. The first stage (1990-1995) is characterized by a sharp deterioration in all of the main indicators of human development. During this period, the global rank of Kazakhstan's Human Development Index (HDI)

fell from 54 to 93. During the second stage (1996-2002), human development indicators were slowly restored with Kazakhstan moving 15 places higher (to a rank of 78). This was mostly due to the economic growth in Kazakhstan. However the current status of human development in the country, as in other CIS states, is still far behind the indicators of 1990 (see Figure 2.1).

According to the global *Human Development Report 2004* [p. 162] Kazakhstan's HDI in 2002 was 0.766, placing it 78th out of 177 countries in the world. A more careful estimate shows that in 2002 Kazakhstan's HDI was 0.766 (see Annex 2, table 4), compared to the HDI of Saint Lucia (0.777) and Brazil (0.775), occupying positions 71-72 in the world.⁹

An analysis of the human development trends in Kazakhstan shows that the decline in HDI during the first

Figure 2.1.
Change for the worse of HDI of CIS countries
in 1995 and 2002 compared to 1990



Source: Prepared on the basis of global UNDP Human Development Reports for 1993-2004

⁹ Human Development Report 2004: Cultural Liberty in Today's Diverse World, UNDP 2004.

stage was caused mostly by a reduction of the expected life expectancy at birth (accounting for 52% of the decline) and thereby the economic decline (37%) and the reduction in education enrolment (11%). During the second stage, the key factor influencing Kazakhstan's HDI was economic growth (accounting for 53% of the HDI increase) followed by improved education enrolment (26%) and growth of expected life expectancies (21%).

Human development in the regions of Kazakhstan reached a minimum during 1995-1996, except for Atyrau and Mangistau oblasts, which experienced minimum levels in 1993 (due to the fact that the Caspian region became the first area of foreign investment in the country). North Kazakhstan oblast, where the human development decline extended to 1998 (resulting from its narrow specialization in agriculture), was also an exception. The biggest decline in general in Kazakhstan took place in 1995 when the HDI fell 50 points below the level of 1990. Later regional human development gradually recovered, resulting in an increase of HDI in Kazakhstan by 46 points by 2003 (Annex 2, table 3).

Starting from 1998, the regions of Kazakhstan can be classified into four groups based on regional human development levels (HDI) (Figure 2.2):

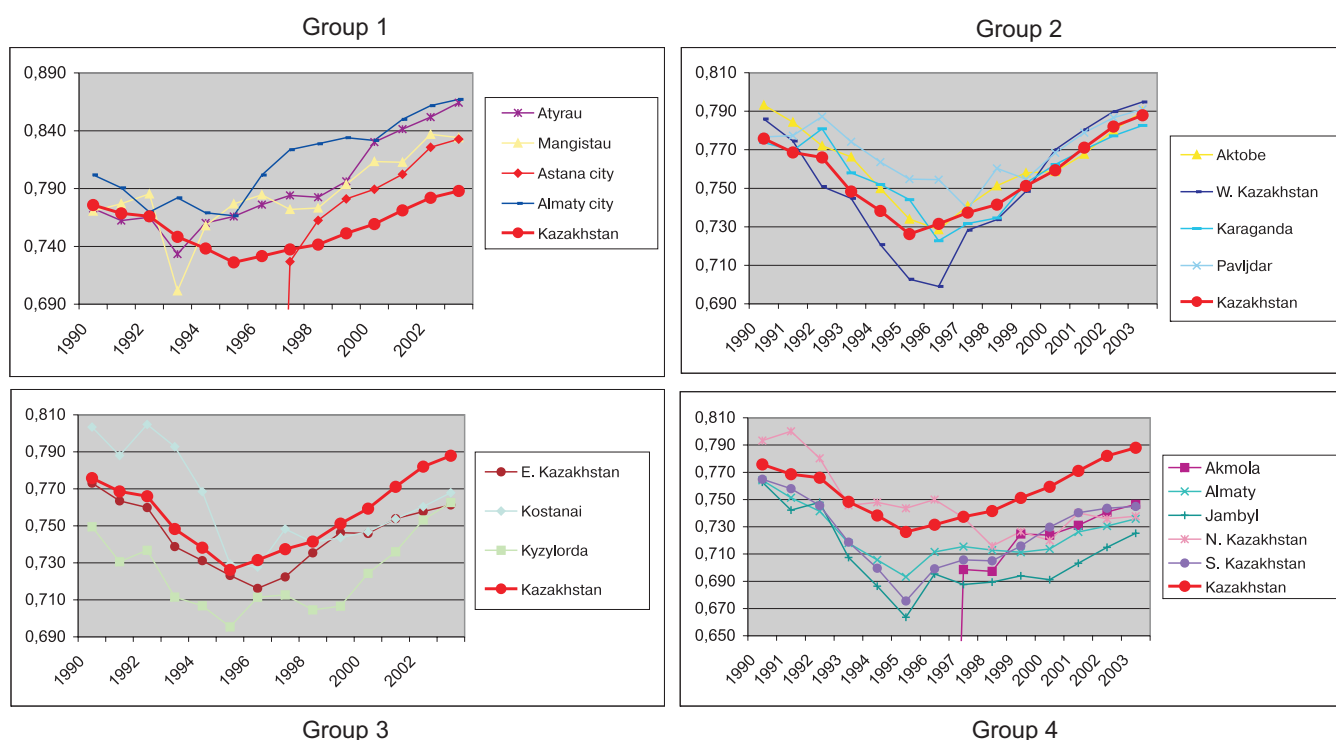
- 1) rather high human development level (Atyrau and Mangistau oblasts and the cities of Almaty and Astana) with HDI above 0.80 during the last three years;
- 2) average human development level (Aktyubinsk, West Kazakhstan, Karaganda and Pavlodar oblasts), with HDI between 0.76 and 0.78;
- 3) human development level somewhat below the average level (East Kazakhstan, Kostanai and Kyzylorda oblasts), with HDI about 0.75;

- 4) comparatively low human development level (Akmola, Almaty, Jambyl, North Kazakhstan and South Kazakhstan oblasts), with HDI between 0.70 and 0.73.

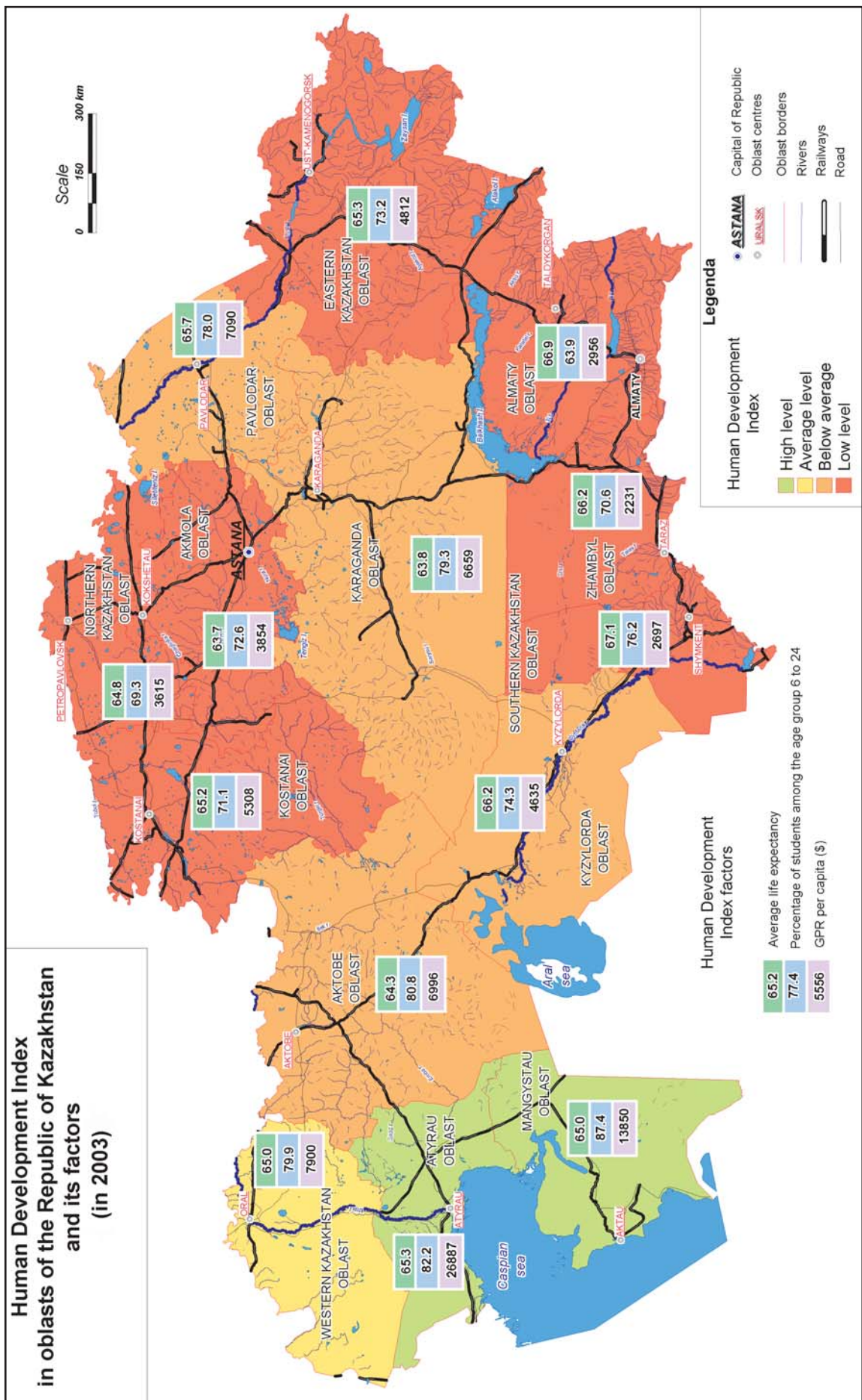
This typology shows that the level of human development is rather different inside each group. However, in each group, regions with similar dynamics of development can be found (Almaty city and Atyrau oblast or Astana city and Mangistau oblast in the first group; Akmola oblast and South Kazakhstan oblast in the fourth group). This correlation of regional HDI figures can be explained by similar socio-economic conditions of development inside these regions. At the same time the HDI of the first and second groups only (8 oblasts in total) are above the HDI level of the country as a whole, while Jambyl oblast has the lowest indicators in the weakest group of regions. It can also be seen that differences in human development are growing between the leading regions and the weakest oblasts. Oblasts with a traditionally high proportion of rural population have the lowest ratings in human development. This perhaps is an indication of the inadequacy of rural support policies and the need to further analyse state actions in these areas.

Changes in HDI by regions and the role of certain factors at the different stages of development varied. Thus, during the first stage, the biggest reductions in HDI were observed in Jambyl, South Kazakhstan and West Kazakhstan oblasts (by 87-99 points) and the smallest reductions were in Atyrau and Pavlodar oblasts and Almaty city (by 35-39 points). During the second stage, the highest HDI growth was recorded in Atyrau and Mangistau oblasts (by 131-134 points) and in Astana and Almaty cities

Figure 2.2.
Classification of regions by human development



Source: Data of the Statistics Agency of the Republic of Kazakhstan



Source: Data of the Statistics Agency of the Republic of Kazakhstan

(by 101-106 points) and the smallest growth was in Almaty, Kostanai and North Kazakhstan oblasts (by 22-43 points).

The most significant effects of lower life expectancies on HDI during the first stage were observed in Karaganda and Pavlodar oblasts (64-67%), and the least in Jambyl, Mangistau and South Kazakhstan oblasts (17-27%). During the second stage, the most significant effects of higher life expectancies were seen in the HDI of East Kazakhstan, Karaganda and Kyzylorda oblasts (26-30%), and the least in Atyrau and West Kazakhstan oblasts (0-3%). This effect was negative in Aktyubinsk and Mangistau oblasts due to a continuing fall in life expectancies.

The second factor – the total share of students at all education levels in relation total population between 6 and 24 years – in the first stage had the largest effect on the HDI of East Kazakhstan, Karaganda, Kyzylorda and Akmola oblasts (with Astana city) (11 – 13%) and the least in Atyrau, West-Kazakhstan, Mangistau and Pavlodar oblasts (2 – 5%). In the second stage this factor had the highest effect on HDI of Aktyubinsk, Karaganda and Pavlodar oblasts (32 – 35%) and the least in Kyzylorda oblast and the cities of Astana and Almaty (5 – 11%).

The decline in GDP (GRP) per capita during the first stage had the strongest effects on the HDI of Almaty, Jambyl, Mangistau and South Kazakhstan oblasts (66-76%) and the weakest effects on the HDI of Karaganda and Pavlodar oblasts (1-21%). During the second stage, the effect of GDP (GRP) per capita growth on HDI increased overall, and reached a maximum in Atyrau, West Kazakhstan and Mangistau oblasts and Almaty city (72-83%) and a minimum in East Kazakhstan and Karaganda oblasts (38-42%).

Putting all of these figures together, we can see that the decline in HDI levels during the first half of the 1990s was due almost entirely to falling income levels and life expectancies. In most cases school enrolment and literacy rates fell only slightly. This is testament to the deep-rooted traditions and positive attitudes towards literacy and education in Kazakhstan, even during what proved to some the most difficult years ever in its long history.

On the other side of the coin, however, we can see that improvements in school enrolment and literacy rates during the second half of the 1990s could only induce modest increases in HDI levels, causing at most about a third of those increases and in the cases of Astana and Almaty cities less than about a tenth of the increases. This of course is because the literacy rates were high to begin with and never fell significantly. In most cases, the bulk of HDI increases during the second half of the 1990s was due instead to increases in income levels. This is especially true in the oil-rich regions of Atyrau, Mangistau and West Kazakhstan oblasts, and in the financial centre of the country – Almaty city – where up to 83% of HDI improvements were due to higher per capita income levels.

2.2. EFFECTS OF DIFFERENT FACTORS ON THE LEVEL OF HUMAN DEVELOPMENT IN KAZAKHSTAN

The level of human development depends on a number of indirect factors not accounted as rectangular components of the human development index. The scope of poverty, problems managing social services, levels of health care, environmental issues, and gender inequality all influence the level of development of human capacities in the country.

2.2.1. Poverty

The level of poverty can be reduced by creating the conditions needed to develop the country as a whole and realize the potential capacities of every individual. In other words, to overcome the problem of poverty, the conditions need to be created to promote sustainable economic growth, increased opportunities for the productive employment of people, effective state social policies, rational governance, and development of democratic social institutions, in particular. The development and implementation of national strategies to reduce poverty, primarily taking into account the interests of the poor, are important steps towards reducing the level of poverty in the world.

Analyses of the level of poverty in Kazakhstan (Annex 2, table 5) can take different approaches. This report bases its analysis on the concept of *poverty from the point of view of opportunities for human capacity development*. This approach looks at the lack of certain basic opportunities for personal development and the availability of personal choices. A person should be free from restrictions not only in satisfying his basic needs for food, clothing and housing, but also in a wider range of opportunities: living a healthy and long life, having an adequate level of education, having a chance to participate in the life of society, and having an adequate income level to satisfy other social and cultural needs. In other words, a certain level of welfare is obviously required for the comprehensive development of a person, but this by itself is not enough.

As noted in the National Human Development Report 2000 for Kazakhstan and in the 2004 report on *Poverty in Kazakhstan: Causes and Cures* prepared by the UNDP, the key factors that made poverty more acute in Eastern Europe and the CIS included the social and economic upheavals caused by the transition process. This in turn resulted in a decline in production and a reduction in income levels of both the state and households. As a result of the economic crisis, the division of society into different income groups has increased. Deeper economic inequality against the background of overall lower incomes meant that those in the lower social stratum received an even smaller share of already reduced resources. All of this applies as well to the sphere of education.

Poverty is related to the level of access to education for different segments of the population, and the quality of education depends on the ability of society to allocate adequate resources for it. In turn, education produces a



comprehensive effect on the quality and level of people's lives and is a powerful factor in the growth of labour productivity, the growth of GDP and, consequently, the reduction of poverty and formation of a middle class.

The correlation between education and poverty levels is clear. Household surveys carried out by the Statistics Agency of the Republic of Kazakhstan in 2002 show that low levels of education are one cause of poverty as stated by 1.5% of poor households. A reported 59.8% of children from poor families who had graduated or were then graduating from secondary school have no opportunity to continue their education; 76.0% of those households cited the lack of money to pay for education as a key reason for this.

The problem of access to education is also related to place of residence. The opportunity to acquire quality education remains the prerogative of the urban population while the rural population is restricted by lack of money. In some cases rural schools can only provide primary or incomplete secondary education, which is one of the reasons that an increasing number of rural children do not complete their secondary education.



Still 99.5% of the total population at the end of 2003 was considered to be literate, including 98.8% of boys and 99.1% of girls. Despite the fact that 99.9% of 15- to 24-year-olds in the country are literate, there are still the problems of low quality schooling and the inadequate provision of pre-school, secondary vocational and higher education, particularly in rural areas.

According to the UNDP report *Poverty in Kazakhstan: Causes and Cures*, educational stands in direct proportion to income levels. During 1999-2002, the share of people with vocational education among the employed in Kazakhstan increased by 8% to 60.7% in 2002.¹⁰ The bulk of this increase took place in 2002 (6.7%). The weighted proportion of people with higher or incomplete higher vocational education among the unemployed in 2002 was only 12.2%; while the proportion of the unemployed with only secondary or primary vocational education was 38.1% and the proportion without any vocational education was 49.7%¹¹. These figures indicate that people with more

education are more competitive in the labour market. Related to this, household incomes are directly related to the level of education of household members.⁹

The same survey also reported on gender, noting that in poor households, the education level of households with a male as the head of the family was below the household average. In 2002 the weighted proportion of all households with male heads of families having higher education was 15.1% overall, but among poor households only 6% of the male heads had higher education. This same pattern was observed in households headed by women.

At the end of 2003, 18% of the economically active population had higher education and 28% had secondary vocational education (Table 2.2). It should be noted that people with higher education were more competitive. This is proven by the fact that the unemployment rate among people with higher education is much lower (5%) than among those with only secondary vocational education (8%) or those with only primary vocational education or general secondary education (12%). Moreover, the rates of economic inactivity are much higher among those with lower levels of education. For example, 82% of people with

only general primary education were not economically active at the end of 2003 compared to 28% among those with general secondary education and only 15% among those with higher education. Thus one can conclude that, other conditions being equal, higher education levels could help reduce poverty in the country and build the middle class.

During the transition to a market economy, Kazakhstan could not correctly determine the correlation between the supply and demand for qualified labourers and specialists given the new development conditions. This resulted in a large gap between the demand for labour and the training of qualified specialists. For the first twelve years of independence, the number and type of specialists graduating from higher and secondary vocational education institutions did not correlate with the pattern of specialists and education levels needed by the new economy. Major

gaps existed in training professional staff. Most graduates from institutions of higher learning were specialists in the social and humanitarian sectors, including economics and management, and culture and art, even though the need for such professions was much lower. In turn the demand in the economy for natural scientists and engineers (requiring an estimated 30% of all graduates) and biologists, agriculturalists and health care specialists (requiring about 25% of graduates) was much higher than the actual number

¹⁰ Education in the Republic of Kazakhstan. Statistics Agency of the Republic of Kazakhstan, 2002, pp. 23, 26. Labour market in the Republic of Kazakhstan: 1991 – 2002. Statistic directory. Statistics Agency of the Republic of Kazakhstan, 2003, pp. 39-40.

¹¹ Education in the Republic of Kazakhstan. Statistics Agency of the Republic of Kazakhstan, 2002, pp. 23, 26. Labour market in the Republic of Kazakhstan: 1991 – 2002. Statistic directory. Statistics Agency of the Republic of Kazakhstan, 2003, p. 153.

Education for all: the key goal for a new millennium

of graduates in these professions (19.6% and 8.2% of the total, respectively).

By assessing living standards based on consumption levels and comparing these with different education levels and qualifications, the 2003 UNDP poverty report showed that not all sectors enjoyed equal remuneration for equal levels of qualifications among their specialists¹². For example, the income of specialists with higher education in industry, finance, transport and communications allowed them to live at the standard of "well-off" people. On the other hand, the income of specialists with higher education in agriculture, government, education and public health was at the average income level of the country, allowing them to live at the standard of "low consumption". This is an indication of the value that the emerging economy places on some professions

It should also be noted that the remuneration of highly qualified and non-qualified staff within sectors is sometimes

not commensurate with those qualifications. For example, the remuneration of specialists with higher education in the education and health care sectors is at the same level as those with lower qualifications. This obviously undermines the motivation of these specialists to perform quality work. This in turn means that many graduates, especially those in social professions, are not adequately appreciated for their personal and public contributions to education and health.

Based on a deeper analysis of the interrelation between qualifications, remuneration and consumption standards, a flexible state income policy could be put together by increasing the efficiency of investment in human capacity development.

For successful development of the country with due regard for the need to increase the level of human development, attention should be given to primary and secondary education as the foundation of a competitive nation.

Table 2.1.
Population by the status of entrepreneurship and education as of the end of 2003

Population with education	Total		Economically active		Including				Economically inactive	
	10,935,923	100%	7,657,290	100%	Employed		Unemployed		3,278,633	
1	2	3	4	5	6	7	8	9	10	11
Higher	1,639,560	15%	1,391,108	18%	1,315,707	95%	75,401	5%	248,452	15%
Incomplete higher	463,009	4%	234,217	3%	211,389	90%	22,828	10%	228,792	49%
Secondary vocational	2,535,757	23%	2,118,312	28%	1,955,256	92%	163,056	8%	417,445	16%
Primary vocational	1,231,958	11%	1,053,369	14%	969,259	92%	84,110	8%	178,589	14%
General secondary	3,251,962	30%	2,349,428	31%	2,076,073	88%	273,355	12%	902,534	28%
Basic general	1,124,075	10%	387,304	5%	341,831	88%	45,473	12%	736,771	66%
Primary general	689,602	6%	123,552	2%	115,682	94%	7,870	6%	566,050	82%

Source: Basic indicators of labour market in the Republic of Kazakhstan. 2003. P.24

2.2.2. Health

Public health establishes a solid basis for development of human capital. There is a close relation between the status and capabilities of the public health system and education levels, life expectancies, and conditions of life (Annex 2, table 9).

At present, certain successes can be noted in health care development in the country. Budget allocations, the institutional network, and bed capacities increase every year. The number of beds is 72.3 per 10,000 people and, in terms of medical staff, there are 35.6 doctors and 74.1 nurses per 10,000 people.

Despite promising moves in public health funding, the outcome of the proclaimed Year of Health in 2002 shows that out of 1.6 million pupils examined, more than 900,000 – more than – half are sick. Every tenth child has a respiratory illness, every ninth has a nervous system illness, every seventh a digestion system or muscular-skeletal system illness. The remaining share of children had illnesses of the urino-genital or hemotogenic systems, eyesight problems, walking disorders or scoliosis.

Along with medical examinations, the condition of all schools in the country was studied in this report. In addition to the health problems noted above, the report found problems of insufficient lighting, lack of compliance with sanitary and hygienic requirements and school furniture that did not comply with standards. Based on data from 2002, 14.7% of all schools or, 1198 out of 8130, do not comply with sanitary and hygienic standards. These schools need major repairs including repairs to water supply systems, heating systems and roofs. About 10% of children under 14 smoke, up to 20% drink alcohol, and the lower age limit for primary drug addicts has fallen to 1314 years. Only 44% of schools have medical posts.

On the basis of this report, the state has taken particular measures to improve the health care system as a whole. During 2003, 949 school medical posts were set up and 761,890 school children were examined by local medical institutions. This resulted in more than 90,000 school children being moved to a higher health index group and 80,000 being removed from dispensary records due to recovery. Because major progress in the health condition of schoolchildren is a solid foundation for successfully

¹² Poverty in Kazakhstan: Causes and Cures, 2003, UNDP.

gaining knowledge and skills, it is justifiable to undertake this kind of assessment of children's health once every four years. Such methods help to prevent and fight health-related problems and avoid interruptions from studies due to illness.

Another as yet unresolved problem in healthcare is inequality in securing guaranteed health care, which also causes differences in human development between regions. In 2003, a total of KZT 6095 was allocated per citizen by the state for guaranteed health care. The level of funding varied greatly across regions, going from KZT 3500 in Almaty oblast to KZT 10,400 in Mangistau oblast, demonstrating the lack of an effective mechanism of geographic levelling.

Therefore the overall situation in health care system is characterized by several key features:

- ✦ official equal access and a high level of development based on bed availability and the number of doctors;
- ✦ actual availability of resources corresponding to the level of developing countries rather than the level of developed countries;
- ✦ unsatisfactory structure of resources and efficiency in their use;
- ✦ clear inequality of access to modern health care, with the accessibility criteria being not always clear and some role played by the shadow market.

The above characteristics result from large differences in people's income, and the partial transfer of Health system organizations' to private, market-based care. The problem of worsening access for the population to quality and cost-efficient health care remains the most important problem in public health. One solution to the situation might be reforming the Health care system aimed at improving the efficiency of health facility operations and increased funding for free health care programmes. In this regard, there is great reliance on the principles of the National Health Reform and Development Programme for 2005-2010 issued recently.

2.2.3. Environment conditions

Human capital development is directly dependent on the environment as the basis of the health and well being of current and future generations of the country. Like in many countries of the world, economic development in Kazakhstan is based largely on the intensive extraction, and to a lesser extent processing, of natural resources, especially oil, gas, coal and other minerals. Today Kazakhstan's GDP grew 9.7% (compared to 9.2% in China). However, if GDP growth is analysed from the point of view of "genuine savings", the situation looks much less favourable.

The notion of "genuine savings" was developed by the World Bank and attempts to measure the rate at which national wealth is being created or consumed, including not only financial resources and physical capital, but natural resources and human capital as well. Based on the notion of "natural savings," economic development adjusted for the depletion of environmental resources is very different from traditional economic indicators. For example, the traditional indicator of gross domestic savings in Kazakhstan in 1999

was 22.8% of GDP. But when this figure is adjusted for the environmental depletion, the "genuine savings" were actually negative at minus 8.2% of GDP.¹³ It would be naive at this point to require a reduction in activities related to the extraction natural resources. However, the need for some kind of compensation for depleted natural capital is needed through growing investments in science, education and health care, and the establishment of special funds for future generations in order to introduce technologies to preserve the environment.

Within the International Commission on Environment and Development (the Brundtland Commission) in 1987, sustainable development was defined as development responding to current needs without depriving future generations of their right to satisfy their needs, which was later amended with the important wording "preserving natural resources and systems not already disturbed". Preservation of natural resources as the basis for the further human development of future generations is of great importance for the implementation of the idea of sustainable development.

A key role in environmental preservation and economic development in Kazakhstan could be played by environmental education and training. Thus far the Government of Kazakhstan has developed the Concept of Environmental Education (2002) detailing measures to implement environmental training at all levels of the education system.

In fact 323,000 children covered by pre-schooling are not involved in the system of environmental training due to a lack of teachers with environmental training and the lack of curricula and textbooks. Environmental training within secondary education is also unsatisfactory. Environmental classes in some schools of the country, covering more than 3 million children, are irregular. At the beginning of 2004, only 8 schools took part in a pilot project on "Mitigating the Impact of Schools on the Environment" arranged by the Central Asian Regional Environmental Centre together with the Field Studies Council.

Some progress in this area was achieved by the production of a textbook for the secondary education system under the project "Environment for Future Generations" by the Central Asia Regional Environmental Centre, interested NGOs and other organizations in Kazakhstan¹⁴. The national Training and Methodological Council of the Ministry of education and Science approved this textbook. At present this is the only textbook for the comprehensive study of the environment, incorporating biology, chemistry, geography and so on. Other textbooks on the environment, whether training manuals or theoretical textbooks, are obsolete and do not reflect the specifics of the environmental problems of Kazakhstan.

Despite the Concept of Environmental Training, there is still no integrated curriculum for environmental training and, in fact, no special environmental schools, gymnasia or lyceums.

The situation is a little better in the higher education system where environmental training is carried out at a more professional level. However, there are no international-standard environmental institutions and no special training has been arranged by professional

¹³ The World Bank, "Toward a Measure of Genuine Savings", World Development Indicators 2001, p. 181.

¹⁴ www.ecoobraz.org

Education for all: the key goal for a new millennium

environmentalists to produce auditors or environmental managers who can monitor the use of natural resources, support environmental design, or conduct environmental impact assessments of projects. International requirements for training environmentalists are given due support on at Kazakh Economic University, Kazakh National University named after Al-Farabi, Karaganda State University and Semey State University.

Based on the long-term development strategy of the Republic of Kazakhstan to 2030, the Government and the Ministry of Environment and Natural Resources of the Republic of Kazakhstan included projects on environmental education and training in the list of priorities in the strategic plan for 1998-2000. The Ministry of Environment Protection is now considering a project entitled "Mechanisms of Implementing Innovations in Environmental Training in the Public System of Secondary Education of the Republic of Kazakhstan" to be included in the "Sector Programme of Environment Protection for 2004-2007". This project includes the development of procedures of interaction and mechanisms of coordination between the ministries of environment, education and agriculture, the public sector, and experts in environment protection and education for sustainable development.

2.2.4. Gender disparities

Analysis of gender disparities in Kazakhstan is based on the HDI, taking into account a gender factor (HDGF). Special attention is paid to the availability of education for men and women in the country.

In general there is no clear gender disparity in access to education (Table 2.3). At the end of 2003, the level of education accessibility for women was 0.959, which was slightly higher than that for men – 0.942. Despite the fact that women had lower incomes than men by 0.127 points on the index, the overall HDI estimated for women was higher than the HDI for men by 0.022 points (Annexes 2, tables 6 and 8).

Despite equal access to formal education in the country, for men and women in the informal education, and in connection with life-long learning (LLL) in particular, women more often fall out of the education process for physiological reasons such as pregnancy, baby delivery and child care. As a result, by the age of 30 or 40, men and women with equal starting opportunities often end up at different levels of professional and career growth.

Moreover, in addition to almost similar opportunities to

Table 2.2.
Dynamics of Human Development Index Components and HDI Disaggregated
by Gender in Kazakhstan in 1998-2000

Description	1998	1999	2000	2001	2002	2003	Increase
Life expectancy index	<u>0.757</u> 0.567	<u>0.767</u> 0.588	<u>0.768</u> 0.587	<u>0.772</u> 0.592	<u>0.775</u> 0.595	<u>0.775</u> 0.592	<u>0.018</u> 0.025
Education accessibility index	<u>0.925</u> 0.915	<u>0.932</u> 0.922	<u>0.939</u> 0.929	<u>0.945</u> 0.935	<u>0.954</u> 0.940	<u>0.959</u> 0.942	<u>0.034</u> 0.027
Income index	0.600 0.687	<u>0.602</u> 0.696	<u>0.586</u> 0.731	<u>0.619</u> 0.753	<u>0.643</u> 0.670	<u>0.661</u> 0.788	<u>0.061</u> 0.101
HDI	<u>0.761</u> 0.723	<u>0.767</u> 0.735	<u>0.764</u> 0.749	<u>0.779</u> 0.760	<u>0.790</u> 0.769	<u>0.797</u> 0.775	<u>0.036</u> 0.052

Note: numerator – women, denominator – men

Table 2.3.
Dynamics of Human Development Index Components and HDI with and without Gender Factor Adjustments
in Kazakhstan based on UNDP methodology in 1998 – 2000

Description	1998	1999	2000	2001	2002	200 3	Increase
Life expectancy index	<u>0.658</u> 0.651	<u>0.675</u> 0.669	<u>0.675</u> 0.669	<u>0.680</u> 0.673	<u>0.683</u> 0.676	<u>0.682</u> 0.674	<u>0.024</u> 0.023
Education accessibility index	<u>0.921</u> 0.920	<u>0.927</u> 0.927	<u>0.934</u> 0.934	<u>0.941</u> 0.940	<u>0.947</u> 0.947	<u>0.951</u> 0.950	<u>0.030</u> 0.030
Income index	<u>0.648</u> 0.639	<u>0.654</u> 0.644	<u>0.671</u> 0.648	<u>0.691</u> 0.677	<u>0.716</u> 0.699	<u>0.734</u> 0.717	<u>0.086</u> 0.078
HDI	<u>0.742</u> 0.737	<u>0.752</u> 0.747	<u>0.760</u> 0.750	<u>0.772</u> 0.764	<u>0.782</u> 0.774	<u>0.789</u> 0.780	<u>0.047</u> 0.043

Note: numerator – HDI, denominator – HDGF.

Source: Statistics Agency of RK

access formal education at all levels, there is a difference between men and women in access to information and communication technologies (ICT) and the opportunities for their efficient use. Industrial restructuring suggests new requirements for employees, namely the ability to use ICT. There is a new demand for non-traditional professions in the labour market. Professions traditionally dominated by females, such as clerks, secretaries and office managers, now require the ability to operate office software like Microsoft Word and Excel as a minimum.

Based on the assessment of the Central Asian League of Women for Information and Communication Technologies (CALWICT), created to attract the attention of civil society to the problem of digital inequality in Central Asia, only 10-20% of women in Kazakhstan are occupied in ICT sphere. Women older than 40, who are still working, lag others in terms of access to ICT, and they adapt to ICT slower than younger women. Therefore the resulting digital inequality is a restricting factor for the economic growth of the country.

There are a number of gender research centres in Kazakhstan focussing on gender disparity issues including the Gender Research Centre (GRC), Gender Information and Analytical Centre in Karaganda, and Scientific Research Institute For Social And Gender Issues Under the Teachers' Training Institute for Women.

In addition to these centres, the UN Women's Development Fund (UNIFEM) is active and cooperates with the National Commission of Family and Women Affairs chaired by the President of the Republic of Kazakhstan, Association of Business Women of Kazakhstan, Kazakh Women's Committee Ak *Jauilyk*, Kazakh-Turkish Lyceum for Girls Ak *Meshit*, Republican Society of Invalid Women with Children *Bibi-Ana*, Public Women's Union *Bolashak*, Women's Association *Jaria*, Woman and Education, Women Education and Consultancy Centre *Kamkor* and many others. The main objective in uniting these organizations is to improve the conditions for women in Kazakhstan. This includes improving professional training through interacting with the public and commercial sectors and arranging various courses and consultancy services.

Gender development issues are reflected in different surveys of the UN, World Bank, Asian Development Bank, Soros Foundation Kazakhstan, and other international and national organizations. Reports on the status of women in Kazakhstan have been prepared, and a special statistical directory, *Men and Women in Kazakhstan*, was issued in which gender aspects of poverty in Kazakhstan were considered (2001). Still, particular measures should be taken to improve the gender situation. One measure that needs to be considered is the curriculum first introduced in 1999 in Kazakhstan in the Almaty State University, called "Gender Theory". Gender aspects of development are also considered in the course "Human Development in Kazakhstan" recommended by MES to higher institutions of the country.

It should be noted generally that gender development in the country is at the stage of institutionalization and development of both theoretical and practical surveys. At the level of primary and secondary schools under the project "Authorised Education" classes on gender disparity are arranged in pilot schools. In general, however, gender issues are not considered by the general education system.

The situation is a little better at institutions of higher

learning. At present issues of gender disparity are studied in departments of sociology, psychology, history, pedagogy and law. In the 2003-2004 school year, about 20 courses on gender were registered in Kazakhstan and provided in Kazakh National University named after Al-Farabi, Karaganda State University, Eastern Kazakhstan State University (in Ust-Kamenogorsk), Western Kazakhstan State University (in Uralsk) and in the universities of Jezkazgan, Kostanai, and Semipalatinsk among other cities. It should be stated that the courses were developed at the initiative of the professors. Subjects from these courses are not yet included in the national standard, the reason being differences in attitudes towards the subject. For many people, gender disparity issues are of interest while others are indifferent. Therefore, gender education is a tool of developing public policies in government, civil society or interested communities.

2.3. INFLUENCE OF HUMAN DEVELOPMENT LEVEL ON DIFFERENT FACTORS

The previous section considered the mechanisms of influence of different factors on the human development level in Kazakhstan and on the education level in particular. In turn there is a clear relation in the other direction, as the education level dictates the pace of development and general conditions of the living standards and life expectancy. Moreover, education is a prerequisite for the further development of education itself. The existing interrelations between human development within the education system and the above factors are discussed below.

2.3.1 Education level and living standard

It is not difficult to see the relation between education levels and living standards. From an economic point of view the more a person knows, the more he or she is in demand and, consequently, the more chances he or she has to get a highly paid job. This is demonstrated by the statistical data for 2003 when the percent of people with higher education who were employed was 80,2% and the percent of people with only primary education who were employed was 16,7%. People with lower education levels include the older age group (60-72 years), where employment levels are low in general, but this does not disprove the overall pattern. The higher the level of people's education in general, the higher their level of enterprise, and demand for this type of labour is higher in the labour market. A similar pattern is applicable to almost all OECD countries¹⁵.

At the same time it should be noted that the education level of parents is closely related to the desire of children to select their future career and further labour activities.

¹⁵ Employment Outlook. P.: OECD, 2002, p. 316-318, tab. D.

In most cases the level of remuneration, and consequently income per capita and well being of the population, depends on the promotion of education by parents. In addition, a high level of education in parents often influences their children to pursue a high level of education and improve their well being as well, which in turn is the foundation for the development for future generations. In the middle of 1970s, for example, the Prime Minister of Singapore, Lee Quan Yew chose to promote intensive training of the young population in the best institutions abroad in order to achieve a rapid rise in economic development. Moreover in the 1980s, in order to preserve further sustainable economic development, Lee Quan Yew proposed the idea of increasing higher education for women.



In 1993 Kazakhstan, like many other Asian countries, established a system of government grants to train staff abroad. This grant fund allows students from different communities in Kazakhstan to study in the best universities of the USA, UK, France, Japan and other countries. While at the beginning of the programme students travelled to study for professions in business management, finance, law, economics, and international relations, today Kazakhstan is sending people to study scientific and technical professions. This includes the chance to study at PhD programmes with state funding. During the nine years of the programme's existence, 97% of all graduates have returned to Kazakhstan and received prestigious and in many cases highly-paid positions in the public and private sectors. Many graduates perfect their knowledge in international institutions.

2.3.2 Education level and life expectancy

International surveys of public health show that the level of costs for health care are not always set efficiently. For example, the latest surveys of the sector found that the USA spent more funds for health care than any other country. However, despite this, the average life expectancy in the USA is approximately the same as in Cuba, where allocations for health care are among the lowest in the world – US\$ 186 per capita.¹⁶ This means that to resolve the issues of health and life expectancy, major attention should be paid to preventative medicine, access to health services, and a healthy lifestyle.

It has been long known in demography and sociology that lifestyle, nature of work, structure and volume of consumption and many other economic and social factors are determined by education level, all of which in turn have an impact on the life expectancy of different social groups.¹⁷ Yet a population census in the USSR in 1979 and again in 1989 found that mortality rates were closely related to level of education in addition to nature of work and other factors. The survey results were published only

in the 1990s. Moreover, the results of the survey proved to be similar to those conducted in western countries.

In Kazakhstan surveys with data showing connections between lifestyle and mortality rates are only beginning to be conducted. It is already obvious though that people with higher education in most cases “outlive” their counterparts with only primary, secondary and secondary vocational education.

Negative trends in the mortality rate of the population of Kazakhstan were noted in 1991. In 2004, the mortality rate increased from 8.2 to 10.2 per 1000 people. The highest rate was recorded in North Kazakhstan oblast: 13.2 per 1000 people per annum. Because of this, it is necessary to conduct a more detailed and lengthy survey to determine the direct correlation between the quality of public health and life spans on the one hand and education and unemployment levels on the other.

According to the data of the Agency for Migration and Demography of the Republic of Kazakhstan, this indicator has stabilized to some extent during the last two years. Average life expectancy is growing, though slowly. In 2003, the average life expectancy in the country was 65,8 years. Women on average live for 71.5 years, men for 60.8 years less.

Starting from 2002, an increase in the birth rate was observed.¹⁸ From 1 January to 1 April of 2004, 65,270 children were born, which is 6.8% more than the same period in 2003. In addition to an increasing population of reproductive age, the positive trend is related to economic stabilization and adaptation of the population to the market economy and social reforms. Such adaptation is partly a function of education.

¹⁶ “What is the cost of longevity” Washington ProFile. <http://www.infohouse.us/idsec333-1.html>

¹⁷ “Survey of differentiation of death rate depending on social status”. A.D.Deyev, A.A. Deyeva, Z.I. Bejayeva. <http://www.rusmedserv.com/medstat/article005.htm>

¹⁸ “Kazakhstan gets out of demographic crisis”. Shlomo Groman. <http://www.languages-study.com/demography/kazakhstan.html>

2.3.3. Education for the sake of education

Based on a survey conducted by the All-Russian Centre of Public Opinion to find out “why we need higher education?”, respondents with higher education and higher income often related their desire to get higher education with concerns about employment, career and professionalism. At the same time, the lower the education level of respondents, the more often they thought that people strive for higher education because it is a “customary” thing to do and in this respect their motivation for getting good education is notably lower.¹⁹

The situation in Kazakhstan seems to be about the same. Moreover, people with higher education tend to get additional education (more higher education or different courses to increase their qualifications), unlike people with secondary and secondary vocational education.

At the same time it should be noted that the quality of knowledge acquired and progress in gaining knowledge influences the probability of getting further education. Almost all “excellent” and 80-90% of “good” pupils enter institutions of higher learning. The quality of the student is also a determinant of the financial support they receive (grant-based, loan-based or for-fee) as well as the quality of the higher institution they enter.

Many surveys show that social differentiation is

growing and becoming more complicated, affected by such factors as urbanization, industrialization and information. New professions require higher qualifications and better training. Education is becoming a more important factor determining the position of the person in society.

The role of education in modern society is becoming more significant; it has become a multi-factor phenomenon actively influencing all facets of the society. In fact, it has partially overtaken the functions that used to be implemented by the church, family and other social institutions.

Education has become an integral part of the certified²⁰ characteristics of the society, which produces direct and indirect effects on the economic position of the individual, his or her promotion and movement along the social ladder. The growing social significance of education gives him or her the opportunity to be either of great benefit to the society – if properly managed – or otherwise, of great harm. Thus the quality and access to this social filter should be properly organized.

Therefore, based on the close interrelation between the growth of human capital and education as a key driving force of human development, more attention should be paid to development of the individual as a member of society. In this respect it should be noted that the future socio-economic well being of the country, the moral and spiritual development of the people, improvements to legal institutions, the capabilities of the population, the exercise of rights and opportunities for both sexes to a great extent depend on the development of the system of education.

¹⁹ “Most people need higher education for good job.” <http://chemodan.com.ua/news/2004/09/1850.html>

²⁰ The term “certification” in sociology is used to describe the disparity system between groups of people. Each society is characterized with a diversity of relations, roles, and positions of the members.

Chapter 3.

ANALYSIS OF THE EDUCATION SYSTEM IN THE REPUBLIC OF KAZAKHSTAN

The word “crisis” written in Chinese consists of two glyphs: one means “danger”, the other – “opportunity”.

John F. Kennedy

The national education system has a great impact on human development. The principles and regulations of education that are reflected in the existing education system determine the level of literacy of the nation, influence scientific and technical processes and play an important role in the development of the national economy.

In view of changes taking place in modern Kazakhstani society, the attitude of the state to public education as an important institution having a major effect on social development is significance. This chapter is focused on national educational policy. It surveys the stages of formation of the legal framework for national policies in education with a particular focus on the mechanisms of public management in education because state leverage is primarily reflected in legal acts that are aimed at regulating the education system. The existing education system is not perfect; it has deficiencies in identifying the jurisdiction of different levels of governance in making decisions to influence progressive development of education.

The most important part is the survey of the education system and all its levels. The analysis of the education system quality is to a great extent determined by the existing conditions of system's adequate provision. The availability of professional staff has been analysed in detail, as qualifications of teachers are important. The chapter also analyses the infrastructure and facilities of the education system. Particular attention is given to financing which to a great extent influences the quality of education. Given the fact that the key objective of the education system is to train highly qualified specialists, the most important criterion under analysis is the quality of education, and literacy.

Therefore the analysis of the education system is carried out in accordance with existing principles of human development and is aimed at identifying problems obstructing efficient modernization of the system.

In general the analysis shows that the education system is undergoing major changes. As stated by the President of the Republic of Kazakhstan at the Third

Congress of Education and Science Professionals, the reforms undertaken in the education sector resulted in a “major increase in independence of institutions at all levels, their rights to choose curricula, textbooks and methods of teaching have increased, general secondary education facilities have been computerized. New textbooks have been developed and are being actively introduced, new types of educational institutions are being established, and the private education sector has been formed. However, all of this has not yet achieved the key objective...” Table 3.1 provides and analysis of positive and negative trends in the education system of Kazakhstan during recent years.

3.1. LEGAL BASIS FOR THE NATIONAL EDUCATION POLICY

In the process of radical modernisation, the reforming general education and managing quality improvements depends greatly on the existing legal and regulatory framework for the education system. It also depends on monitoring the system according to law, as the legislation regulating the existing system forms national education policy. This chapter considers legal and regulatory issues in the education system.

²¹ Speech of the President of the Republic of Kazakhstan at the Third Congress of Education and Science Professionals of RK, 12.10.2004.

<http://www.inform.kz/showarticle.php?lang=rus&id=96898>

Table 3.1
Balance of education system development in Kazakhstan

Positive trends and indicators	Negative trends and indicators
Education quality	
In 2004, Kazakhstani schoolchildren were awarded a record number of prizes at international contests. Combined teams of pupils from Kazakhstan took part in 18 contests at the international level and won 101 medals, including: 23 gold, 31 silver and 47 bronze medals.	The Unified National Test in Kazakhstan 2004 showed that 24.2% of graduates did not achieve the minimum 40 points out of 120. Only 0.7% of pupils scored excellent marks by achieving a score of 101-120. The quality of knowledge in natural sciences and mathematics is of concern.
At the beginning of the 2003/04 school year, 1768 innovative schools were in operation, which is 21% of the total number, where more than 300,000 children (11% of the total number of school children) could study certain subjects in-depth (foreign languages, natural sciences and humanitarian disciplines). Compared to the previous school year, the number of these pupils increased by 2.6%.	During recent years, a major problem developed in schools in Mangistau and South Kazakhstan oblasts and the cities of Almaty and Astana, where classes were provided in some cases in four shifts. In the 2003/04 school year, there were 10 schools following this system, with 1300 pupils studying in the fourth shift.
The education sector funding	
Elements of multi-channel funding are being introduced including the involvement of enterprises and direct beneficiaries of education services – students and their families. Existing investment practices already involve employers and other social partners in funding education programmes. Thus in 2003 companies and associations invested KZT 15.4 million for the development of vocational training programmes, which is about 1.75% of the total budget.	During the period from 1990 to 2003, the total allocation of state funds for education decreased dramatically not only in absolute figures but also as a percent of GDP. Thus while in 1990 public expenditures on education were 8.2% of GDP, in the 1995 this figure had fallen to 4.5%, and in 2003 to 3.1%. The share of the education sector in the total national budget decreased from 14.4% in the 1999 to 11.9% in the 2001 and increased to 14.1% in the 2003 (the respective share in OECD countries in 1999 was 12.7% on average).
Governance in education system	
Delegation of powers to the regional level and directly to education institutions de-jure increased the number of participants in the development and implementation of educational policy. The share of local governance bodies in management of the education budget increased accordingly.	Local governments and regional education authorities are still predominantly the executing bodies for decisions made by central bodies. Delegation of powers to the lower levels was not accompanied by corresponding steps by the government to ensure the availability of management staff with the necessary capacities to work efficiently.
Civil society	
There is a number of non-governmental educational organizations in Kazakhstan that are quite serious in showing themselves in the eyes of the society with their own resources. The most stable non-governmental organizations include such well-known in the country organizations as Public union of authors and users of Mektep textbooks, association of innovative schools, Efficient school Center, Scientific and practical center of civil education, Public union "Achievements of young" and others.	The role of civil society and public (as a pre-condition for ensuring transparency and accountability of the public education system) is not reflected in the Education law (1999). To objectively cover the role of civil society in the process of development and implementation of education policy at different stages its capacity and ability to really influence the decision taking on key issues should be taken into account.
Private sector in education	
Private higher institutions are becoming more popular. Whilst in 2000/01 school year their share of students was 29% of 440,000. in 2003/04 out of 658,000 students they covered 45.3%	IN 2001 only 13 non-public institutions were accredited out of 122.

Access to education and enrolment	
Number of students per 10,000 population increased from 175 in 1991 – 1992 to 441 in 2003 – 2004	In 2003 299,200 pupils got the basic general education, 81% continued their education at a higher stage of schooling. Every year the number of such pupils is notably reducing. In 2000 out of graduates of 9th grade only 84% continued studies in 10th grade, in 2001 – 83.1%, in 2002 – 81.6%.
The network of pre-school institutions funded by local budgets increased by 9% compared to 2000, the number of children increased by 26%. Allocations of the national budget for pre-school curricula in 2003 increased by 45% compared to 2000. However, it should be admitted that the increase of the pre-school in 2000 – 2003 is just a restoration growth that was preceded by the years of fall and lack of funding for pre-school institutions	As of the beginning of 2003 the enrolment with pre-schooling of children from 1 to 7 was 19%, in rural areas – 2.4%. The same indicator in the developed countries such as USA and Japan is 60.8% and 96.8% respectively. In Russia up to 87.2% of children are covered with pre-schooling. Low enrolment of pre-schooling contradicts the basic principle of the national educational policy aimed at accessibility of education for the citizens of the country.
The number of vocational lyceums, training highly qualified staff in economics, art and literature professions, servicing, vehicle operation, computers and information science is 50 or 17% of the total number of vocational schools	Number of vocational schools reduced during the period from 1994 to 2000 by 31% and by the beginning of 2003/2004 there were 288 institutions with 61% (98,000) students in them of the 1994 level (159,600 students).
During the past 5 years the accepting to higher institutions has been growing by 16% annually, including almost by 28% in private ones.	The problem of higher education is irregular distribution of institutions in the regions obstructing the improvement of accessibility of higher education. Almaty city is regarded the center of higher education where at the beginning of 2003/04 school year 69 institutions were operating. The next rated is South-Kazakhstan oblast with 19 institutions, Karaganda with 15 and East-Kazakhstan with 9 institutions.
The key is to ensure the access for all children to free mandatory education. Kazakhstan has gained impressive progress in this respect. The right for free secondary (11-year) education is guaranteed and really provided for by the Constitution. Based on Statistics data the enrolment of 6 – 17 year-old children with education is 96.5% with practically universal enrolment of people of 7 – 15 years.	Based on Statistics Agency the enrolment of upper secondary stage in the country is 79%. This means that after graduation from the basic school some people do not continue the education. 10.8% of 16-year-old adolescents without completed secondary education didn't study.
Education of persons with special needs	
A specific of pre-school institutions is that are supposed to take care of children's health. For this purpose 36 rehabilitation pre-schools and 236 rehabilitation groups in ordinary kindergartens are functioning covering 9960 children with special curricula. In addition 49 sanatorium-type kindergartens and 50 sanatorium-type groups in the ordinary institutions cover 6376 children with TB invasion.	Special pre-school institutions are attended by 24% of the needy children, meaning that the highest proportion of children with restricted development abilities are left behind the rehabilitation programmes and their parents are deprived of the consultations in upbringing such children in the families.
Teachers	
In 2003/04 school year the number of teachers in the secondary schools increased by 3.4% compared to 2000/01 school year.	In 2003 only 14,400 students of teaching profession graduated. Only 6817 graduates came to work at schools, including 4777 with higher education.

3.1.1. Stages of legal regulation of the education system in the Republic of Kazakhstan

The following stages can be identified in the process of education system reform during the last dozen years:

- ✦ 1991-1993: formulation of legislation for the education system of an independent Kazakhstan
- ✦ 1993-1995: conceptual review of education content at all levels
- ✦ 1996-1997: continued conceptual revision of the content of education: commencement of implementation of long-term national programmes in two strategic areas: new textbooks and computerization of education system. Management and financial decentralisation of the education system was started with the diversification of types of institution and forms of ownership.
- ✦ 1998-2000: development and approval of the strategic documents, Education Law (1999), National Programme on Education (2000), 2010 Education Development Strategy (2001), determining the key priorities of education development for the long- and medium-term
- ✦ 2004:
 - 2015 Concept of Education Development in the Republic of Kazakhstan, which forms the basis of the plan to reform the Kazakhstani education system until 2015, approved on 24 February 2004.
 - 2010 National Education Development Programme in the Republic of Kazakhstan

The ideology and principles stated in these documents give a broad political framework and allow a systematic approach to the development and implementation of programmes (national and regional) for particular areas of education system reforms. A major step in this respect was the medium-term National Programme on Education approved by Presidential Decree in the 2000 (for 2000-2005).

Priorities of education policy recorded in the strategic documents of the last few years target developing some innovation processes in the education system, including: creating a national system of providing education quality on the basis of monitoring results and bringing the national education system in compliance with international standards. The processes of establishing an institute of public evaluation, forming an integrated information and education environment, and connecting to the global telecommunications network and Internet are gaining special importance. Increasing the social status of education professionals is a necessary step in support of national education.

Successful implementation of such innovations presumes the formation of an adequate legal and regulatory framework on the basis of wide system analysis of the existing legislation and development of recommendations for amendments to the existing standards.

The Education Law of the Republic of Kazakhstan (1999) provides a legal framework aimed at forming conditions for successful implementation of innovations

in education. In particular, this was the first time that the powers and responsibilities of different levels of managing the education system were delineated, thus improving the performance of education management bodies. Principles of self-governance and autonomy of education institutions of different levels were introduced; and academic freedom of educational institutions was widened, giving the option of wider implementation of innovations in education. The law also provided for the possibilities of forming public and social forms of management. The private sector was accepted as an equal partner; thus creating the prerequisites for multi-channel funding of the education system.

However the law did not cover such issues as the structure of education system management, mechanisms and functions of different levels of education system management, or activities of civil society and the private sector in education management. In this respect there is much reliance on the issued National Education Development Programme in the Republic of Kazakhstan for 2005 – 2010, which provides for, as an action plan, amending the Education Law.

3.1.2. Governance in education system

In education system reform, special attention should be paid to the issue of the governance in this system as the existing legal basis is a subject for reconsideration.

While reforming and determining the shape of the education sector, the public body responsible for the development of national education policy, the Parliament, did not legally determine which public management system was empowered to operate in education sector; thus it has not set up a clear legal public management structure.

Previous national legislation regulating the education system gave special place to the President of the country among education management bodies as he is supposed to determine the national education policy. Additional transparency in education management was ensured by the power granted to the Parliament in the area of education.

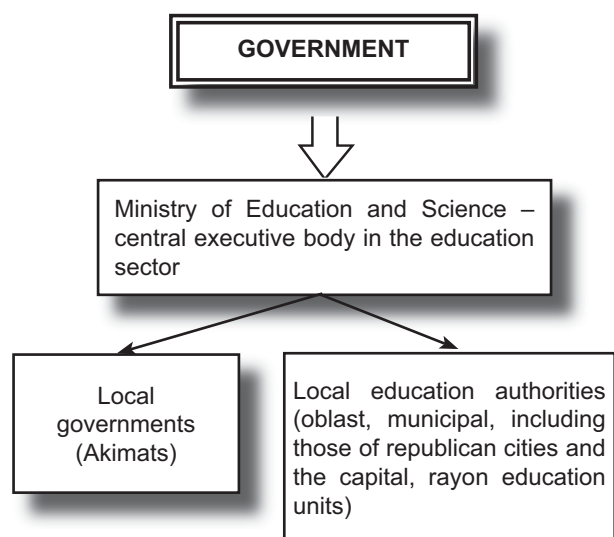
However, the new legislation based on the Education Law (1999) has no provisions regarding the President and the Parliament in education. At the same time the Constitution of the Republic of Kazakhstan (1995) and the Constitutional Law “On the President of the Republic of Kazakhstan” and “On the Parliament of the Republic of Kazakhstan and the Status of Deputies” clearly include the participation of the head of the country and the supreme legislature in education management.

The Parliament is empowered with the right to issue laws regulating the most important public relations, including the important area of the education sector. Parliament deputies also have the right to initiate legislation, meaning that they can make proposals on improving the education system. Therefore it seems illogical to omit the President and the Parliament's roles in the education management system.

Based on the Education Law of the Republic of Kazakhstan (1999) the management structure implementing national policy in education sector is shown in Figure 3.1.

This structure omits the maslikhats – local

Figure 3.1.
Structure of the governance bodies implementing
national policy in education sector



representative bodies – which approve development programmes for education institutions, submitted by the respective local governments, and consider reports on their implementation; they are also empowered with a number of other functions. Thus, the fact that the powers of local representative bodies are mentioned but they are not included in the list of education management bodies in the same law is confusing.

So the legislature has changed the education management system, without establishing a clear structure of public management of the education sector. The law caused legal contradictions in determining the public bodies responsible for the development of national policy in the education sector and has not fixed in the law the entire system of public bodies having powers in the education sector.

Participation of civil society and communities, as a pre-condition for ensuring transparency, accountability, prevention of corruption, and efficient use of funds, is not reflected in the Education Law (1999) either. To develop an effective role for civil society in the development and implementation of education policy at different levels, their capacities and capabilities for having a real influence on the above issues should be taken into account. In other words, pre-existing and realistic roles should be defined for civil society to participate in this process, taking into consideration their structure, form and capabilities, and whether there are any efficient mechanisms of involving their voices as legitimate participants in the process of education policy development and implementation.

Most non-governmental organizations lack the experience and resources to be effective in the education sector. Most Kazakhstani NGOs depend on the financial support of international donors. The assistance of international donor organizations supporting the third sector will be decreased proportionate to the growth of the welfare of Kazakhstan. The non-governmental sector needs to learn to adapt to new conditions of interrelations. Under

such conditions both the state and individuals and not international organizations are becoming the key players, beneficiaries and clients of NGO services. Thus they need to have direct dialogue together, without the intermediation and financial support of a third party.

However there are organizations that have already proven their standing with the society, having their own resources (in the form of projects, technologies, staff). The most sustainable non-governmental organizations include such nationally well-known organizations as the Association of Young Leaders, the Association of Higher Education Institutions of Kazakhstan, the Association of Primary and Secondary Vocational Institutions of Kazakhstan (Almaty city), the Scientific and Practical Centre for Civil Education, the Conflict Centre, the Social Union “Youth Achievement,” and many others. It is such organizations in civil society that will become the important implementers of education policy when the state starts evaluating the positive contribution and input of the non-governmental sector to the education sector, in particular in supporting the principles of education accessibility.

For dialogue and cooperation between representatives of social organizations and bodies managing public education to be continuous and not only during occasional conferences, round tables and other events, more open and focused initiatives for participation are required not only from the NGOs but from the public bodies responsible for making decisions about education policy. In addition, a corresponding legal framework and mechanisms are required that allowing the opinions of civil society to be taken into account in formal documents and programmes. Therefore it would be premature to come to a simple conclusion that today the role of civil society organizations in the education sector of Kazakhstan is a real and effective power having significant influence on the process of education system reform in Kazakhstan.

There is a real need for adapting education management mechanisms to the current situation in which there is an understanding that the central issues of management should be mostly focused on strategic issues aimed at forming education policy and ensuring the quality of education through the monitoring of results. At the same time local problems are better solved at lower levels, with clear determination of local bodies’ responsibilities and corresponding powers enjoyed with accompanying cost commitments.

Education system reforms have delegate some powers to the regional levels and some directly to the educational institutions. However this has not brought the expected positive results due to the low level of funding and the lack of a corresponding legal framework, qualified management staff in regional bodies, and independence of educational institutions.

As for the interrelations between levels of education management, one should recognize that the lack of cooperation and broad consultations between central and local management bodies can affect the implementation of initiatives of the Ministry at the regional level. If the Ministry of Education and Science decides to strengthen its strategic capacities, parallel broadening of capacities at the oblast level should also be considered, where it is also necessary to provide a realistic schedule of implementing and improving the potential for strategic and development activities.

The lack of efficient mechanisms of participation of representatives from all levels of the education system management and all stakeholders (parents, students, employers associations, non-governmental organizations, media, etc.) in the process of educational policy development is a factor negatively affecting most reform initiatives.

The undertaken analysis of the legal framework of the national education policy shows that the state should clarify, and provide for in the law, the role and place of all participants of the education system, or, more precisely, the education sector, starting from the President down to the non-governmental sector and parents' committees. In the coming years the Ministry of Education and Science could benefit enormously from involving a wider range of concerned stakeholders in forming and implementing educational policies.

3.2 ANALYSIS OF CURRENT SITUATION IN EDUCATION SYSTEM IN KAZAKHSTAN

The Address of the Head of the State to the people of Kazakhstan for 2005 emphasises that "competitiveness of the nation is primarily characterized by the level of its education." Today the education of the Kazakhstani people requires conditions that will follow the best global examples and the best domestic experiences. Achieving a highly professional staff, modern facilities, well developed education infrastructure, efficient management with the involvement of the entire population, and transparent and accountable use of funds are the real challenges of the present, which will in turn facilitate the development of a competitive nation.

3.2.1 Development level of the network of education institutions and enrolment of students

Education system reform is supported by the widening capacities of the state to satisfy demands of people and society for education. Reform is based on the principles of improving accessibility to good quality education and creating equal opportunities for it. The subject of analysis of the following section is the survey of the extent to which the conditions exist in the Kazakhstani education system to provide education to every citizen and the level of development of the pre-school, secondary and vocational education.

Pre-schooling

The right to pre-school education and training is ensured by the network of pre-school institutions, pre-school classes in

secondary schools, and pre-school groups in orphanages and boarding schools for orphans and children not cared for by parents, as well as pre-schools managed by non-schooling organizations.

The pre-school system includes the network of pre-school institutions: the system of "kindergartens", pre-school gymnasia, pre-school centres, and kindergartens with copyrighted curriculum, all in all covering 160,700 children. The summary in Annex 2-11 shows the total number of permanent pre-school institutions, including those in urban and rural areas, at the end of 2003.

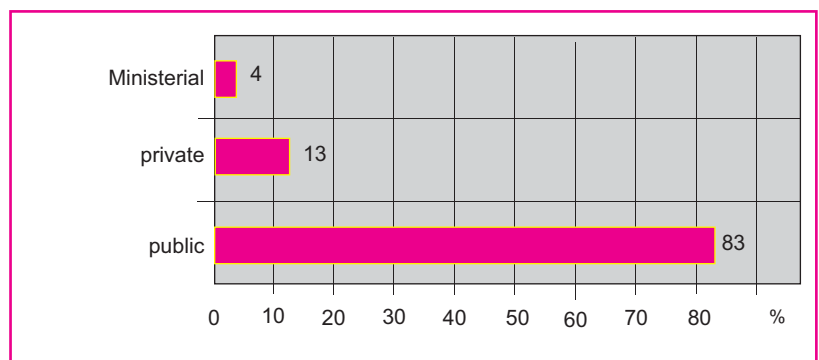
In comparison with 2001, the number of rural pre-schools and children enrolled, decreased. Most rural pre-schools have fewer separate classes, and programs include children of mixed-ages in them; single-class, double-class or triple-class schools are the norm. Urban kindergartens have 4-14 classes and some kindergartens run parallel programs with children of the same age. In 2003 only 1156 pre-schools operated in the country; their structure is shown in Figure 3.2.

Since the beginning of 1990s, the condition of the pre-school system declined dramatically. More than 80% of pre-schools closed down. Transfer to the market economy radically changed the system of financing such organizations, and most industries stopped supporting them due to growing budget restrictions and a new orientation towards earning profits. On the other hand, the growth of private pre-schools remained low due to their low rates of return and the complicated process of legally registering pre-schools, in particular, securing license, which is a prerequisite for such an operation.

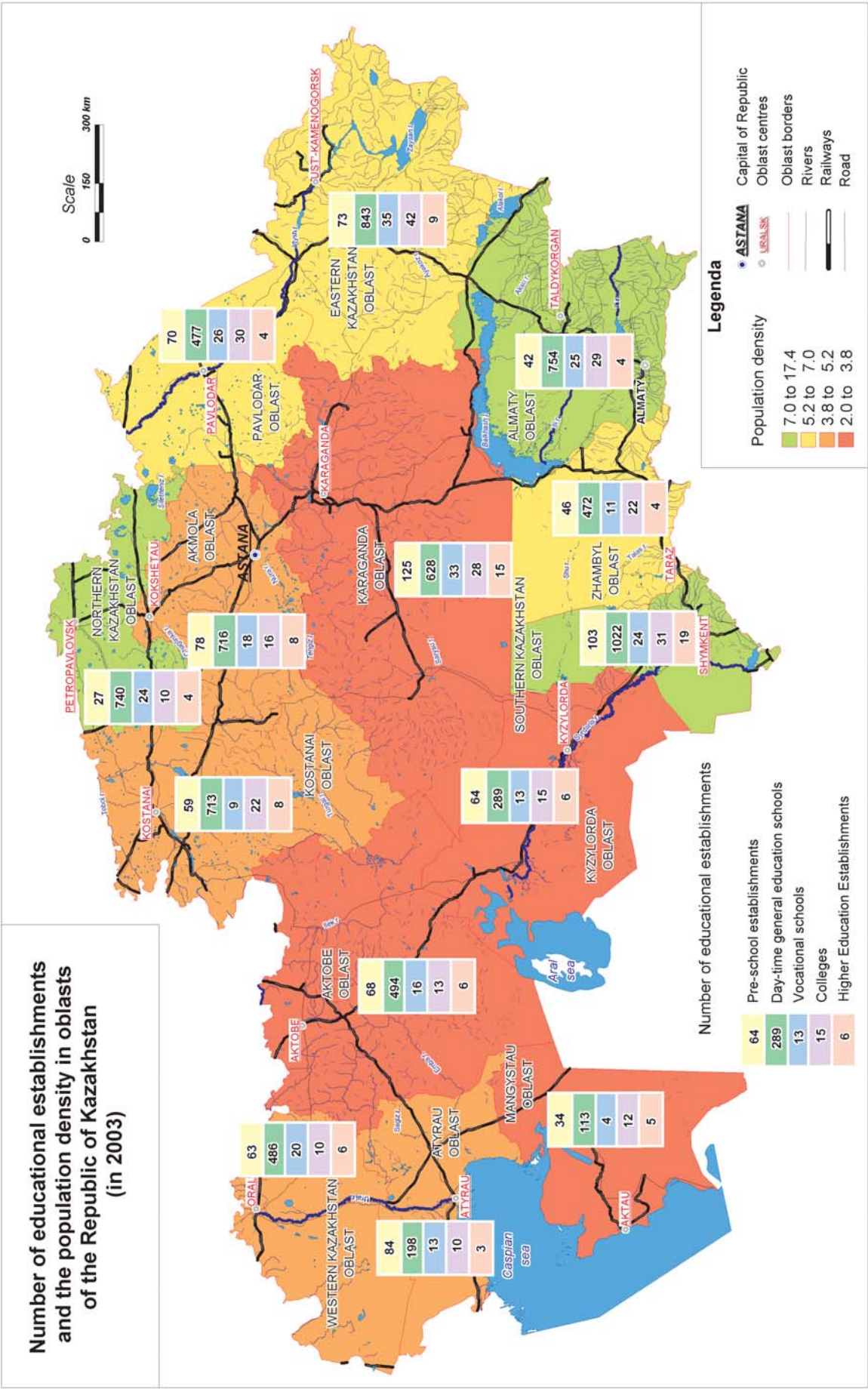
As of the beginning of 2004 the enrolment of children 1- to 7-years-old with pre-school education was 19% overall and only 2.4% in rural areas. In developed countries, such as the USA and Japan, this figure is 60.8% and 96.8% respectively. Pre-schools in Russia cover 87.2% of children. Low enrolment of pre-schooling contradicts the basic principle of national education policy aimed at accessibility of education for all citizens. The increased cost of pre-schooling led to a lack of budget funding and caused pre-school services to be unaffordable for some communities.

Positive changes resulting from actions taken by the state started to be seen in the years 1999-2000, when the process of closing pre-schools notably slowed down and some kindergartens that were closed earlier resumed their

Figure 3.2.
Structure of pre-schooling network



Source: Statistics Agency of the Republic of Kazakhstan



Source: Data of the Statistics Agency of the Republic of Kazakhstan

operations. Mandatory free pre-school training of 5- and 6-year-old children was provided by the law. The social significance of this decision was that access to education increased; all children were provided with equal starting opportunities when entering schools.

Enrolment in pre-schools in 2001 was 123,766 children; in 2002, 153,965 children, and in 2003, 160,708 children. A summary table of the number of children enrolled in pre-schooling by oblast and information on the enrolment of 5- and 6-year-old children with pre-school training at the beginning of the 2003/04 school year is presented in Annex 2, table 15.

During the last few years, the Ministry of Education and Science and the oblast Akimats have been trying to rectify the situation. The pre-school network funded by local budgets increased by 9% compared to 2000, and the number of children trained increased by 26%. Budget allocations to pre-school educational programmes in the 2003 increased by 45% compared to 2000, to KZT 4.2 billion. However it should be understood that the increase in the number of institutions from 2000 to 2003 is only restoration growth, which was preceded by years of decline and lack of funding for pre-schooling. This also speaks to the fact that fundamental issues still remain unresolved.

A particular function of pre-schools is the protection and improvement of children's health. This objective is met by 36 rehabilitation pre-schools and 236 rehabilitation groups in general kindergartens allowing special curricula for 9906 children with restricted abilities. In addition 49 sanatoria-type kindergartens and 50 sanatoria groups in general pre-schools cure 6376 children suffering from tuberculosis. In general, only 24% of children in need go to special pre-schools, meaning that most children with restricted development abilities are excluded from rehabilitation and educational programmes and their parents have no access to consultations on the special needs of such children in the families.

There has been a stable trend of increasing numbers of applications for kindergartens that are not admitted. For example, more than 2000 applications were received in Astana city. At the beginning of the 2003 in the urban areas of West Kazakhstan, Kostanai, Mangistau, North Kazakhstan, and South Kazakhstan oblasts and Astana city 105-129 children applied per 100 places available in the kindergartens.

According to the world understanding accepted by the OECD, UNICEF and other international organizations, a key objective of pre-schooling is mandatory pre-school training. Pre-school classes are a relatively new phenomenon in education in Kazakhstan. There were several reasons for starting them, primarily caused by previous mass closings of pre-school institutions. As a result, from 1995 to 1999 most children entered schools without the required level of general development: without proper psychological, cognitive, or cultural preparation for schoolwork.

Most of these unprepared children, finding themselves in what was for them a different school environment, had difficulties in orienting to the actual events. Hesitating behaviour of such new comers raises negative attitudes on the part of other children, thus obviously disturbing the mind of the child, and causing even teachers to adopt unfriendly attitudes to him or her. The resulting image of a weak and passive pupil is accompanied with the stigma of being a slow learner or difficult pupil.

Opening pre-school classes was also required by the introduction of new textbooks from 1997 to 2000 in the primary school, which were developed on the assumption that the child entering school would have the appropriate level of physical, cognitive and special pedagogical development.

In November 1999, the Government issued resolution No.1762 "On Mandatory Pre-School Training of Children". According to this resolution one-year pre-school classes for 5- and 6-year-old children can be started in secondary schools and other educational institutions irrespective of their accountability or form of ownership. Pre-school groups can also be started on the basis of older, preparatory groups of pre-school institutions.

During the last three years, education bodies started 12,000 pre-school classes and groups in schools and kindergartens. This resulted in 63% of 5- and 6-year-old children being covered with pre-schooling, including 52% in urban areas and 57% in rural areas. 36% of children are covered with pre-schooling programmes in pre-school institutions.

This work is progressing especially in Akmola, Aktyubinsk, West Kazakhstan, Karaganda, Kostanai, and Pavlodar oblasts and in the cities of Astana and Almaty. Pre-school programmes are less successful in Almaty, Jambyl and Kyzylorda oblasts where, due to the lack of funds, large rural population, and high birth rates, most children (from 70% to 80%) enter schools without pre-school training.

The provision of the mandatory pre-school training of children has become a key achievement of the country in favour of children of pre-school age. The Republic of Kazakhstan is the only country among CIS and many European countries that has fixed the right of the child to pre-schooling in the law. However, it should be stressed that the pre-schooling decision was not controversial and its further development should be a part of the general secondary education system in the light of introduction of 12-year education in the future.

General secondary education

General secondary school is the foundation ensuring the accessibility and general enrolment of children with education. Quality and accessibility of secondary education influence the ability of the state to ensure equal starting opportunities for all children irrespective of their gender, social status, ethnic identity, place of residence, or physical abilities.

The secondary school network in Kazakhstan has been in the continuous process of objective optimisation and reorganization since independence. Reduction of the number of daily secondary schools that started in the years 1993/94 (figure 3.3) is related to net out-migration of population and demographic declines that caused changes in the secondary school network. Because there are no children of school age in some areas – in rural areas in particular – some schools are being closed down at the same time that other schools are opening. Thus the population in 1997 decreased by 487,600 people compared to 1995. In the 1995-1997 school years, students' populations became more concentrated, resulting in the reduction of primary and basic schools and the increase of secondary schools. A total of 101 schools were closed in the 2003, and 35 new

Education for all: the key goal for a new millennium

ones were opened. The number of pupils in first grade also follows the reduction trend: just last year the number of children entering first grade decreased by 19,200; the total decrease for 2 years was 40,000 children. In the 2003/04 school years, 236,000 children were taught in the first grade. This is due to the decreased birth rate from 1995 to 2000. However, for the 2005/06 school years, a major increase in the number of first grade pupils is expected. The forecast should be done now and preparations should be started for the increased number of children.

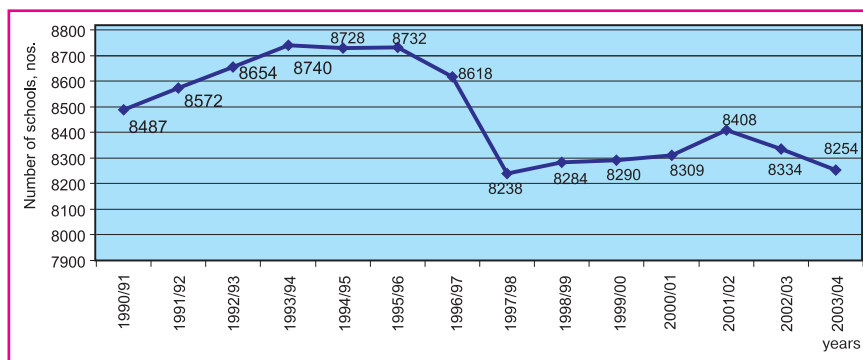
Based on statistics, the highest share of the pupils is in secondary schools – 93.4% of the total number of pupils. At the same time the number of pupils in primary and basic schools has decreased, which was the main cause of the reduction of the number of schools of this type. Based on the data of the Statistics Agency of the Republic of Kazakhstan, the number of pupils at day schools was 3,044,667 people. The dynamics of the number of pupils is shown in Figures 3.4 and 3.5.

The average number of rural pupils in primary schools was 28 children per school, in basic schools, 90 children per school, and in secondary schools, 516 children per school. This indicator in urban schools is considerably higher than in rural schools: 7.8 times higher for primary schools, 2.8 times higher for basic schools, and 2.5 times higher for secondary schools.

The high number of urban pupils results in the fact that studies are arranged in two, three, and even four shifts. While the proportion of schools with two-shift studies is still at the level of 2002/03 school year (63%), the proportion of pupils studying during the second shift increased by 3.4 percentage points, and during the third shift by 0.6 percentage points. In recent years, a negative phenomenon emerged in Mangistau and South Kazakhstan oblasts and Almaty and Astana cities with some school adding a fourth shift. In the 2003/04 school year there were 10 such schools with a total of 1300 pupils studying in the fourth shift.

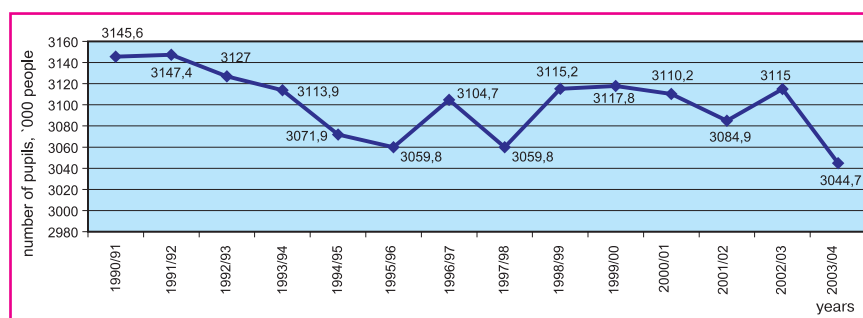
The network of secondary day schools is differentiated significantly by type. Innovation in creating new types of institutions has started to intensively develop, educating 664,500 pupils; institutions include 115 gymnasias, 62 lyceums, 69 schools with lyceum classes, 249 schools with gymnasias classes, 33 specialised schools for talented pupils, 45 line schools, and 2201 schools (with 23,060 programs of study) offering deep

Figure 3.3.
The network of general secondary schools during the school years from 1990/91 to 2003/04



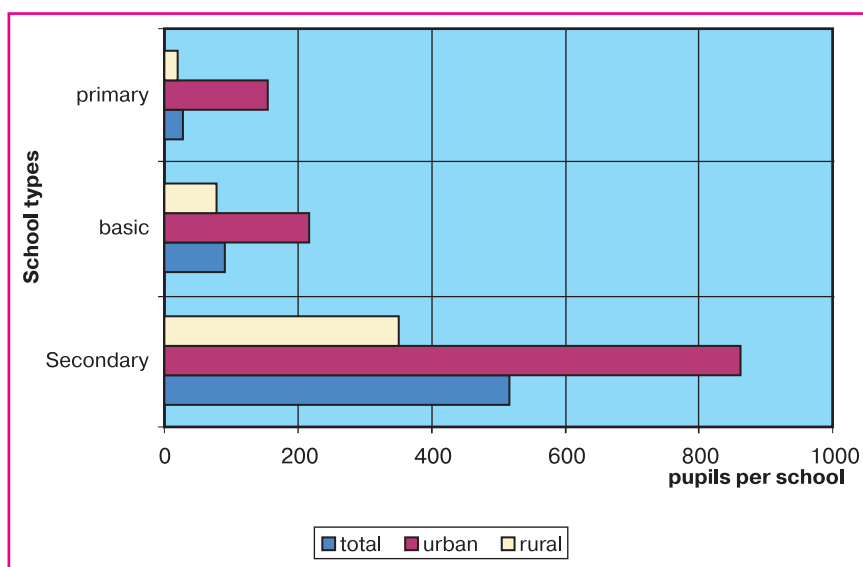
Source: Statistics Agency of the Republic of Kazakhstan

Figure 3.4.
Number of pupils in general secondary day schools during the school years from 1990/91 to 2003/04



Source: Statistics Agency of the Republic of Kazakhstan

Figure 3.5.
Average number of school pupils per school in the 2003/04 school year



Source: Statistics Agency of the Republic of Kazakhstan

theoretical and practical studies in specific subjects. A total of 3,545 schools trained pupils in Kazakhstan in the 2000 compared with 3,632 in 2002 and 3,636 in 2003.

A total of 1,768 of these innovative schools operated at the beginning of the 2003/04 school year, which was 21% of the total number of schools, where more than 300,000 pupils (11% of the total number of pupils) have the opportunity to deeply study certain subjects (foreign languages, natural sciences and humanitarian disciplines). Compared to the previous school year, the number of pupils enrolled in these schools increased by 2.6%. Rural pupils became more deprived of access to this type of education: their share of the total number of pupils studying certain subjects in-depth is only 4.6%.

An important outcome of the education reforms is the development of the private sector in the system. Different education institutions co-exist in the country, varying by ownership type, forms of training and education. Private education institutions are developing in the country under the control of education authorities that have issued licenses to conduct education activities; training in such institutions with the national education standards approved in Kazakhstan. Equal rights and protection of public and private property in the Republic of Kazakhstan is provided for in the Constitution (1995) stating, "fee-based education in private educational institutions shall be provided on the basis of, and under the procedures stipulated by, the law." According to the Constitution and the Education Law (1999), educational institutions of different types are equal

in their rights. The development of private schools started in the 1993/94 school year (Figures 3.6 and 3.7).

Despite the fact that from the 1998/99 school year the number of private schools has been decreasing (in 2003/04 their number went down to 155), the number of pupils during this period stayed at the level of 18,000 – 20,000 students. This speaks to the fact that the system of private schools and their contingent is well formed. The authors of the report think that the idea of the development of private education institutions requires more detailed review.

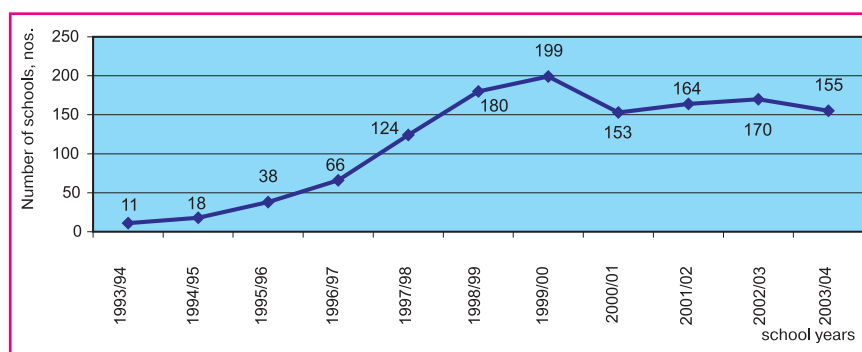
Special rehabilitation institutions operate in the system of secondary education, providing education and training for children with restricted development abilities or behaviour problems. However these education institutions also suffer from the negative consequences of "optimising" education institutions, resulting in the reduction of their number and the number of pupils in them. In the 1990/91 school year the number of special schools decreased by 17 and the number of pupils by 5,700. A total of 108 special schools operated at the beginning of the 2003/04 school year, training 23,907 pupils. During the same period 133 general secondary day schools started classes for children with restricted abilities, training about 5,000 pupils.

Ethnic schools are developing, the idea being to develop a deep and comprehensive knowledge of the culture of the people and to form a deep respect for other nations and cultures. In the 2003/04 school year, pupils were taught in 9 languages: Kazakh, Russian, Uigur, Tajik, Ukrainian, Turkish, German and English; 80.3% of Uzbeks, 54.1% of Tajiks and 40.7% of Uigurs are being taught in their mother tongue. Children of 80 ethnic groups are studying in general education day schools. Teaching in Kazakhstani is becoming more widespread in schools. According to Statistics Agency data while in the 1990/91 school year 32% of pupils were taught in Kazakh, in the 2003/04 school year, 55.3% were taught in Kazakh, 41% were taught in Russian and 3.7% in the languages of other ethnic groups. In addition, the curricula and optional classes in some schools include studies of Uigur, Uzbek, Dungan, Turkish, Polish, Azerbaijan, Tajik, Kurd, Korean, Hebrew and other languages.

The number of innovation institutions with national languages of training has increased. At the moment 1,123 schools provide training in the national language (in 6,462 programs) with deep theoretical and practical studies of some subjects, including 28 lyceums, 42 gymnasias, 19 schools with lyceum classes, 100 schools with gymnasias classes, 10 special schools for talented children, and 7 line schools.

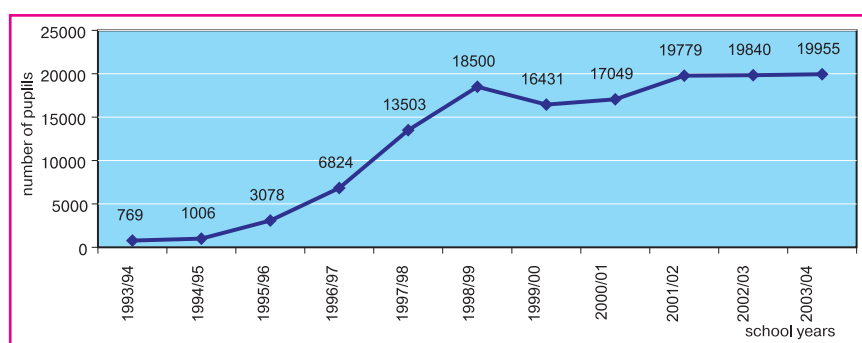
Gender analysis of these numbers shows that 49.4% of students are female. The proportion of girls among all students in the primary (grades 1-4) and basic (grades 5-9) levels of general education was 48.9% and in the upper level (grades 10 and 11) was 52.1%. The same proportions of girls and boys were observed in the 2002/03 school year.

Figure 3.6.
Network of private secondary day schools



Source: Statistics Agency of the Republic of Kazakhstan

Figure 3.7.
Number of pupils in private secondary day schools



Source: Statistics Agency of the Republic of Kazakhstan

Education for all: the key goal for a new millennium

Technical Vocational training

As an integral part of the education system, vocational training plays a key role in training qualified professionals. The vocational training system during independence of the country underwent major changes. The development of market relations, growing economic independence of educational institutions, and transfer to a multi-level system of training professional staff, all of these factors have significantly renovated the system of training.

Primary technical vocational training

The number of vocational and technical schools from 1994 to 2000 decreased by 31%, and by the beginning of the 2003/04 school year there were 288 institutions with the number of students (98,000) standing at 61% of the 1994 level (159,600 students). Vocational lyceums started to train highly qualified professionals in economics, art and literature, the service industry, vehicle operation, and computer hardware and software. Lyceums account for 50 schools or 17% of the total number of vocational schools.

During the last few years the primary vocational institution network has been intensively reorganized. Thus, starting from 1999, with almost no change in the total number of technical schools (285 in the 1999 and 288 in the 2003), the number of private institutions increased from 17 to 29, and the number of public institutions decreased respectively from 268 to 259. The increase in private technical schools has not resulted in any significant increase in students. Thus, during the period from 1999 to 2003, the share of students in private technical schools increased from 2.7% to 3.3% of the total number of students.

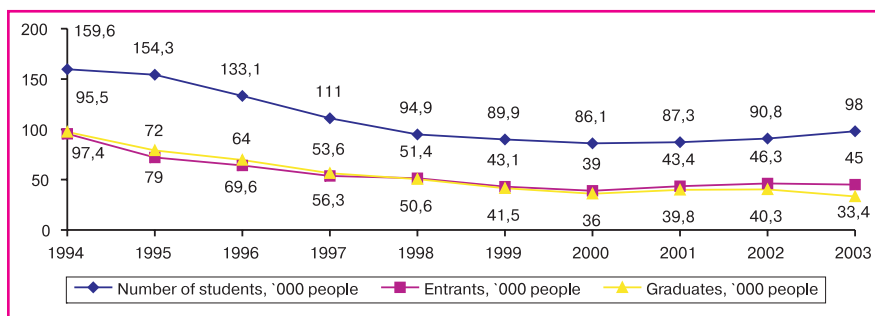
The network of private primary vocational educational institutions is increasing at a slower pace (from 17 in the 1996 to 41 at the beginning of 2003) and the number of students is growing even more slowly (from 3% to 3.6% of the total students in the same period). This is related to the practice of enrolling children mostly from low-income families that cannot pay for education and to the high cost of facilities required for vocational training in private institutions. Widening the network of private institutions is taking place in areas where the population can afford education services, mostly in urban areas. Education is still less affordable for the population in remote areas. Thus, the number of rural students in vocational institutions in the 2003/04 school year remained approximately at the level of 2001/02 school year.

Despite the fact that the network of educational institutions is not moving toward more enrolment of consumers of education services, there are other ways of making these services more accessible. A major



achievement in education is the development of a diversity of curricula. The system of primary and secondary vocational training, according to the Education Law, incorporates five curricula allowing continuing training from different basic knowledge levels. Students of primary vocational training account for 80% and students of continuing education on the basis of secondary school, 20% of the total number of students. Number of PVI students is shown in Figure 3.8.

Figure 3.8.
Dynamics of the current number of students, entrants and graduates of primary vocational institutions

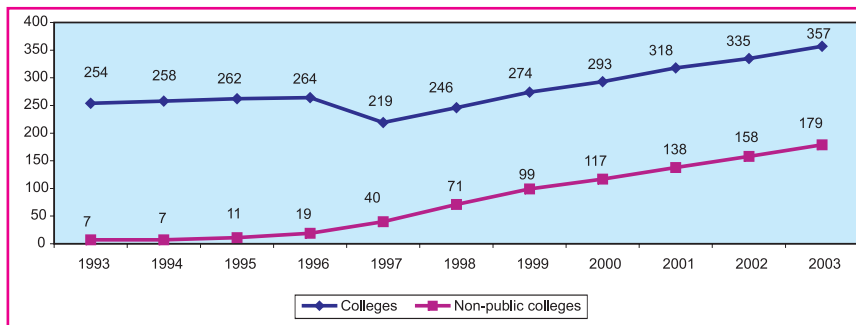


Source: Statistics Agency of the Republic of Kazakhstan

Secondary technical vocational training (colleges)

Since independence of the Republic of Kazakhstan, secondary vocational education did not experience any significant changes either in the number of students or the number of educational institutions (Fig. 3.10). In the 1997/98 school year, the number of colleges decreased significantly from 264 to 219. Respectively, the number of students during the same period decreased by 17%, to 148,000 students. At the beginning of the 2003/04 school year, there were 357 colleges; their number increased compared to the previous year with 250,900 students.

Figure 3.9.
Dynamics of college network development



Source: Statistics Agency of the Republic of Kazakhstan

Private colleges started to get organized from 1993 and at the beginning of the 2003/04 school year, they reached 179 schools (Figure 3.9), training 46,800 people, which is 27.8% of the total number of college students.

During the last 5 years, the number of college students almost doubled, and is now 108,000 people (Figure 3.10).

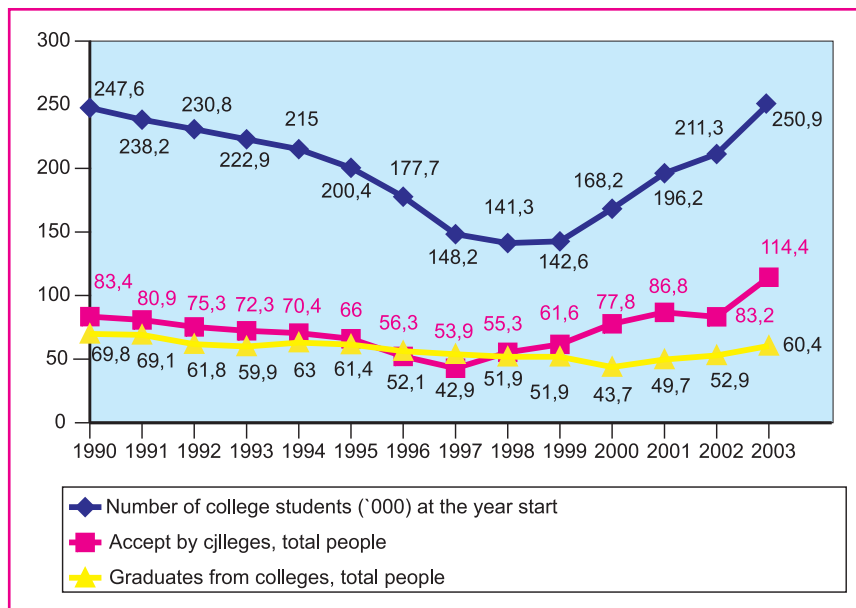
International surveys show that it is necessary in a post-industrial society that at least 30% of the adult population have higher education. However the existing system of higher vocational education in Kazakhstan is not yet capable of satisfying the education demands to the required extent, despite intensive development.

Based on statistics, 180 higher institutions operated at the beginning of the 2003/04 school year including 46 public and 134 private institutions. Compared to the 2002/03 school year the number of higher institutions increased by 3. During the last four years, their number increased by 10.

Higher education faces the problem of unbalanced patterns concentrating higher institutions in certain regions of the country, obstructing the growth of accessibility to higher education. Almaty can be regarded the centre of higher education, where 69 institutions – or more than one-third of all higher institutions – were located at the beginning of the 2003/04 school year. The second most concentrated region was in South Kazakhstan oblast with 19 institutions, then Karaganda oblast with 15 institutions and East-Kazakhstan with 9 institutions.

Figure 3.10.

Dynamics of college students, entrants and graduates



Source: Statistics Agency of the Republic of Kazakhstan

An Analysis of studies by profession shows that humanitarian, medical, economic and teaching professions account for more than 60% of total college students. The number of computer software and hardware students is increasing annually, and in the 2003/04 school year they accounted for 6% of students. At the same time the share of agricultural and forestry students was only 2%, students preparing for retail careers was only 0.7%, and those studying food processing technologies was only 1.6%.

Higher education

Modern society requires transition to a fundamentally new level of accessibility to high quality vocational training.

The network is increasing mostly through opening private educational institutions. During the last four years, 22 of the newly established institutions were private: 7 of them opened in Almaty city, 5 in Astana city, 7 in South Kazakhstan oblast and 1 each in Akmola, Almaty and North Kazakhstan oblasts. Widening the higher institution network resulted in a 1.5 times increase in the total number of students, including a 14% increase in students in public institutions. Statistical data shows the growing popularity of private higher institutions. Thus, while in the 2000/01 school year about 29% of 440,000 students studied at private higher institutions, in the 2003/04 school year, 45.3% of 658,000 students studied at private institutions. The average number of students in private higher institutions has doubled, and is now 2,200 students per institution (7,800 students per higher institution).

Operations of the leading private institutions of higher learning spur improvements to the quality, level of teaching and work of the entire system of higher vocational education. As the competition between these different types of institutions has notably increased, the students are gaining wider opportunities to choose among the educational services provided, and the institutions have really sensed the need for systematic and diverse work to attract well-prepared entrants.

Initially private higher institutions focused on training staff in the fields of humanities, economics, law and pedagogy. The logic of this development of the private sector in higher education has quite justifiable economic reasons. Institutions focussing on the humanities do not

Education for all: the key goal for a new millennium

require major up-front costs to start an institution, and so they are easier to open than technical institutions, where training processes require appropriate facilities and access to technical, informational, software and technological elements. At present, private institutions train specialists in over 200 professions – from the most common (economics, law, management, language, commerce, technical services, technology, service industry, transport and construction) to the comparatively rare (nursing, choreography, etc.). However, most private higher institutions still train specialists in a comparatively narrow spectrum of professions (with the exception of at most 10% of private universities providing training in 10-12 and more professions).

Different forms of payment for professional higher education exist. The vast majority of students in the 2003/04 school year paid fees for the full recovery of education costs: 541,300 students, or 82.3% of total number of students. Another 62,400 students (or 9.5% of the total) were funded by educational grants, 41,000 by educational loans (6.2%), and 13,300 (2%) by other forms of funding under the state educational order. About 49% of the fee-paying students were enrolled in public higher institutions and 51% in private institutions.

A total of 183,000 students entered institutes of higher learning in the 2003/04 school year, including: 153,000 students who were paying for their own education, almost half of whom entered public institutions; 16,000 students funded by state educational grants of which 13,000 were attending public institutions; and 10,000 students with state educational loans, including 7,500 students in public institutions. During the most recent period, the total number of entrants increased by 16% on average, while the entrants to private institutions increased by 28%. This was accompanied by the tendency of more and more students to select professional studies in education, humanities, social sciences and other inter-disciplinary professions, economics and management.

Higher education is now facing the problem of accessibility for the population, which is rather the result of unequal access to quality education at the secondary education level. From the point of view of equal access, higher education is a public good that supposedly will increase the education levels of the society as a whole. From the market point of view, however, higher education is a good or investment where tuition increases competition and, as a result, the quality of knowledge both among the institutions and among the students. Because of this, the objective of the state should be to ensure equal starting opportunities at the secondary education level and to provide the best graduates with grant and loan programmes to allow them to secure higher education after leaving school.

At present differences in the quality of secondary education result in school graduates in Kazakhstan not having equal starting opportunities for receiving higher education. In addition to the insufficient level of knowledge of rural school graduates, the factors resulting in unequal opportunities include the financial status of children from low-income families who

have to earn a living after graduating from school, and the lack of special infrastructure for disabled children in the higher institutions of the country. Though the implementation of a national baccalaureate partially mitigates this problem, the search for new solutions in ensuring equal starting opportunities for securing higher education is a most important issue in the country.

3.2.2. Analysis of basic parameters of education quality provision

A survey of the content of the education system should be based on certain indicators to analyse efficiency because development of the system is mostly dependent on whether the education system corresponds to the existing quality indicators. By determining the key characteristics and problems of each level of the education system, the authors of the report analysed the system using key criteria that were peculiar to each education level. They include the content of education, availability of qualified staff, quality of curricula and funding of the education system.

Education content

The reform of the education system should be particularly focused on the quality of curricula that are the basis of education content.

At present no mechanism has been developed to implement general mandatory pre-school education. This should be done, given the various existing forms of the education process with a short-term and flexible regime of attending pre-school groups. A total of 265 pre-school institutions (24% of the total number) provide training in Kazakh; 416 (40%) provide training in Russian; and 408 (37.3%) mixed language schools teach 27,300 children communicating in Kazakh and 45,000 in Russian.

The pre-school curriculum is planned for 32 weeks. Children have classes for 22 hours a week. The structure of the classes is determined on the basis of physiological and psychological characteristics of 5- and 6-year-old children having their first experience in a formalized training process. The content of pre-school curriculum



includes ethnic and human values, elements of ethics and hygiene, initial skills in communications, and physical and psychological development.

Nineteen new training methodological systems consisting of 82 elements in Kazakhstani and Russian have been implemented in the 2003/04 school year in the education process of pre-schooling classes and groups. The implementation of such systems will facilitate the efficient solution of pre-school education quality issues. More than 220,000 pre-school pupils have been provided with the first generation of pre-school textbooks in the 2003/04 school year.

Standards for 87 professions of primary vocational training and 199 professions of secondary vocational education have been developed and approved in recent years. The changing economic situation in the country and the demands of the labour market required a review of the classification of professions in primary and secondary vocational training, covering at the moment 300 primary education and 371 secondary education professions. From 2002 the programme of development and issue of textbooks and training and methodological systems for special disciplines has been in operation for vocational and technical schools for three years; it provides for the development of 828 textbooks and training methodological systems for 2395 special disciplines for the amount of KZT 695,160,000 (more than US\$ 4.5 million).

The main work in this area has been in the process of development for several years, but it cannot catch up with the process of technical renovation and technology change in the industries, which takes place much quicker than the revision of the education plans. This has negative effects on training professionals. The problem is further exacerbated by the weak system of peer review of standards carried out without the involvement of line and professional organizations. Textbooks on special subjects, especially in Kazakh, are being replaced and introduced slowly. Education institutions providing different curricula do not take into account the opinions, requests and interests of the students.

Availability of teaching staff in the education system

An important condition for establishing a quality education system that complies with modern requirements is the provision of all education levels with highly professional staff.

From UNESCO "Education for all through voices of children":

"If the teacher is a professional, the pupils will have good results and quality knowledge."

Boy, 15 years old, Almaty city

The analysis of education staffing should start with pre-school institutions that form the basis for human capacity development. A total of 16,200 teachers were training children at pre-schools in 2003 of which 39% had higher education and 54.8% had a secondary vocational background. The low share of teachers with higher

education affects the quality of preparations for primary school (see Annex 2, table 16).

Special attention should be paid to the availability of teachers for general secondary education. A total of 274,138 teaching staff were working in secondary schools in the 2003/04 school year. Compared to 1999, the number of teachers increased by 41,400 people and by 3.4% compared to the 2000/01 school year. This includes an increase in the number of teachers of grades 5-11 by 5.5% and a reduction in the number of teachers of grades 1-4 by 5.3%. A total of 162,000 teachers work in rural schools. The average number of pupils per teacher is 11.2 in grades 1-4 (compared with 11.7 in the 2000/02 year); 17.8 pupils per teacher in grades 5-9 (compared with 18.7 in 2000/01); and 11.2 pupils per teacher in grades 10-11 (compared with 11.6 in 2000/01).

More than 274,000 teachers worked at general schools in the 2003/04 school year, including 195,800 (71.5%) with higher education, 14,800 (5.4%) with incomplete higher education, and 60,000 (21.9%) with secondary vocational training. It is of concern that 3,205 teachers only had general secondary education, more typical in rural schools. Annex 2, tables 18-20 show the classification of teachers of general schools in the 2003/04 school year.

In the 2003/04 school year, the demand for new teachers was about 3,700 professionals, which was about 3% higher than in the 2002/03 school year. One problem in filling staff positions is the unwillingness of graduates from teachers' training institutions to work at general schools. Thus, in the 2003 about 14,400 students graduated from teachers' training institutions including 4,777 specialists with higher education. A total of 3,498 graduates were sent to rural schools including 2,172 specialists with higher education.

The key problem in rural schools is the lack of staff. As noted by education sector representatives, many teachers, young ones in particular, are trying to find jobs in cities. The option of training rural children is unattractive for them due to poor facilities, lack of prospects for promotion, delays in payment of wages and poor working conditions.

Reasons for the acute lack of qualified staff in rural schools can be presented in the following way:

- ✦ lack of accommodations for teachers in distant regions;
- ✦ graduates don't prefer living in rural areas;
- ✦ high demand for experienced teachers in the urban public and private schools;
- ✦ personal preferences of school managers employing the new staff;
- ✦ lack of opportunities for self-education and improving qualifications for rural teachers;
- ✦ low-capacity schools require fewer hours of work and, consequently, they pay less salaries to the teachers.

Teachers in rural schools to a large extent face the problems specified above, and in addition their qualifications are lower than those of urban teachers. Almost 23% of rural teachers have no background in pedagogy and another 12% have only a secondary education background. Measures planned by the state to improve the quality of the teachers training system are inspiring. However, solutions to rural school problems require separate action plans for

Education for all: the key goal for a new millennium

the state, and local governments in particular, to propose comprehensive social packages for young teachers willing to work in rural schools. Such policies should take due account of the issues specific to rural areas including gender aspects.

The difficulty of using active training methods is a serious problem for schools with combined classes and is becoming a reason for the bad reputation of combined classes in Kazakhstan. Rural schools seriously lack teachers of foreign languages, mathematics, hardware and software, manual work and vocational training. This is caused by the fact that these specialists are of high demand in many sectors and they have no problems finding jobs in the cities. In 2003 only 20% of the graduates in these subjects that were supposed to work in rural areas arrived at their assigned place of work.

The share of females among teachers is very high. Women account for 80.6% of the total number of teachers. Based on the fact that education is a strategic area of human development, gender balance is important for this sector. The issue of training the growing generation can be comprehensively resolved only with the equal involvement of men in the process. For this, attention should be paid to the issues of remuneration, professional growth, promotion, self-education opportunities, and increasing the status of teachers.

There is no national system of teacher employment, for example, through vacancy announcements in rayon, oblast or municipal newspapers. It is the responsibility of the schools to search for and employ teachers. Fairs are organized in some regions to announce teaching vacancies, but in most cases the schools get the information about unemployed teachers from regional and/or rayon education bodies. The mechanism and criteria of selection of teachers on a competitive basis (similar to testing for civil service by the Civil Service Agency) should be considered. The Ministry of Education and Science should be involved in developing a legal and regulatory framework to cover public relations for civil and national service and to ensure the social and legal protection of teachers.

The availability of qualified staff is becoming of particular significance in the vocational training system as this is the sector where specialists in different areas are trained. As of 2003, the total number of teachers in primary and secondary vocational education was 28,865 people, including 73% working in public and 14% in private institutions. The distribution of staff by technical schools/lyceums and colleges is shown in the following table:

Table 3.2.
Number of teachers in vocational education

PSVE institution	Public	Non-public	Total
Colleges	12,012	7,369	19,381
Technical schools/lyceums	8,940	544	9,484
Total:	20,952	7,913	2,8865

Source: Statistics Agency of the Republic of Kazakhstan

An analysis of the ratio of students and teachers shows that in public and private colleges there are 10.7 students per teacher; in public technical schools, 9.6 students per teacher or overseer; and 6.5 in private technical schools. This ratio of students and teachers does not comply with international standards, where the requirements in 1:10 to 1:15. This trend shows that primary and secondary vocational training in the country is not attractive enough for the students. This is caused primarily by the quality of teachers since the private institutions mostly attract working staff who teach as an additional job.

The trend of staff aging is continuing: the number of teachers with 1-10 years of experience is about 30% of the total; those with more than 10 years experience account for the other 70%. About 1,200 special discipline teachers are needed. Due to low salary levels, the outflow of highly qualified engineering and teaching staff is continuing. A total of 41,000 teachers and professors were working in the higher vocational education system during the 2003/04 school year including 24,800 people in the public educational institutions.

The problem of staffing for private higher institutions deserves special attention since 20-40% of their staff includes teachers with more than one job. Therefore increasing the number of higher education institutions would result in staffing complications in this category. For example, in the 2003/04 school year, 20% of teachers in private institutions and 12.5% of teachers in public institutions were holding more than one job.

The qualifications of staff in higher institutions are also playing an important role in the quality of staff training. In the 2003/04 school year, out of 2,500 doctors of science, 11,600 masters of sciences, 2,700 professors and 7,000 assistant professors, the teaching staff of private institutions included 44% of all doctors, 42% of masters degree holders, 53% of professors and 48% of assistant professors.

Table 3.3.
Breakdown of teachers by ownership of institutions

	Number of teachers				% of total			
	2000	2001	2002	2003	2000	2001	2002	2003
Total	29,577	34,508	37,602	40,972	100	100	100	100
State-owned	22,351	23,602	22,386	24,841	75.6	68.4	59.5	60.6
Private	7,226	10,763	15,104	16,069	24.4	31.2	40.2	39.2
Owned by foreign states, companies or individuals		143	112	62	0.0	0.4	0.3	

Source: Statistics Agency of the Republic of Kazakhstan

Table 3.4.

Number and structure of professors and teachers in higher education institutions, number of people

	1999	2000	2001	2002	2003
1	2	3	4	5	6
Number of masters of sciences					
State-owned	6,960	7,310	7,463	6,744	6,701
Private	1,510	2,164	3,267	4,827	4,884
Owned by foreign states, companies or individuals			39	38	19
Number of doctors of sciences					
State-owned	1,232	1,381	1,582	1,404	1,402
Private	337	468	733	1,095	1,115
Owned by foreign states, companies or individuals			8	2	1
Number of assistant professors					
State-owned	6,820	4,586	4,535	3,720	3,615
Private	1,531	1,712	2,513	3,876	3,449
Owned by foreign states, companies or individuals			32	22	6
Number of professors					
State-owned	1,589	1,765	1,810	1,358	1,286
Private	418	659	994	1,574	1,456
Owned by foreign states, companies or individuals			8	3	2

Source: Statistics Agency of the Republic of Kazakhstan

The level of qualification of teachers surely influences the quality of education in the institutions. The state appreciates the significance of improving teachers' training. There are common problems with training and educating highly qualified teachers that are exacerbated in rural schools with low funding. The following are the problems:

- ✦ The low status and low wage levels (much below the average) of teachers does not attract candidates of a high enough level. As the 2003 exams show, the knowledge of entrants to teachers' training institutions is low. Another symptom of the problem is the departure of 4,000 teachers from the education system in the 1990s, when a high unemployment level was observed. Further diversification of economy would threaten both keeping and attracting quality teachers.
- ✦ Teacher training in Kazakhstan is focused on an information-heavy and didactic approaches instead of more complex forms and much-needed interactive training.
- ✦ The career structure is inadequate.

National system of budgets to finance education

The national system of budgets to finance education includes funds from central and local budgets. During the period from 1990 to 2000, the total allocation for education decreased significantly not only in absolute figures but as a percent of GDP (see Annex 2, table 10). Thus, while in 1990 it was 8.2% of GDP, in 1995 it was only 4.5%. This trend continued into 2000, when it was 3.1%. The year

2003 was the first time some growth of this indicator took place, increasing to 3.4% of the GDP.

From 1999 to 2003 moderate growth of budget allocations for education and science was noted. The share of education (without loans) in total national expenses decreased from 14.4% in 1999 to 11.9% in 2001 and increased to 14.1% in 2003 (respective shares in OECD countries in 1999 averaged 12.7%²²).

Based on data from the Ministry of Finance (MOF) and Ministry of Economy and Budget Planning (MEBP), the average allocations for education from 1999 to 2003 amounted to 83% of local budgets and 17% of the central budget.

Based on data from the Ministry of Education and Science (MES), an average of 86% of local education expenses were covered from local budgets and 13% from the central budget, not including education institutions controlled by other ministries and agencies. In 2004, based on MEBP estimates, the share of education expenses covered by the central budget will increase to 21.6% while the share covered by local budgets will decrease to 78.4%. The key priorities for the period 2004-2006 are "universal pre-schooling, access to quality secondary education, implementation of new education standards and continuous learning systems, modernization of qualifications, and starting elite higher institutions"²³.

²² OECD (2002a), p. 178

²³ Explanatory note (№20/6489) to draft law "On central budget", September 2003, p.4

Table 3.5.
Distribution of public expenditures by sectors, 1999 - 2003, %

Sector	1999	2000	2001	2002	2003
1	2	3	4	5	6
General public services	5.3	5.0	5.7	4.7	6.1
Defence	3.2	2.9	3.6	3.9	4.5
Public order and security	6.0	6.8	7.2	8.1	8.7
Education	14.4	12.1	11.9	12.6	14.1
Public health	8.2	7.8	7.0	7.4	8.5
Social provision and social assistance	29.3	24.4	20.8	20.9	22.7
Housing and municipal services	1.1	3.2	3.4	2.6	3.2
Culture, sports, tourism, and information	2.3	2.5	2.0	2.4	3.2
Fuel and energy infrastructure	0.0	0.0	0.6	0.8	0.8
Agriculture, forestry, water management and environment	1.3	1.6	2.6	3.0	4.3
Industry, construction and mining	0.5	1.0	0.5	0.6	0.4
Transport and communications	2.4	5.4	4.9	6.0	7.7
Other services	5.2	4.6	6.9	5.4	7.5
Debt servicing	3.6	5.1	4.2	4.1	3.4
Formal transfers	12.3	13.7	14.4	13.9	1.2
Loans (excluding repayment)	5.0	3.9	4.3	3.9	3.9

Source: Ministry of Finance of RK

Table 3.7.
Public expenditure on education by educational levels²⁴, %

Education level (type)	1999	2000	2001	2002	2003	Average	OECD 1999 ²⁵
Pre-schooling	3.1	3.7	3.2	3.3	3.0	3.3	7.4
General mandatory education	68.4	73.7	65.2	68.7	66.2	68.4	72.2
Primary vocational education	3.2	3.3	2.9	3.3	3.6	3.2	
Secondary vocational education	3.5	3.3	2.5	2.5	2.3	2.8	
Other curricula	11.9	6	17.1	12.3	16.4	12.8	
Higher education	9.9	10.0	9.1	9.9	8.5	9.5	20.4

Source: MES and OECD (2002)

An important aspect of improving the system of financing education is the delineation of powers between budgets at different levels. With unclear distinctions between jurisdictions of the central and local budgets, it is very difficult to efficiently manage the education system. In addition it is important to eliminate or at least minimize the duplication of functions between MES and its local units so that each function is completely executed by one level only and there is efficient coordination of different levels of government involved in education.

At the moment the different public functions, powers and degrees of responsibility of each level are not clearly identified, resulting in problems in inter-budgetary relations, as it is not clear which of the budgets should cover particular items. MES provides education services funded directly from the central budget and local governments provide education services to be funded by the local budgets.

However there is no clear distinction of powers. For example, the law "On the Budget System" (article 9 "Expenses of the Central Budget", clause 1) states that the central budget (i.e. MES' source of funding) is spent to fund higher, general secondary, optional, and special education. Article 12, clause 1 of the same law provides

²⁴ Including ADB loan №1420 for Education rehabilitation and education management improvement project (US\$20 million), 1997-2001, and ADB loans №5041 and 5042. Basic education project (US\$45 million), 1998-2002.

²⁵ Percentages are calculated based on Table B2.1c OECD (2002 a) taking into account funding of education from private and public sources. The latter include 82% of expenses for pre-schooling, 92% for primary, secondary and post-secondary non-higher education and 79% for higher education.

that local budgets are supposed to fund pre-school, basic and general secondary, primary and secondary vocational, optional and special education. This discrepancy in the law demonstrates a lack of coordination between the different management levels in education.

The central budget for education in 2003 was executed under 45 budget programmes. As of 1 January 2004 the Ministry was allocated funds under the functional group "Education" in the amount of KZT 21.09 billion. Cash disbursements were KZT 21.03 billion or 99.7% of funds allocated. The dynamics of central budget expenses for education by the institutions of the Ministry of Education and Science (including ADB loans) show that despite the growing GDP share spent for education, the share of funding going to pre-school, primary and secondary vocational education remains the same at the level of 0.1%. (See Annex 2, table 11 for more details.)

A specific feature of the FY2003 budget is the new programme of transfers to local governments for totalling KZT 5,228 million, including: KZT 3,963 million for construction of rural schools, KZT 692 million to maintain standard staffing of public educations, KZT 572 million to ensure the guaranteed standard of the public education network, and KZT 194,4 million allocated for the implementation of the information programme of the education system. Cash disbursements under the Information Programme were KZT 164.4 million. KZT 298 million was allocated to the development, issue and supply of textbooks and methodologies, of which cash disbursements were KZT 291 million. In 2002, KZT 32 million was allocated for upgrading professors and teachers of the higher institutions from the central budget. As a result 2,449 people improved their qualifications.

From UNESCO "Education for all: seen by children":

"Parents should realize that education is a key life priority and should be more critical for their children. The Ministry of Education should enhance the control of quality and fairness on sites and the Government should increase the funding of education"

Boy, 16 years old, Almaty city

Unfortunately, as can be seen from the previous analysis, insufficient funds are allocated by the Government of Kazakhstan for education. Total allocations for education do not exceed 3.4% of GDP. The documents of the Dakar Forum contain the appeal to the governments of all countries to ensure allocations of at least 6% of GDP for education. However budgets at all levels in Kazakhstan hardly cover social expenses – 80% of budgets are for salaries. Funds allocated for items such as school maintenance, procurement of school equipment and materials, major repairs and replacement of school buildings are not enough. About 2% of schools have to operate 3 or more sessions.

Facilities

Quality of education to a great extent depends on the material and technical base of the educational institutions.

At the moment this base does not comply with current requirements.

Pre-school facilities are still weak: only 57% are using buildings of standard design, with 544 (49.6%) of them requiring major repairs. Utilities leave much to be desired: hot water supply is only available in 622 (57%) of the institutions, 195 (18%) institutions use furnaces for heating, and 298 (27.2%) have outdoor toilets.

The notorious "optimisation" of the education network undertaken from 1995 to 1998 resulted in the closure of many schools and pre-schools, rural ones in particular, and caused education to become inaccessible for certain children, as well as the reduction in the quality of education services provided. Based on a UNICEF report, more than 30,000 children in 2001 had to walk to school a distance of 5 to 40 km. More than 1,000 (72%) primary schools are located in substandard buildings and have only outdoor toilets. Some oblasts face the problem of access to potable water. Most primary schools have no gymnasia or sports fields, and no conference hall. Deterioration of schools affects attendance by pupils. Some schools have insufficient funds for heating, resulting in lower attendance in winter and increased health problem.

The conformity of school buildings to national standards remains an acute problem especially in rural areas. Most schools were constructed in the 1950s and 1960s. Construction is needed of new standard buildings replacing the substandard ones, in rural areas in particular. Lack of mandatory equipped classes for physics, chemistry, biology, physical education, and workshops prevents ensuring quality compliance with the national education standards.

In 2003 the central budget allocated funding for the construction of 27 schools. So far 15 schools have been completed in the oblasts: 5 in Almaty, 5 in East Kazakhstan, 2 in South Kazakhstan, 2 in Pavlodar, and 1 in Jambyl oblast. Eleven schools were constructed to replace ones in very bad condition. In addition, 17 rural schools were constructed using local budgets.

The number of schools with low numbers of pupils is annually increasing. The share of such schools in the total number of schools increased by 4.5%. The highest proportion of low-utilisation schools is in North Kazakhstan oblast with 618 or 85.6% of the total number, in Akmola oblast with 540 (77%), in Kostanai oblast with 510 (73%), in East Kazakhstan oblast with 483 (59.2%), and in Pavlodar oblast with 330 (72.2%). The majority of such schools are located in rural areas. To ensure universal enrolment of rural children with education, boarding schools should be established and vehicles should be provided for the daily transportation of pupils.

As of 2004 more than 30% of schools require major repairs: 6.4% are in very bad condition and 80% of the all buildings in bad condition are located in rural areas. If no measures are taken for major repair of these schools, they will soon become impossible to repair and will have to be demolished and rebuilt. It is the general understanding that if repair is not done regularly, repairs and replacement of school buildings and equipment will be more expensive in the future than maintaining these buildings in a timely manner.

About 20% of secondary schools have no classes in chemistry, mathematics, or Kazakh language, 40% lack geography classes, and 12% lack workshops. More

than 30% of schools have no gymnasiums, canteens or cafeterias; only 27% of pupils are supplied with hot food.

The national programme of information technology of secondary education system approved by the Instruction No. 3645 of the President of the Republic of Kazakhstan of 22 September 1997 was completed in 2002. However one cannot say that the schools are fully supplied with required modern computers. About 3,500 computers supplied to the general schools before 1997 were first generation computers (Agath, Jamaha, Korvet, UKNC and others) that in fact are not suitable for operation and would cause problems in the process of introducing information and telecommunication technologies into education. In addition 6,465 computers are now in need of replacement (see Annex 2, table 17).

Education quality and literacy

As noted in the "2015 Concept of Education System Development in the Republic of Kazakhstan" the existing education in Kazakhstani schools remains focused on factual information, aimed at learning information for a subject. National standards based on the subject-oriented approach are obsolete. There is no competence-based approach oriented at the individuality of a pupil. Existing schools do not provide clearly positive motivation regarding choices of the course of life, interests and prospects.

The results of comprehensive testing show low levels of knowledge of the entrants. The share of entrants who got unsatisfactory marks in 2001 was 30%, in the 2002 and 2003 it was 28%. The quality of knowledge in the natural sciences and mathematics is of particular concern.

According to Resolution № 316 of the Government on 13 March 2004, the Unified National Test was started. A total of 179,216 school graduates took the Unified National Test (76.1% of the total number of graduates in the 2004), including 105,599 graduates from schools in Kazakhstani and 73,617 from schools in the Russian language.

The Unified National Test in Kazakhstan 2004 results show that 24.2% of graduates did not get the minimum 40 score out of 120. Only 0.7% of the graduates achieved excellent marks, having received a score between 101 and 120 on the Unified National Test and 2003 test results do not differ much from each other. Comprehensive results can be found in Annex 2, tabl. 21.

The average score in the country was 52.1, with the highest indicators achieved by school graduates in West Kazakhstan (53.4), East Kazakhstan (52.9), Karaganda, Pavlodar (56.4), and North Kazakhstan (53.5) oblasts and Astana city (61.2) and Almaty city (61.0). The lowest test results (below 50) were achieved by the school graduates in Atyrau and Mangistau oblasts, below 51 in Aktyubinsk, Almaty, South Kazakhstan and Kostanai oblasts. Based on NB results, 748 out of 2,443 candidates for "Altyn Belgi" have proven their entitlement.

A UNESCO survey, the intellectual marathon "Akбота", and test results of general school graduates for the last five years show a stable trend in the decreasing quality of education. In existing school conditions, talented children gradually lose their capacity and this raises the need for urgent solutions to this problem.

The aforementioned results – indicators in intellectual competitions, number of graduates entering higher institutions, graduates granted certificates with honours, results of contests and even comprehensive testing – do not reflect the quality of education. This speaks to the fact that the measurements of education quality in Kazakhstan are not reliable enough. This problem is discussed in more detail in Chapter 4 of this report.

Thus, the analysis of the current condition of the education system in Kazakhstan shows the need for taking urgent measures to improve and implement the education policy of the state. Issues remain concerning the legal and regulatory framework of national education state policies, structure of education system management, mechanisms of management and delineation of powers between different education management levels, and activities of civil society and the private sector in education management

During the period of economic and social reforms in Kazakhstan, when the mobility of the population significantly decreased, the problem of education network development and enrolment of the population with education –when the total share of education enrolment of population of 6- to 24-year-olds in 2003 was only 76.9% -- is becoming particularly acute. In these conditions the widening education network in Kazakhstan by the private sector allows the youth to get higher and secondary vocational education at their place of residence, thus resulting in young people studying in the institutions in Kazakhstan and reducing outflow of talented youngsters to study outside the country.

Major increases in private secondary and higher vocational institutions have been caused by a number of factors. Primarily, private higher institutions and colleges quickly reacted to the changing market for professions in the society and took this into account in their curricula, opening new courses for education and training according to the demands of employers. The problems of the private education sector requiring urgent solution include, first of all, the deficit of information of activities about this sector, its peculiar characteristics, specifics of its curricula and training processes, and lack of systematic comparative and analytical surveys of performance of public and private education institutions.

Attention should be focused on key areas such as education content, availability of highly qualified teaching staff for education institutions, development of facilities, education funding improvement and the system of quality evaluation based on international experiences. Computer-based methodical aids and visual multimedia aids are not widely used. However they could significantly improve the quality of education and thus improve the professionalism of graduates. In addition the problem of education content is caused by the fact that education institutions providing certain curricula to students do not take into account the opinions, demand and interests of the students. Timely care of these issues and their improvement would allow an increase in the level of human development in Kazakhstan and bring the country to a new stage, ensuring education for all.



Chapter 4

EDUCATION IN KAZAKHSTAN AS A GUARANTEED HUMAN RIGHT

The welfare of an individual or a nation relates to the common well-being of all people.

A.Barbus

Education is central to the human development concept and the most important priority for the government, society and the individual. Acknowledgement of the social role of education is rooted in human capital theory. Such an interpretation of education's role expands Clause 26 of the General Declaration of Human Rights, adopted by the General Assembly on 10th December 1948, which declared the right of every person to education and emphasized the purpose of education as being the development of human personality and the consolidation of respect for human rights and freedoms. The human right of choice is not just a means but also the goal of economic progress. This particular view is the basis for such documents as the Jomtien Declaration on Education for All (1990) and the Dakar Framework of Actions (2000) which are acknowledged by the world community and represent the essence of the global movement, Education for All (EFA). Each of the six purposes and 12 strategies of EFA is fully consistent with key human development goals (see Appendix 2, table 19).

Since the collapse of the USSR and Kazakhstan's gaining of sovereignty through the 1990s, Kazakhstan has had to address issues related to market and democratic reforms. The changes that have taken place in our country have contributed to the eventual acknowledgement of education as key in raising the concept of social competitiveness in public consciousness and state policy. The address of President Nazarbayev to the people of Kazakhstan for 2005 emphasizes that *"under the conditions of globalisation and tough global competitiveness the physical and intellectual capabilities of the Kazakhstan people are the key factors in the success of our intentions, the competitiveness of the country's economy and its survival in modern conditions. The nation's competitiveness is firstly determined by the level of its education."*

Thus the importance of education is self-evident with regard to both society and the individual. However at the current stage of economic development, the most important political documents consider education more as a tool for economic competitiveness than for achieving life purposes. One may expect that as the economy of Kazakhstan moves to an innovation economy, the opinion about the role of education will be gradually changed. For the time being we observe some contradictions between social expectations

and specific socio-economic and political conditions of the country; at the same time we have promising prospects.

Kazakhstan as a UN member country is a participant in all major international conventions in education and protection of human and children's rights. These are the afore-mentioned General Declaration of Human Rights, The Dakar Framework of Actions, as well as the Convention on Children's Rights, the International Declaration on Economic, Social and Cultural Human Rights, the Lisbon Convention and the Bologna Declaration on Higher Education, UN Millennium Development Goals and others based on the same principles. Modernisation and reforms in education in Kazakhstan take account of the main provisions of these documents. All the measures aimed at both ensuring access to compulsory primary and secondary education, and implementation of large-scale reforms in education according to international trends and positive experience and traditions at home, have been carried out under the most difficult conditions of the transition period.

Kazakhstan is progressing impressively in education development. According to official figures the country is nearly one hundred percent literate. An objective assessment of international organizations shows that one of the six Millennium Development Goals – guaranteeing general primary education is already completed. All the strategic political documents to some extent reflect the importance of education as a necessary constituent of human resource development; education was acknowledged as the most important priority in the long-term Strategy Kazakhstan-2030. And as stated above, the major political documents emphasize a close relationship between the competitiveness of Kazakhstan in the world community, economic competitiveness, and competitiveness of Kazakhstan scientists, managers, businessmen, experts, and labourers.

Some progress can be observed in implementation of the Dakar Framework for Action, which is the major document reflecting the world community's intentions towards a guaranteed right to quality education for all, and recognizing human study activities as a natural element of life at any age. The government has taken steps to introduce its main provisions by appointing an EFA National Coordinator, the functions of which were placed under the Vice Minister of Education and Science in accordance with

the Order of the Minister of Education and Science. The National Action Plan of Education for All has been developed and a staged implementation schedule was ratified with the assistance of all concerned ministries, authorities, and representatives of civil society. Coordination Council has been established for its implementation and monitoring. An EFA Resource Centre has commenced work, its objective being the promotion of EFA ideas in the country.

Objectives of the Dakar Framework for Action:

1. expanding and improving comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children;
2. ensuring that by 2015 all children, particularly girls, children in difficult circumstances and those belonging to ethnic minorities, have access to and complete free and compulsory primary education of good quality;
3. ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life skills programmes;
4. achieving a 50 per cent improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults;
5. eliminating gender disparities in primary and secondary education by 2005, and achieving gender equality in education by 2015, with a focus on ensuring girls' full and equal access to and achievement in basic education of good quality;
6. improving all aspects of the quality of education and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills.

In 2002 with the assistance of UNESCO and UNICEF Kazakhstan became the first host country of the Central Asian Education Forum in the region with a view to developing partnership, technical cooperation and resource mobilization for implementation of the Dakar Framework of Actions, and a leading country in the coordination of subject group activities dealing with the development of life skills. After April 2002, in honour of the next anniversary of the Dakar Forum, Kazakhstan among many countries in the world took part in EFA World Week actions to attract the attention of a wide community to the Dakar Forum decisions and for further dissemination and implementation of EFA ideas in Kazakhstan.

Fundamental human rights were identified by the General Declaration of Human Rights adopted in the middle of the 20th century and their implementation is the current century's objective. The preceding chapters give details of progress achieved in pre-school, primary and secondary education and the potential of these educational levels in Kazakhstan. The present chapter provides a quick glance at the changes in education which have taken place since the 2000 EFA Assessment was conducted in preparation for the World Educational Forum in Dakar in April 2000, where the member countries confirmed adherence to EFA as a basic principle of peace creation and committed themselves to ensure attainment of EFA goals. The move to protect the rights of socially insecure children and adults, and vulnerable, poor and disadvantaged populations is one

of EFA's characteristics. That is why special attention is to be paid to implementation of the rights of such groups.

4.1 MEASURES TO IMPROVE UPBRINGING AND CARE OF EARLY CHILDHOOD GROUP

It is to be noted the pre-school education enrolment used to be stable, until the 1990s. Due to a decrease in the employment rate and increases in the price of child support, enrolment abruptly went down. This trend was typical, not only for our country. The Asian-Pacific Regional Educational Forum, held in Bangkok in 2000, revealed that pre-school enrolment had declined in all Central Asia countries. Measures such as the expansion of distance education, the introduction of compulsory and free pre-school education for 5-6 years old children, the priority funding of orphanages, infants' homes, and pre-school institutions for children with special needs, and the introduction of new methods for funding based on unit costs were not fully implemented. According to UNICEF data in 2002, Kazakhstan was 60th²⁶ out of 187 nations in infant mortality before the age of 5. As stated in the ADB funded public expenditure review²⁷, it seems that educational development funding, including pre-school was based on the principle of covering the maximum number of children with education and care within available resources. There is no understanding that the state should mobilize all the required resources and provide the quality education for all children. Due to a massive decrease in pre-school institutions there is a challenge to prepare children for school. According to Statistics Agency data, only 22% of children from the age of 3-6 had access to pre-school programs in 2003. The pre-school training enrolment has slightly improved, which now includes 63% of children at the age of 5-6 compared to 20% in the 1998. However, as stated in Chapter 3, enrolment of pre-school children varies between rural and urban regions, and between services provided by public or private providers. This problem therefore remains critical and requires urgent attention.

The analysis shows that the problem of pre-school education mostly concerns Almaty and Kyzylorda oblasts, where less than ten percent of children are provided with access to such programs.

Conclusion: Within the past 13-14 years, Kazakhstan was not yet able to implement set goals in the sector to the full extent and pre-school education remains the most challenging sphere in the country education system.

²⁶ Official summary "Position of Children in the World", 2002, UNICEF, p. 11.

²⁷ Berryman, S.E., Golladay, F.L., Osipov, K. and Tasbulatova, S. 2003. Kazakhstan: a review of public expenditure for education and health care. Manila: Asian Development Bank.

Table 4.1
Percentage of children covered by pre-school programmes
(pre-school institutions + pre-school classes)

	1990	1995	1999	2000	2001	2002	2003
The Republic of Kazakhstan	51.3	21.9	8.5	19.4	20.9	21.7	22.0
Akmola	53.3	23.7	6.2	25.1	27.5	28.2	25.4
Aktobe	53.0	25.7	8.6	25.8	28.4	27.4	27.8
Almaty	44.9	11.9	2.8	6.4	5.0	6.2	6.3
Atyrau	44.1	29.4	12.7	25.8	26.9	27.2	28.8
East Kazakhstan	56.1	23.0	8.2	24.1	24.0	24.9	23.0
Zhambyl	44.9	16.3	3.9	14.9	17.5	18.9	19.4
West Kazakhstan	47.9	18.5	10.1	23.7	29.1	29.7	31.1
Karaganda	64.9	32.3	12.5	24.0	26.6	29.9	31.2
Kostanai	70.6	30.1	7.6	14.1	25.2	26.1	27.8
Kyzylorda	41.3	16.4	6.4	18.4	8.8	10.1	10.9
Mangistau	29.9	35.1	12.7	19.7	22.7	23.3	23.7
Pavlodar	70.4	37.3	17.6	29.1	29.1	29.4	29.9
North Kazakhstan	86.8	31.6	5.1	22.5	23.1	23.2	23.7
South Kazakhstan	29.7	9.5	3.8	15.2	18.5	18.1	18.1
Astana city			27.2	27.2	27.3	29.4	30.6
Almaty city	63.6	38.3	26.6	29.6	30.0	32.1	31.8

Source: Statistics Agency of the RK.

4.2 MEASURES TO ENSURE ACCESS OF ALL CHILDREN, ESPECIALLY THOSE FROM TROUBLED FAMILIES AND ETHNIC MINORITIES TO FREE COMPULSORY EDUCATION BY 2015

The key factor is to ensure access of all children to free compulsory education. Kazakhstan has made significant progress in this sphere. The Constitution of the Republic of Kazakhstan guarantees and provides for the right of free secondary (eleven years) education. According to the Statistics Agency of the Republic of Kazakhstan data, educational enrolment of children from the age of 6-17 is 96.5%, with nearly universal enrolment from the age of 7-15.

However, there are some pending issues in this sphere. According to official data secondary education covers 99.8% of children of the relevant age group. The ratio of children about to leave primary school (grade 5) to those in grade 1 was 92% in 1999; but more recently this ratio has grown and is equivalent to that of developed nations, i.e. 99%. There is no ground for concern at first glance.

The problems normally occur moving along the educational levels. According to Statistics Agency data the upper stage of secondary education covers 79% of the age-group in our country. Taking into account that upon completion of basic education (grade 9) some students

continue studying in vocational schools (VS) and colleges, the net (enrolment ratio) of 16-17 year olds is 93%. Even so, 7% of the age-group do not continue with their education. Thus enrolment at different stages differs.

Educational enrolment can be considered from two angles, i.e. acceptance and registration at school, and school attendance. According to UNICEF, school attendance is 86% at the primary stage. The 1999 census proves this data indirectly, showing an increase in the number of the persons who do not get primary or secondary education. In 1999 18.9% of youth at the age of 18 did not have general secondary education, and 12.9% from the age of 20-24. According to the same data, 10.8% of adolescents at the age of 16 did not study anywhere. Although the estimate in the school year 2003/2004 shows that at the beginning of the school year a certain turning point was noted in attendance in primary and secondary education, the issue of full enrolment of school age children is not fully resolved.

The decrease in compulsory secondary education enrolment is to some extent associated with low attendance in class. An independent investigation²⁸ shows that according to the data of May 2004 submitted by six oblast Departments of Education, 590 pupils do not attend schools, 279 of which miss school protractedly. These groups are:

- ✦ Children migrating within or outside the city or the region;
- ✦ Missing children;

²⁸ Report on EFA week in Kazakhstan (19 – 24 April 2004), EFA Association in Kazakhstan. Almaty, 2004.

- ✦ Children without willingness to study;
- ✦ Children under medical examination.

There is some contradiction between these figures and the data provided by the Ministry of Education and Science. According to the data of the Ministry of Education and Science, the number of children missing classes is below 1000 persons a year. However according to enforcement body data, which often finds children missing classes not only more than 10 days a year, but also for longer periods, i.e. months and even years, 7,600 children did not attend classes in 2000, while the MoES suggests that this number was not over 300. This proves the contradiction between educational organizations' statistics and others'. The most significant factor however is that official returns on attendance do not reflect the true situation since there is a trend of missing classes by children. Thus, according to UNICEF data, no more than 75% of children of the age of 7-11 actually attend classes, excluding those who have reasonable excuses not to attend occasionally. The institutions concerned do not collect and analyze attendance data related to older pupils, and the available data on attendance is distorted. The reasons for decreasing attendance are ambiguous and have many aspects. Official organizations distinguish the following main reasons for missing studies and failure to attend the classes:

- ✦ Awkward age problems;
- ✦ Bad health, often associated with students in depressed regions of the oblast;
- ✦ Lack of responsibility of parents in the process of upbringing;
- ✦ Low income of households.

In addition to that, the results of anonymous questioning held by the EFA Association in Kazakhstan in the context of the 2004 EFA Week give such reasons for non-attendance of classes as lack of children's motivation, hostile attitudes by peers, in some cases psychological pressure, and individual incidents of violence caused by peers and older pupils. Thus 12% of the respondents from secondary school note that the reasons for non-attendance are the troubles in relation with peers and in 5% of the cases, problems in relationship with teachers. Social reasons are also noted: unemployment, hard drinking, lack of control by parents, depression, and immoral conduct of parents.

As stated by the international organizations, a pupil's non-attendance and tardiness can reflect other problems – an undeveloped public transportation system, irregular transport to the place of study, temporary closing of schools due to breakdown of the heating system, and others.

Unfortunately it is not possible to make any objective conclusions about access to education because of the lack of adequate methods to trace class attendance and impartial analysis data reflecting the real status of non-attendance and the appropriate reasons. Reasons why class attendance data is not always true can be:

- ✦ Lack of reliable accounts of school attendance; concealment of non-attendance by the school administration; lack of means to deal with children who do not attend classes.
- ✦ Registration of population migration is not adequate, intensive migration inside cities and regions.

Some international organizations also have taken

note of the issue of the lack of valid data. The Asian Development Bank public expenditure review states that the problem is so serious that it impedes sector analysis, monitoring, and quality assessment. It was also noted that the problem concerns not only the Ministry of Education and Science but also other ministries and departments.

Lack of objective analytical methods and methods of comparison of data provided by different departments and non-governmental organizations, and contradictions in statistics data are just the tip of iceberg. The main problem lies in the lack of timely steps toward general educational enrolment of all school age children due to biased statistics. According to independent sources (Report on 2004 EFA Week) a certain number of children miss not only some particular classes, but actually do not get adequate education. These are usually children from problem families, families with low income, or from families where one or both parents are convicted and the children remain without the adults' protection and supervision, and have to live like tramps to earn their living, and so on.

From UNESCO "Education for all through voices of children"

Why do children miss classes?

Some children have to work due to family problems. Such children are exposed to outrage and humiliation; they are regarded as social outcasts and beggars.

Girl, 17 years old, Taraz, Kazakhstan.

Many children do not attend classes because their classmates tease them regarding their appearance and poverty. Trying to avoid jibes they have to miss the classes.

18 years old, Kokshetau

Conclusion: One of the most important EFA objectives – ensuring the full enrolment of children with general education, in particular children from problem families – is not fully performed, and as a result some part of society is marginalized. The statement that Kazakhstan ensured general enrolment of all children of the corresponding age by education is mostly applicable to good families. Thus a pedagogical problem is turning into a social one. This issue cannot be resolved through education alone.

4.3 EDUCATION FOR CHILDREN WITH SPECIAL NEEDS

Children with special needs are given particular attention in the decisions of the Dakar Forum. However, even a quick glance shows that the provisions of the Constitution of the Republic of Kazakhstan, the Education Law, the Convention on Children's Rights and other

Education for all: the key goal for a new millennium

important national and international documents regulating the right of each child to get a quality education are not fully enjoyed by such children in our country.

At present three ministries are attending to such children in Kazakhstan: the Ministry of Education, the Ministry of Health, and the Ministry of Social Protection. Between 1992 to 2001, the enrolment of children and adolescents with special needs steadily decreased. According to CSAWR²⁹ data as of 1999, 22% of children and adolescents are in need of different kinds of support in social adaptation and basic education. These include abandoned physically disabled children living in medical facilities and not receiving any education (2,883 persons), children and adolescents getting state disability grants (41,624), children and adolescents who have committed a crime and are convicted, including those who have never been to school (7,524 + 3,882) and others. (They do not include children in boarding schools, refugees and beggars).

This study shows that according to statistics, the number of children covered by programs for children with special educational needs has been decreasing (36,425 children in 2003 compared to 37,165 children in 1991). There is reason to believe that parents do not register these children, especially in rural areas, in order to avoid social stigma.

However the decrease actually happened as a result of "mainstreaming" children with certain development malfunctions and special needs into the educational process of regular schools, creating thereby 'levelling classes' or classes for children with arrested psychological development, where over 45,717 pupils were studying during the period in question. Such children often study with normal children in normal classes, especially in rural areas. There is no need to explain that these children feel strange in this environment. 1,422 physically handicapped children are being educated at home and this doesn't address the actual needs of this group of children either.



The number of special subsidiary educational and rehabilitation institutions decreased, and their network declined as compared to 1991. The number of students being rehabilitated also declined.

According to CSAWR data, over 45,000 children with development malfunctions do not get an adequate education since there is no guiding, organizational, or financial basis, nor systematic rehabilitation training and retraining of teaching staff, speech therapists, specialists, psychologists, or medical staff at schools as they have been spontaneously accepted by such schools. As a rule these are children from low-income families, and a third of such families are single parent families; therefore they are not capable of providing special conditions for education alone without the support of the government. The mainstream educational system is not ready to teach children with special development needs in ordinary general schools. School buildings and facilities are not fitted to implement the required rehabilitation and educational activities: there is none of the required equipment, furniture or facilities. The issues of transportation, children's nutrition, provision of textbooks, training equipment, and mechanism or alternative means are not resolved.

Table 4.2.
Number of special rehabilitation educational organizations and number of children in them

	1991	1992	1995	2000	2001	2002	2003
Number of special rehabilitation pre-school institutions	35	42	41	41	44	47	45
Number of general pre-school institutions with rehabilitation groups	223	235	197	111	123	114	112
Number of children in preschool rehabilitation institutions and rehabilitation groups	9,869	9,946	8,656	8,820	9,115	9,105	9,661
Number of general rehabilitation schools	129	128	121	104	103	107	108
Number of children in rehabilitation schools and rehabilitation classes of ordinary schools	27,291	25,514	24,597	20,326	20,959	21,375	26,764

Source: Statistics Agency of the RK

²⁹ Report. Implementation of a Joint Project Between the Ministry of Education and Science and UNESCO «Assistance in Basic Education of Children with Special Needs», Almaty, May 2000

A unique problem for such children is finding a vocation. The vocational training of such children and adolescents is restricted to special schools, the educational content of which desperately falls behind the current production and labour market requirements; it does not meet the interests or capabilities of the children. The only document regulating education of persons with special needs is the Decree of State Committee for Public Education No. 93-13064/10 dated 08/02/1990 «On Educational Enhancement in Vocational Schools for Invalids, and Persons with Mental and Physical Deficiencies».

Reasons:

- ✦ Lack of well-defined public policy with respect to the most vulnerable children, poor coordination of different bodies' activities related to detection, recording and social support of the children with special development needs resulting in private policy courses of action towards establishment of segregated classes in regular schools with insufficient guidance and financial support of the government.
- ✦ Insufficient articulation of priorities of issues related to children with special development needs in available legislative and standard documents.
- ✦ Incomplete data regarding children with special development and educational needs is an obstacle to objectively analysing the situation and taking adequate steps in order to resolve issues.
- ✦ Limited budget allocations to local authorities to build new rehabilitation institutions.

The issue of children with special development needs requires urgent attention.

4.4. MEASURES TO ENSURE EQUAL AND FAIR ASSES TO BASIC AND CONTINUOUS EDUCATION BY ADULTS ESPECIALLY WOMEN; INCREASE OF ADULT LITERACY BY 50% IN 2015

The present report reviews these purposes as interconnected and interrelated. This is justified by Goal 3, i.e. incorporation of life skills into the educational programs for adults and youth with a focus on literacy skills.

The notion of literacy

The meaning of "literacy" is changing along with the requirements of society. *Ability to read and write* has been understood as literacy for a long time. In 1951 UNESCO's expert commission recommended considering a person as literate if he is able to read, understand and write a brief simple composition on the events of routine life. A person able to read and understand but unable to write a brief summary of a routine life event is considered uneducated.

The term "functional literacy" became widespread in the 1970s and came to be used with respect to a human

who has the knowledge and skills necessary for *life and interaction with other members of society* according to the level of societal development. New notions appeared in the context of this meaning: "political literacy", "legal literacy", "computer literacy", "environmental literacy" etc.

Russian scientific and pedagogic literature of the last few years, interpreted literacy as *individual characteristics* reflecting the ability to read, perceive, and comprehend a necessary volume of information coded under a certain sign or communication system. The level of human literacy stipulates a level of accessibility to any information owned by society and therefore a *level of adaptation to surrounding natural and social conditions*.

The UN General Assembly on the Literacy Decade³⁰ (December 2001) substantially contributed to modern understanding of the concept. According to this document literacy assumes not only reading, writing, and computing skills but also development of a knowledge and skills system required to be ready to *meet the challenges of the environment*. This covers the educational needs of **all** people, i.e. adults and children, boys and girls, men and women irrespective of where they live and study (within or beyond the formal education system).

According to the two latter definitions the literate human now is a person ready independently to find and apply information to adapt to changing conditions.

Such an understanding of literacy emphasizes the importance of acquiring the most essential life skills by children, youth and adults, since they ensure resolution in the face of the challenges faced by people within the modern globalised world. In other words a new understanding of literacy means the integral characteristics of an individual including functional literacy, professional competence, practical and general cultural knowledge and skills.

The issue of literacy in Kazakhstan

For Kazakhstan the issue of literacy in the traditional sense of the word was resolved at the beginning of this century. The statistics shows that in 2003, the literacy rate was 99.5%. However new realities pose new tasks which are key factors in the country's economy and its survival in the current conditions of "the exhausting and hard process of global competition".

To perform this work it is planned to eliminate computer illiteracy, and ensure access to the Internet by performing large-scale computer education programmes comparable with literacy programmes in the 1930s. The obligatory requirements for being employed in the civil service are computer skills, Internet skills, and knowledge of the English language. It should be emphasised that out of all countries of the former Soviet Union this approach has been accepted only in Kazakhstan as of yet.

According to the experience of developed countries, it is more effective to develop comprehensive skills or competences when they are integrated in the curriculum of formal and non-formal education. This approach needs to be adopted in Kazakhstan's national education programme so that there is a more consolidated approach to human resource development.

Asociological survey carried out by the thematic working

³⁰ Resolution of the UN General Assembly issued at 56th session in 2002. "United Nations' Literacy decade: Education for all".

group "Education based on life skills" within the framework of the Forum for Education in Central Asia and Kazakhstan where 2,500 pupils and their parents have participated, showed that importance of literacy was understood by the pupils themselves. For instance, answering the question "How do you understand the notion 'literacy'?" only 12.3 % thought that it was the ability to write without errors and read. 84.5% of pupils answered that it was the general intellectual development of a person; 10.7 % chose the ability to hold a conversation, the ability to formulate ideas correctly, and explain a point of view; and 23.4% chose computer skills and foreign languages.

Responses indicated that the situation regarding

From UNESCO "Education for all through voices of children"

How do you understand the notion "literacy"?

– *Voices of children*

Literacy is not the knowledge of school literature but knowledge of life.

15 years old, Taraz

literacy development with students, youth and adults was far from optimistic. For instance according to the results of a study on the development of **independent activity** it is evident that over 50% of students had difficulties in making a decision, were afraid of responsible assignments, and were unable to assert their interests; diffidence as an impediment to make right decisions was a factor for **25%**, influence of people influencing decisions affected **26%**, and insufficient knowledge affected **39%**.

From 30% to 60% of the students feel a need for the development of skills of critical assessment of information, comparison of information with data from competent sources, and discussions and assertion of their point of view. Only **10%** of students in vocational schools and 35% of pupils in general schools stated that they are good computer users, **65%** of students in VS and **63%** of pupils in general schools are mastering the computer, and **25%** of students in VS and 13% of senior general school pupils cannot use the computer at all.

Literacy of adults and informal education

New economic conditions require different professional competences. The position of the modern working adult in society is mainly determined by the level of his or her competence. Opportunities for further education are needed for personal growth, intellectual enrichment, and psychological comfort in remaining employed and finding a job which can ensure a good standards of living. If a person is unprepared for working in a modernizing economy, it is difficult to earn a decent living. Under these conditions education, formal or nonformal, acts as a means of social protection. The provision of accessible additional education for large numbers of people and its orientation to competence development are efficient forms of protecting the human right to labour, including the right to a good standard of living.

As shown by experience the development of life skills is more successfully accomplished through nonformal education (NFE). Thus for a country in transition to a

market economy the role of NFE is critical in ensuring wide access to skills in demand, which are outside the scope of formal educational.

A study³¹ shows that the potential of NFE is insufficiently realized in Kazakhstan. NFE programmes are in demand by both children and adults and could be used by 25-30% of the population. However they are not accessible by all, in particular those aged 15-28 years from low-income families, 30% of whom are students. As a rule these are predominantly the programmes directed at obtaining knowledge and skills which for one or another reason have not been provided through formal education or which are new requirements in training demanded by employers. i.e. in this case NFE is carrying out compensatory and adaptive functions. There are also a small number of programmes aimed at enriching an individual's creative potential.

Education for Adults

Comparing various target groups, the conclusion could be drawn that in Kazakhstan education for adults is the least accessible or socially protected. During the Soviet period it was delivered through a system of public and governmental institutions, which contributed to a person's general and professional development. Along with improving professional knowledge and skills adult education aimed at improving general cultural levels and covered many categories of adult. As such it was relatively efficient during the Soviet period and was accessible by different groups of people.

The accessibility of such services has declined in recent times. In education where market relations are being formed, people may use educational services only if they can afford to pay for them. As a result, most people, especially those in rural areas, are unable to pay for quality educational services and therefore solve many living problems without social support.

It is quite a large heterogeneous section of the population (defined by the term "critical segment of the labour market"), which is in need of social protection through education. According to some, the size of this group differs from region to region and is up to 70% of the economically active population. It comprises:

- ✦ graduates who are recorded as unemployed or forced to work outside their speciality;
- ✦ physically handicapped people including those capable of working;
- ✦ oralmans (migrants);
- ✦ single women bringing up the children without a husband or partner;
- ✦ people released from penitentiary institutions;
- ✦ workers earning a low income;
- ✦ elderly people who have completed their working career but still continue working, and individuals at the pre-pension age.

The low income of these groups is exacerbated by a lack of NFE activities in the majority of rural regions and an insufficiency of educational programmes in demand.

³¹ Assessment of non-formal education to mitigate the impact of economic transition, Almaty, 1999

People in certain areas are becoming marginalised, and social complications are increasing.

As shown by the analysis carried out within the study 'Assessment of non-formal education to mitigate the impact of economic transition' (1999) legislative support is not provided for adult education (excluding promotion and retraining for the unemployed). Therefore the major part of educational services for adults is managed outside any legal and regulatory framework. The law ensures only the regulation and funding of state programmes as well as retraining of unemployed.

With the lack of governmental coordination, NFE programmes are mainly managed with the support of international donor organizations or the students themselves. As shown by the research performed by the Association 'EFA in Kazakhstan'³² NFE is most important for youth and adults in rural areas and programmes most in demand include business management, computer skills, foreign languages, and legal competence as well as access to and use of e-mail and the Internet. Training in farm management, the improvement of agriculture and production quality, efficient production, effective sales management, business planning, accounting, banking, the establishment and development of a business, staff management, marketing and production sales, brokerage and dealer services, and office manager, secretary-receptionist, masseur, hairdresser-stylist, cosmetician, tour guide etc. training are becoming high areas.

However these programmes are mainly designed for people of working age. Rural populations cannot access relevant NFE services since they are predominantly supplied by private providers in major settlements, and are fee-based. Talking about the accessibility of public services most in demand by those of pension or pre-pension age, by the unemployed or those with a low income is unrealistic.

This empty niche is filled by non-governmental providers of education—representatives of private businesses, NGOs, religious, youth organisations, employer organisations, trade unions, political parties, community members, and so on—through the organisation of various educational events such as workshops, promotional and retraining courses, on-the-job training, individual consultations, tutoring, and so on.

It should be noted that growing access to NFE for adults and youth has been facilitated through the establishment of Centres for Local Community Training supported by UNESCO, through the Soros-Kazakhstan Foundation, and through initiatives of the Ministry for Labour and Social Protection and other organisations. However that experience is not politically supported in a proper way. The Centres have to survive through rendering fee-based services that again restrict the accessibility by the poor.

The major issues in non-formal education are as follows:

- ✦ inaccessibility of NFE for a considerable proportion of adults and unemployed especially in rural areas due to fee-based services and lack of state funding;
- ✦ homogeneity of the programmes offered by service providers, domination of "ready-made" programmes, and lack of attention to demand for the most needed skills;
- ✦ practical unavailability of services with respect to

modern market skills training in the Kazakhstani language; and

- ✦ limited sharing of experience gained through the media and awareness of it by a narrow circle of people.

Centres for Local Community Training supported by UNESCO

Community training philosophy is aimed at providing the possibility for local people and organizations to be active participants in ensuring educational opportunities and solving community problems. It is based on the following principles:

- life-long learning,
- self-determination,
- self-assistance,
- development of leadership qualities,
- institutional accountability,
- an integrated approach to the provision of services, and
- decentralisation.

These are the principles used by the Association 'NFE in Kazakhstan' to support the establishment of Centres for Local Communities Training in three regions of Kazakhstan: in Almaty Oblast, Karabulak Village and Amanbokter Village; in Zhambyl Oblast, Korday Village, Nogaibay Village and Sortobe Village of the Korday Region, Taraz; and in Karaganda.

Activities carried out take account of local community needs. Major ones include: computer training, training for the unemployed, the promotion of and training in healthy lifestyles, massage for disabled children, training in the official language, agricultural commodities processing, farm management, sewing, cooking, hairdressing, shoemaking, furniture repair, handicraft training (particularly felting and carpet weaving), and leisure activities for rural people.

Target groups are poor people and families having many children, women and youth including the unemployed, children with special needs and their mothers, widows, migrants, orphans, and so on.

Centres are established by the community, for the community and through community resource mobilisation. Being socially-oriented Centres are well supported by local authorities. Within all centres local authorities have allocated funds for the remuneration of teachers and facilitators.

Some Centres are officially registered as non-commercial, non-governmental associations and already have received funds for expansion of their activities. The spectrum of functions of the Centres is being expanded. In addition to providing training, Centres are becoming the social and cultural centres of rural regions contributing to leisure and cultural activities and places where rural people can spend their spare time reading newspapers and chatting with each other. Centres are supplied with copying, fax and Internet equipment and facilities.

Activities are characterised by the criteria valuable for participation in the development of the community. They are: mobility, social relevance, compliance with people's needs, relatively low cost of services rendered, involvement of volunteers, readiness for cooperation with the local authorities when solving issues regarding poverty and unemployment. Centres assist community members to study continuously according to their own needs. All Centres have the capacity and desire for further development provided they are given proper technical and financial support.

³² Establishing the Centres for the Local Communities' Education in Kazakhstan, Almaty, 2002

Conclusion on Goals 3 and 4: In Kazakhstan, the process of creating the necessary conditions for, and ensuring equal access to, life skills education programmes is at an early stage of institutionalisation and requires an integrated strategic approach. Political support for the development of adult and non-formal education is insufficient. Equity in the provision of adult education, especially for vulnerable groups, has not been achieved in Kazakhstan. The scale and role of adult education in developing the country's economic potential are underestimated; government coordination is lacking; quality control in the services provided is poor.

The idea of non-formal education is not new. The term was first introduced at the end of the 1960s as a response to new demand for obtaining education not only in school. The focus of interest in NFE was mainly directed at adults. In the 1970s, NFE meant alternative programmes for youth and adults who had no opportunities to attend formal education and therefore had not obtained quality education at school, or who wished to supplement the education received. In most European countries formal education comprises all compulsory primary and secondary education, technical and vocational education leading to specific qualifications, and higher education. Anything in addition to formal education is non-formal, and means any established and successive educational activities, which can be pursued beyond formal education. NFE is offered to individuals of any age and can be carried out both inside an educational institution and outside it. NFE programmes have different lengths and do not have clear progressive stages.

Therefore NFE is a full and equitable type of education which is aimed at the development of persons and society and supplements formal education. The main difference with NFE in our country, as opposed to in international practice, is the tendency to fit non-formal (supplementary) education into a framework. For instance, it is often proposed to license NFE programmes or to fix a standard for such programmes.

In international practice the term "non-formal education" is interpreted more widely and means any educational programmes which can be accomplished beyond the formal education system: in the family or society, in groups or individually, with the help of the mass media and distance education techniques. Unlike formal education it does not have strict time frames, is not confined to obligatory procedures with the award of diplomas or certificates. NFE is like a mosaic, flexible, variable in its form and content and can provisionally be divided into two components:

- Programmes of supplementary education for children and teenagers
- Programmes for the adults. There is a wide variety of programmes in high demand, e.g.:
 - equivalency programmes,
 - programmes to improve the quality of life,
 - programmes for the creation of sources of revenue,
 - programmes of assistance for individual interests, and
 - future-oriented programmes.

4.5 ELIMINATION OF THE GAP BETWEEN BOYS AND GIRLS IN OBTAINING PRIMARY AND SECONDARY EDUCATION BY 2005; ENSURING UNIVERSAL AND EQUAL ACCESS OF GIRLS TO QUALITY BASIC EDUCATION BY 2015 AND ITS COMPLETION; EQUALITY OF MALES AND FEMALES IN OBTAINING AN EDUCATION.

Enrolment of girls with primary education in Kazakhstan is practically universal according to official statistics and research carried out by independent experts. The conclusion is affirmed by the analysis performed by UNESCO³³ which has noted that Kazakhstan was amongst the group of 52 countries (128 countries participated in the comparative analysis) where gender equality in secondary education has been achieved. Therefore this aspect is not of a particular concern. The assurance of an equal right to education regardless of gender is supported by the Law of Kazakhstan and its regulations are fully implemented, even in the presence of specific social and cultural obstacles to the education of girls.

Indeed, the difference in the enrolment of girls and boys by primary and secondary education is slight but this optimistic picture is marred by attendance and retention statistics. According to UNICEF research, attendance at primary school (1992-2001) in Kazakhstan averaged 88% for girls and 87% for boys while the percentage of those who entered primary school and reached the 5th grade (1995-1999) was 92%. The indicator of enrolment of secondary education from 1992 to 2001 averaged 87% both for boys and girls. Although these indicators are quite high compared to those in other countries, if this trend deteriorates it might lead to a gender imbalance in educational enrolment.

In this respect the experts in gender research, particularly at the Science Research Institute of the Kazakhstani State Female Pedagogical Institute, are of the opinion that there are no grounds for complacency yet. Research performed in 2002 revealed the existence of some stereotypes with respect to features inherent in boys and girls in older children of preschool age. In particular, children of this age reflected the adult stereotypes of girls' and boys' capacities. Gender self-consciousness of children is formed spontaneously due to the vestiges of pedagogical traditions and ethno-pedagogical peculiarities fore-ordaining the formation of types such as 'good girl' and 'good boy'. The experts were concerned by gender stereotypes being formed through textbooks and training manuals where even the 1st grade ABC book lays, deliberately or not, the foundation for conception of different roles for boys and girls in child consciousness. Thus girls appeared as the servants – "Mila was washing the window-frame", i.e. they are washing up, making the dinner with mom etc. in the pictures. While fathers and boys are having a

³³ EFA Global Monitoring Report 2003-2004. Gender and Education for All: The Leap to Equality. UNESCO, 2004. p. 288-289.

rest, reading the newspapers, watching the TV or working on something. Therefore special attention should be given to gender aspects in teaching and learning.

4.6 INCREASE IN THE QUALITY OF EDUCATION AND THE ASSURANCE OF GOOD PROGRESS BY ALL STUDENTS IN ACHIEVE THE RECOGNISED AND ASSESSABLE RESULTS OF EDUCATION, IN PARTICULAR LITERACY, NUMERACY AND THE MOST ESSENTIAL LIFE SKILLS

During the last decade the issue of quality in education has become a very popular topic. and has become one of the priorities of the educational policy. It is also becoming an essential aspect of international cooperation in education. Therefore, in talking about educational reform, first we need to define the meaning of education quality, although in none of the documents adopted during the last decade can we find a clear definition of education quality.

The following indirect indicators for quality assessment can possibly be used and have been taken as a basis in the EFA Report on Global Monitoring, if direct indicators are missing:

- ✦ the number of pupils per teacher,
- ✦ the background or competence of teachers,
- ✦ the level of public expenditure, and
- ✦ pupil progress.

In addition we would include educational content, process and environment.

Number of pupils per teacher

In the opinion of many people this indicator is not reliable enough and the results are not comparable. Small numbers of pupils per teacher as a result of a high number of small-scale schools in the country is rather a forced necessity and can be explained by low population density and vast territory. Conclusions based on comparison using this indicator cannot be objective and therefore we are unable to apply it for analysis.

Level of public expenses

Kazakhstan from a financial point of view provides protection of major educational services as noted in the above-stated ADB public expenditure review; the major part of available resources in the educational sector is allocated for general education. In the most difficult years the government gave budgetary support to wages and public utilities above everything else. Investments in education as % of GDP declined during the period from 1996 to 2000 in Kazakhstan and began to rise again from 2000 to 2003. A similar pattern occurred with public expenditure on education as a proportion of total public expenditure. Taking

account that Kazakhstan is referred to as a middle income country one can make a comparison of public expenditure on education with the OECD countries where it averaged 4.9% of GDP in 1999 while in Kazakhstan it averaged 3.3% of GDP in 2000-2002. Taking into account that generally the absolute amount of GDP in Kazakhstan is less than the GDP of OECD countries, it can be concluded that overall public expenditure on education in Kazakhstan is relatively modest since Kazakhstan has limited public revenues.

Is that enough or not?

Public expenses are mainly concentrated on compulsory education: pre-school, primary and secondary education. Comparison of funds allocation by the main economic categories of budget for general education with a similar budget of the OECD countries in 1999 showed that for instance, in South-Kazakhstan oblast, 92% has been spent for current expenses and 8% for capital expenses. Nearly 95% is spent for wages and only 5% for other current expenses, which are public utilities, building and maintenance etc.. In OECD countries nearly 80% out of total amount allocated for current expenses is spent on wages and 20% for other current expenses. The sector situation has been slightly improved as a result of implementation of the Aul Mektebi – the Schools in Rural Areas programme. But the funding allocated under the residual principle does not satisfy the needs of the sector including secondary education despite the comparative protection of education. Insufficient funding of “unprotected” budgetary items, in particular routine repairs, major repairs of school buildings, cleaning slums, and new construction still takes place. The funding process itself is not open and transparent enough.

Inadequate funding and the low status of teachers in society contributes to decreasing of education quality. Costs per student in primary, secondary and other levels of vocational education remain below the costs in other countries. Average monthly wages in the sector of education equalled 14,406 KZT in 2003, which was 62.3% of the level of average national wages and 79.8% or 48.7 % of wages for industrial labour.

Table 4.3
Average Monthly Nominal Wages
in the Republic of Kazakhstan

	1999	2000	2001	2002	2003
Average monthly nominal wages in the Republic of Kazakhstan, KZT	11,864	14,374	17,303	20,323	23,128
Average monthly nominal wages in education, KZT	8,149	8,512	9,937	12,863	14,406
Correlation of average monthly nominal wages in education and average monthly nominal wages in Kazakhstan, %	68.7	59.2	57.4	63.3	62.3

Source: Statistics Agency of the RK

The following aspects should be analysed within the EFA context:

Education for all: the key goal for a new millennium

- ✦ Does the government fund education to protect the children of socially unprotected levels of the population?
- ✦ Do the children of various social groups have equal access to different levels of education?
- ✦ Do they have equal opportunities to obtain quality education?

So, do the children of various social groups have equal access to different levels of education? International practice looks to such characteristics as family poverty level, place of residence, sex and affiliation with ethnic minority identity, in order to evaluate the access to an education.

Sex: as noted above it does not significantly affect secondary education enrolment.

Place of residence and family income. Comparison of the total number of preschool age children with the number covered by programmes of preschool training indicates a stable trend of decreasing accessibility of that education level. To some extent this can be explained by the decreasing number of children in general.

Table 4.4.
Number of 1-6 year-old children at the year start

Indicator	Number of 1 – 6 year-old children
1999	1532865
2000	1460357
2001	1394333
2002	1337380
2003	1301794
2004	1298104

Source: Statistics Agency of the RK

But even having taken that into consideration the enrolment decrease seems to be catastrophic: only 15% of those covered by pre-school in 1990 within the country are now covered by pre-school, including only 5% of the 1990 total of children within rural areas covered. This figure does not include private preschools affordable for the children from more well-off families. Geographical poverty is mainly concentrated within the remote rural areas and small towns with half-grown enterprises that have ceased to operate. In 2001 the share of the poor population within rural areas is equal to 35.2%. Poverty concentration is different depending on the region. As per the public expenditure review the concentration of rural poor within Mangistau Oblast was at 95.5%. Around 43.2% of poor families (the families having five or more children) live within the southern and western regions of the country. They are generally ethnic Kazakhs.

The conclusion is obvious: **access to preschool training programmes for the children of socially unprotected levels of population is not adequately provided.**

With respect to the poverty impact over the access to

secondary education it is hard to draw a conclusion on the effect on population welfare due to lack of official data.

UNICEF³⁴ noted that the growth in poverty levels and the general worsening of living conditions in the 1990s resulted in limited accessibility to education for children from poor families. According to MOI information, 75% of school non-attendance can be explained by unfavourable living conditions and low family incomes. The issue of ensuring access to quality education within rural areas due to lack of schools in the remote regions, lack of transport and funds to provide heating during the winter period is critical with regard to social guarantees. In particular, 492 settlements had no schools running in 2002 although 14,000 children of school age lived there. Over 30,000 rural pupils are taken by transport to school. On a daily basis, children have to travel a significant distance to school and back which affects their health, level of progress and attendance and it is unsafe for their lives.³⁵

Available funds from the General Education Fund (1% of allocation from the local budget) which are used to give financial aid to the children from the poor families to cover the expenses on purchase of school accessories, clothes, footwear, transport costs and food is obviously insufficient.

Access to Higher Education

International experience and the experience of CIS countries indicate that students from less well-off families are insufficiently represented at the level of higher education. Taking into account the fact that the Kazakhstan educational sector does not have terminal programmes in secondary education one can say that the access is theoretically provided. The government takes measures to improve access to higher education for poorer levels of the population on a competitive basis by providing grants and loans for tuition and for social needs. To some extent, this contributes to aligning opportunities for less protected levels of population to obtain higher education.

The advantage of the Soviet period was that representatives of the needy population or working people who could not obtain higher education on a full-time basis could continue education by correspondence, which is currently less available due to decreased enrolment for this form of education and its now being fee-based. This actually means that higher education is becoming less affordable for the poor. This is exacerbated by rising tuition and related costs. Some measures are taken to address this issue through implementation of distance education but this technology is not yet widespread. It is not enough and there is some chance that higher education can become an affordable service only for the children of the well-off.

Access to primary vocational education

Children of poor families traditionally follow this stage of education after completing grade 9. Stabilisation of the network of organisations and pupils has taken place after a dramatic decline. Nearly 98,000 students of 16-18 age (10,3%) studied under this form of education.

Uneven concentration of the PEO organisations within the towns and their practical absence from most rural regions

³⁴ UNICEF Report «Right to the Qualitative Education: Schools of Friendly Attitude to a Child», Almaty, 2002

³⁵ The Rural Schools Programme

Table 4.5.

Composition of primary vocational trainees ('000 people)

Group	1998	1999	2000	2001	2002	2003
Trainees of vocational schools	91545	87361	86089	87327	90778	98045
including:						
Trainees with limited development abilities	348*	462*	667	772	1086	825
Orphanage inmates, boarding school inmates, children without parents	1619*	1981*	5051	2352	2767	3222

* data for the full-time form of training

Source: Statistics Agency of the RK

as well as the fee basis of some educational programmes allow us to draw not very comforting conclusions about limited accessibility of prestigious education for children of poor families, in particular for children with special needs in education and graduates from orphanages. Unfortunately the level of funding for primary vocational education, at 0.1% of GDP, gives grounds for drawing the conclusion that despite repeated requests, the sector remains an orphan of government policy.

Conclusion: the poverty of families in Kazakhstan impacts on obtaining quality education at all stages, from primary to the higher education. Children of poor families do not have opportunities to take part equally at different levels of education. The measures taken by the government to align the opportunities of children from different socio-economic groups in obtaining quality education including financial measures are not sufficient.

Let us mention briefly some factors such as content of education, educational technologies, health, and the educational environment, which have an influence of no lesser importance than funding on the quality of education.

Educational process and contents (technology of education)

The Concept of Educational Development by 2015 approved by the Government points out that a focus on factual information and skills still prevail in curricula, programmes and training institutions. The intention to provide for a high variety of educational content through implementation of flexible components was poorly

performed due to limited facilities, skilled teachers and funds available. Consequently the contents of curricula, programmes and institutions do not always meet the goals and objectives put forth. They are different in academic quality and not directed at developing practical and living skills. It requires a full reform of the educational process as well as of educational technology.

Educational Environment

The number of schools and their capacity, technical equipment and hygienic conditions are also a great problem. According to the Ministry of Education and Science, 42% of schools were operating in sub-standard buildings, 22% required major repairs, and 2% needed reconstruction in 2002. Therefore only 32% of schools had the standard buildings. The majority of them were built (over 40%) from the 1960s to the 1980s. During the 1990s school buildings were constructed at local expense. The buildings have been put into service within the shortest time possible, not taking into account durability and savings during the course of operation. If measures of major repairs of 22% of schools are not taken in the near future the buildings can come into the state where they cannot be repaired, but need to be demolished and it would be necessary to construct new ones. It is generally known that repairs or replacement of school buildings and equipment in future is more expensive than timely repairs. Before 2002 the government, in practice, did not allocate funds for major repairs and procurement of equipment.

The notorious "optimisation" of the network of educational institutions carried out from 1995 to 1998

Table 4.6.

Technical condition of the buildings for day-time secondary education schools

Schools	1993	1995	2000	2001	2002	2003
Day-time secondary schools located in the purpose-built buildings	3096	2326	3590	3820	3742	3569
% of the total number of schools	35.4	26.6	43.2	45.4	44.9	43.2
In need for major repair	965	925	2432	2666	2796	2588
% of the total number of schools	11.0	10.6	29.3	31.7	33.5	31.4
In the status of urgent repair	187	231	517	486	484	526
% of the total number of schools	2.1	2.6	6.2	5.8	5.8	6.4

Source: Statistics Agency of the RK

Education for all: the key goal for a new millennium

resulted in closing most schools and preschools especially within rural areas and also contributed to a significant decrease in the quality of educational services rendered. According to the UNICEF Report, over 30,000 of the children in 2001 had to walk 5-40 km to reach school. Over 1,000 (72%) primary schools were located in sub-standard buildings with only outdoor toilets available. Some oblasts had a problem accessing potable water. The majority of primary schools do not have gymnasiums or sport areas, or conference halls.

Table 4.7.

Number of schools with gymnasiums

Schools	Day-time secondary (primary, basic, secondary)	% of the total number of secondary schools
1991	4899	58.0
1995	5086	58.9
2000	5012	61.1
2001	5178	62.3
2002	5228	62.9
2003	5356	66.5

Source: Statistics Agency of the RK

Shifts in the schools Around 66.1% out of the total number of schools operate in several shifts and 2% are used for more than two shifts. 1% of pupils have been studying at such schools.

Table 4.8.

Availability of classes for basic
computer skills training

School year	Number of schools with computer training classes			Number of PCs in computer classes		
	Total	Urban	Rural	Total	Urban	Rural
1993/94	3353	1168	2185	43299	16173	27126
1995/96	3399	1207	2192	43477	16409	27068
2000/01	4185	1526	2659	44050	20573	23477
2002/03	7066	1871	5195	55432	23872	31560
2003/04	7263	1982	5281	57563	25170	32393

Source: Statistics Agency of the RK.

Health. The number of diseases is growing. According to UNICEF the number of sick children has increased by 7%, contagious diseases increased by 13%, blood diseases by 12%, respiratory infections by 7%, during the period from 1999 to 2001. Anaemia is becoming a typical problem for the entire country, especially for the southern and western parts. 40% of ethnic Kazakhstani children have primary anaemia and 28% have complicated anaemia. A growth in alcoholism, drug use, and sexually transmitted diseases is observed, as is the level of alcohol use amongst minors.

Conclusion: The government allocates insufficient funds for education. The Dakar Forum documents contain an appeal to governments of all countries with respect to

allocation of at least 6% of GDP for the education budget. However, the budgets of all levels can hardly cover the expenses of so-called "protected" articles. 80% of budgets are expenses for wages. The funds allocated for such expenses as schools maintenance, purchase of training equipment and materials, major repairs, replacement of school buildings that cannot be repaired, and new constructions are not sufficient. Two percent of schools have to operate with two or more shifts. The overall expenses for education do not exceed 3.6% of GDP. A section of ethnic Kazakhs has the least opportunities to obtain quality education.

Assessment of educational outputs

Kazakhstan does not have a reliable measure of educational outputs and factors affecting the outputs are not defined. Along with such indicators as enrolment and graduation from the educational institutions, stability of the student population, attendance etc. one important indicator is student attainment. Under this criterion, it is impossible to assess the quality of education compared to other countries.

Regarding the quality of education, information on the number of children who won competitions, enrolled in higher educational institutions, and obtained diplomas with honours is provided. However, the outputs do not reflect the quality of the system as a whole. Some of the indicators mentioned are quite subjective. This is indirectly confirmed by the changed number of honours students in grade 11 depending on availability or absence of privileges for such students when going up to the higher educational institutions. Besides, if one or two pupils won the oblast or republican competition it does not automatically mean that all pupils mastered the subject well. The final school examination results are also subjective to some extent if independent external assessment is missing. Moreover, they do not give results that can be interpreted at national level.

On the positive side is the introduction of the external assessment on completion of school studies combined with entrance exams for higher educational institutions. Full impartiality of this system should be supplemented with comparison of results of the activities of the nation's pupils with the results of other countries' pupils. It is appropriate when national standards of secondary education do not meet the requirements of the market economy and include skills that are required under changing conditions of external environment, and an economy based on innovations. The public expenditure review recommends participating in such programmes as PISA (Program for International Student Assessment), IALS (International Adult Literacy Survey), and TIMSS (Trends in international mathematics and science study). The National Education Development Programme, 2005-2010, provides such measures.

Independent external assessment allows for more unified requirements for school leavers and ensures more equitable access to higher education, based on public openness and transparency. It can also allow for a database on the quality of education within different regions and in different subjects that would facilitate making reasonable decisions on improvement of the educational process. Certainly, the system needs to be improved in terms of test contents since they are restricted by the direction of state educational standards with regard to knowledge of

actual information to the detriment of the essential skill development. The developed technology facilitates the transfer to the higher level of assessment of the studies' results using the methodologies of PISA, IALS, TIMSS certified and proved to be consistent in the developed countries.

The methodology of PISA on assessing the functional literacy of pupils at the age of 15 has been applied in the Karaganda Oblast educational system. A trial diagnosis of Karaganda pupils' functional literacy has been performed by the laboratory for regional education development of the Karaganda Oblast Institute for Professional Development and Advanced Training of educational staff and civil servants. One of the main objectives was to assess the capacities of young people at the age of 15 for active participation in the social life. 220 pupils of the 9th grade from five Karaganda schools (118 pupils from gymnasias and lyceums and 102 pupils of general schools) participated in the survey. The results of the gymnasias and lyceums pupils were different from the results of the general schools pupils:

Results	Pupils of gymnasias / lyceums	Pupils of general schools
High	3.4%	0%
Good	21.4%	0%
Satisfactory	55.2%	33.8%
Unsatisfactory	22.9%	66.2%

The survey results showed that 40% of the pupils tested were not capable of applying knowledge obtained at school in real life situations; of these 66.2% were the pupils of general schools and 22.9% of lyceums and gymnasias.

Worst of all is the case with functional literacy in the natural sciences and literature; respectively 57.1% and 36.8% of students have demonstrated a low functional literacy in these subjects. Mathematic functional illiteracy has been shown by a lesser number of pupils. This trend was typical for both pupils of gymnasias/lyceums and general schools though the results of the general school pupils were much worse in comparison with the gymnasias/lyceum pupils.

Therefore not drawing far-reaching conclusions, it should still be noted that the results of the trial test are evidence of insufficient readiness (according to the modern international requirements) of Kazakhstan pupils for life in a post-industrial information society. This is consistent with the conclusions of the international review of adult literacy carried out by the OECD in 1994-95 that up to 75% of 16-65 year olds in countries with a transition economy (out of the number taking part in the survey) had low results in functional literacy required for a modern economy.

It can be assumed that the pupils' test results were brought about by the following factors, which need to be studied and analysed further:

1. Insufficient practical orientation of educational materials in natural science, literature, and mathematics; their specific isolation from the real life surrounding the pupils.
2. Congestion of programmes by theoretical information.

3. Insufficient attention to higher order thinking skills, such as problem-solving and analysis.

The disadvantages named are the results of extremes in implementing an academic theoretical approach in the programmes and textbooks for secondary education (so-called subject-centrism). While not giving up the best traditions of the Soviet schools it is necessary to strengthen the individual and practical orientation of the educational content and process having improved its developing nature.

Conclusion: The system of assessment of the results of the pupils educational activities applied in Kazakhstan is a step forward compared to the previously existing practice, which largely has been subjective and has not ensured international standards. It needs to be further improved having taken the international experience into consideration. The constraints are the contents of the curriculum, educational programmes and training institutions, which are not aimed at developing intellectual and practical skills. Their content is dominated with factual knowledge that does not allow competence development. The development of a national system for educational quality assessment is of paramount importance.

Conclusions of the Chapter:

Implementation of the Dakar Framework of Actions is not possible outside the context of developing the educational system as a whole in all its diversity. The main point of the EFA global movement is ensuring equal and fair access to quality education for all at all stages of education. Ensuring access to education is one of the main principles of the country policy meeting the fundamental interests of the entire society. Therefore, it is appropriate to take a look at the implementation of the six EFA goals during the last decade.

One can say that the last decade has been a period of innovation in the hope that the system would be flooded with ideas introduced from the outside. It was accompanied by the allocation of funds for separate reforms, which included the development of new generation textbooks, school computerisation, plans for reforming the different education subsystems etc. These measures may not have had the expected results but have provided valuable experience, which if applied can lead to a full-scale reform of the educational system. Experience has indicated the pointlessness of incremental, separate modifications and the need for an integrated approach in reforming the entire educational system from elaboration of educational policy, modification of content, educational technology and environment, and assessment of study results to investment in human resource development, a raising of teacher status and ensuring civil society participation at all stages of the process.

Efforts to ensure equal and fair access to education at all stages (from pre-school to post-graduate education) need to be taken. The EFA development index in Kazakhstan estimated using UNESCO methodology equalled **0.976** in 2003 (Annex 2, table 20). In 2000-2001 it equalled **0.959**. It is quite a high result and in index ranking Kazakhstan was 13th and is included in the group of countries with a high index, along with such countries as Italy, South Korea, Poland, and Estonia. The EFA development index has grown even higher in the 2003.

However, achievement of the EFA six goals are far from complete. Transition from a command to a market economy has affected the accessibility of education for all and the quality of services provided. The most vulnerable levels of the population have suffered most; they include the children of the families with low income, families having many children, children with special needs in education as well as youth and adults from rural and remote regions. Accessibility has become limited for them because of the introduction of fees, insufficient resources where they live, as well as the impact of other factors, which are beyond the scope of pedagogy.

From an analysis of the extent of achievement of EFA goals in Kazakhstan the following issues can be counted as the major ones in the sector:

- ✦ Mechanisms for educating children from poor families for some reason not covered by the system and children with special needs do not work properly. Measures taken to provide access to education for all are mainly focused on protection of the rights of well-off people.
- ✦ Coordination of all stakeholders in the field of education is missing. This can be facilitated by the task-oriented work on implementation of the Dakar Framework of Actions. However, the National Action Plan (NAP) proposed by the working group has not become a national mobilising and guiding document since it was produced and approved without participation of the country's leadership at the governmental level.
- ✦ The NAP actions aimed at achieving the six EFA goals are necessary but not sufficient measures for ensuring wider access to quality education at all stages and steps. Its successful implementation to a great extent depends upon external funding especially from international organisations.

As a result, not all children have full access to quality education. Some people, especially those from a problem environment are out of school before the completion of compulsory education. A high level of non-attendance still exists, owing to the lack of motivation of a definite number of children in obtaining education and in some cases due to economic reasons. Adequate ways of recording the non-attendance of pupils and adequate mechanisms for getting them to return to school have not been developed. Literacy in the sense of mastering modern life skills has not been accessible for the majority of new citizens: adults, youth, and children of school age. Preschool education services are affordable for 19-22% of our little citizens. Children from the most vulnerable populations are deprived of these services, which means low preparedness for school for the majority of children of preschool age. Therefore, unequal starting conditions for many of them are a factor already at preschool age. Obtaining quality education for all, and an adequate assessment of education results, recognisable not only within our own country but also abroad is hindered due to lack of the appropriate content of education and training technologies reflecting the requirements of our developing society. In other words, Kazakhstan's educational system development continues under previous methodologies, structures, and content.

We hope that the essential steps contemplated in the National Programme for the development of education 2005-2010, in particular an increase in investment in education, improvement of staff training and retraining, and the establishment of adequate infrastructure, will allow the establishment of necessary conditions to fulfil the obligations of truly guaranteeing the right of every citizen to obtain quality education as an "irreplaceable means of transparency and protection of other human rights, by creating the conditions required for sound health, freedom, security, economic welfare and participation in the social and political life of the country".

Chapter 5

ESTABLISHING A KNOWLEDGE-BASED SOCIETY IN KAZAKHSTAN: REALITY AND PROSPECTS

The educated person differs from the uneducated one by the understanding that his or her education is not complete.

K.S. Simonov

The scope and significance of changes related to the development of digital technologies in developed industrial countries are often compared to the scope and consequences of the industrial revolution. The new development stage at the end of the 20th and the beginning of the 21st century is described by the World Bank and other international organizations as the knowledge-based society, with the following key characteristics³⁶:

- ✦ the growing significance of knowledge as the driving force of economic growth in a global context,
- ✦ the information and communication revolution,
- ✦ the emergence of a global labour market,
- ✦ socio-political transformation of global proportions.

At the end of the last century the ability of societies to create, select, adapt, use, and profit from knowledge acquired decisive significance for sustainable economic growth, and improvement of living standards. Knowledge started to turn into the most important factor of economic and social development of countries. During the last decade, comparative advantages of countries have been to a lesser extent determined by natural resources or cheap labour, and to a greater extent by technical innovations and competitive use of knowledge or by both.

The growth of the role of information and knowledge has led to a new rationale of the function of education in a knowledge-based society. It is now recognized that education is a tool not only for training, but also for increasing the overall intellectual, technological and cultural level of society, supporting its capacity for progressive change and the formation of a modern life style, and building up human capacity³⁷. In this respect some surveys of the 1980s and 1990s (M.Ul-Haka, K.Griffin, J.Night, A.Sena) come to the conclusion that education has the potential to be of value in itself, capable of providing a person with knowledge required for a decent standard of living and the choice of his or her or her own path in life.

Development of an individual, his or her personal and

professional capacity on the basis of acquiring knowledge, skills and competence is a continuous process – “from the cradle to the grave”. In conditions in which models of education, life and work are quickly changing people should have equal opportunities to react to the requirements of social and economic transformations and, consequently, universal and permanent access to education for the purpose of acquiring and updating skills and abilities needed for full participation in the life of an informed society and to create and implement his or her life project. To develop such abilities to a full extent every person should want and be able to take his or her life into his or her hands, i.e. be an active citizen of the country. Through education and life-long learning people are best able to cope with the global changes taking place.

In this chapter we show the real status and prospects of education development in Kazakhstan in the context of life-long learning as the most important condition for human development. Issues related to the general content and objectives of life-long learning and the possibilities of implementing the concept in the country are considered here. This chapter also describes the current and future roles of information and communication technologies (ICT), and the private sector and civil society in ensuring quality education at all the levels and types required for full-value life of every person in the new social and economic environment.

³⁶ Establishment of knowledge-based society. New objectives of higher school. World Bank report. “All World” Publishers. M., 2003, P. 28

³⁷ See Human development in Kazakhstan, Almaty, 2003, p.178

5.1. LIFE-LONG LEARNING

5.1.1. Basic principles and objectives of life-long learning

During the last decade, the ideas of life-long learning (LLL) were widely accepted in the world and were gradually given priority in policy. Leading European countries have realized the significance of this concept for future socio-economic development, ensuring social equality and civic involvement in the information society. Participants at the European Council meeting that took place in March 2000 in Lisbon, Portugal, stated that education and training systems are now facing the need "...to identify within their sphere of influence, consistent strategies and practical measures aimed at encouraging life-long learning for all".

The overall meaning of LLL was worded as any targeted learning on a permanent basis to improve knowledge, abilities, and competence with the objectives of:

- ✦ personal realisation;
- ✦ active citizenship;
- ✦ social involvement; and
- ✦ the ability to be employed including adaptability to the labour market demands.

In other words, the term "life-long learning" means a new approach to education with a focus on the development of a person's ability to study beyond school age during his or her entire employed life in different situations in both formal and nonformal structures of education and training. Each of the objectives is to some extent aimed at increasing the personal productivity, at overcoming different social barriers and at greater personal involvement in decision making related both to society and the implementation of his or her personal programmes.

If LLL is regarded as a continuous education process from the day of birth to the end of life, then the most important requirement is the ensuring of high quality basic education for all citizens from childhood and on. In this respect, the concept has much in common with Education For All. However, while provision of people with higher education is the key objective of EFA, in the LLL concept it is a pre-condition for the successful adaptation of a person to the information and market environment and for access to resources ensuring freedom of choice. Basic education should certainly be followed by further and higher education aimed at providing new abilities demanded by a knowledge-based economy and society. Both concepts – each using its own principles and tools – are focused on achieving the main objective: increasing opportunities for the development and application of personal abilities in all spheres of life, economic, social, cultural and political.

The LLL Memorandum identifies six key principles aimed at facilitation of implementing Life-long learning³⁸:

1. New basic abilities for all: ensuring universal and permanent access to education through learning and updating the abilities required for sustainable involvement in a knowledge-based society.
2. Increasing investments in human resources to prioritise their significance for development. Investing in human resources means giving the people the choice of their lifestyle and life work, and increasing the significance of diverse learning outcomes for all stakeholders.
3. Innovations in teaching and education: using efficient methods of teaching and education and creation of an environment for the implementation of comprehensive training during the entire life, taking into account the wide variety of interests, needs and requirements of individuals as well as certain interested groups in multi-cultural societies.
4. Education evaluation: major improvement of mechanisms helping understanding and evaluating involvement in education and its outcomes, in informal and spontaneous training in particular.
5. Reconsideration of the role of professional orientation and advice: simpler access for every person to quality information, consultations, and training opportunities during his or her whole life. The new approach to professional orientation as a permanent accessible service, overcoming the differences between educational, professional and personal orientation, and reaching wider communities.
6. Bringing education closer to users: provision of LLL opportunities as close to the beneficiaries as possible, at their place of residence, whenever possible, using ICT.

LLL implementation suggests joint efforts of governments, line ministries, social partners, and citizens to develop a coordinated human development policy. The key role is played by local and regional governments ensuring access infrastructure for LLL, including child-care, transport and household services.

5.1.2. Urgent problems of life-long learning development in a transition economy

The concept of life-long learning concept is of great urgency both for developed countries and for transition economies where the models of life are changing swiftly in society as a whole, and for every individual. The scope and dynamics of the changes require an absolutely new approach to education and learning, based on continuity,

³⁸ See Memorandum of life-long learning, European Commission, Eurostat, Meeting of 13 – 14 September 2000, Luxembourg, p. 2

³⁹ Ibid, p. 11

universality, and due regard for people's needs. LLL is the overall umbrella that should unite all types of teaching and training to ensure a choice of curricula for individuals according to the goals set up by them at different stages of life.

Kazakhstan is not yet regarded as a country with a developed economy based on comprehensive use of information and knowledge, but modern Kazakhstani society has wide requirements and objective pre-conditions for implementation of the key provisions of the Lisbon Convention. Understanding of the functions and prospects of education development in view of life-long learning is of equal importance for Kazakhstan as for other countries, as education is the sector where a country can implement a policy capable of responding to the challenges of the changing world and people's needs. This readiness is reflected in a number of strategic documents.

The quick pace of economic and technological development in Kazakhstan results in the need for adequate provision of these processes with highly qualified labour capable of flexibly responding to the growing changes at the labour market. To keep up with the changes, workers and professionals need to have relevant professional and personal qualities, and improve and update them regularly. The Strategy of Industrial and Innovative Development identifies the education sector as a key "hot spot" for ensuring sustainable development of the country. It also notes that education in Kazakhstan should become a dynamically developing system and should adequately respond to the accelerating process of globalization and information.

Source: Strategy of industrial and innovative development of the Republic of Kazakhstan for 2003 - 2015, Astana, 2003, p. 40

The National Programme of Education Development in the Republic of Kazakhstan for 2005-2010 treats education as the most important factor for the country's development. The need for improvement of the education system, increasing its mobility to comply with the demands of the economy and society, is particularly stressed. The expected outcomes of programme implementation include the transition from the principle "education for the whole life" to "life-long learning for all".

Source: National Programme of education development in the Republic of Kazakhstan for 2005-2010, Astana, 2004.

In 2000 the President of Kazakhstan together with the leaders of other countries signed the UN Declaration "Millennium Development Goals (MDGs)", which means that the country commits itself to resolving top priority human development issues, including the increase of well-being and people's health, ensuring universal primary education, gender equality at all education levels, and strengthening environmental sustainability.

Source: Report "UN millennium development goals in Kazakhstan"

As can be seen from the above documents, the first two strategic documents treat the role of education mostly from the point of view of the requirement of improving human resources for the economic growth; adoption of MDGs is oriented at establishing and strengthening the basis for sustainable development of existing and future generations of Kazakhstan citizens with education playing an important role among them.

Thus the urgency of introducing LLL in Kazakhstan arises both from the need for further improvement of social and economic development and, what is most important, from the need to form conditions for providing equal opportunities for all communities in the country to apply their abilities in the very different sectors depending on the choice of life course by each person.

References to these sources mean that policy decision-making recognizes the need to transform the education system into an integrated system of human development oriented towards economic progress. However the political recognition of the need for the modernisation of education system is not fully and adequately accompanied with practical actions due to outstanding obstacles hindering the implementation of the key principles of life-long learning in Kazakhstan.

Education as the integrated system. It is obvious that the education system of Kazakhstan, which was quite adequate for the pre-reform period and was characterized by relative stability and slow changes, is no longer good for current and future situations. In current conditions persons responsible for education policy should think outside the traditional limits of secondary and higher education, but cover the entire sphere of education. LLL is focused on the development of three main categories of the targeted learning:

- ✦ **Formal education**, provided by educational and training institutions and completed with the issuance of the appropriate certificates or diplomas.
- ✦ **Non-formal education**, provided by additional educational structures and vocational training institutions, normally not resulting in the issuance of formally recognized certificates.
- ✦ **Informal or spontaneous training**, which is considered a natural component of different routine life events.

In Kazakhstan, as in other CIS countries formal education is still the main factor in political thinking; it determines the process of providing educational services and influences the opinion of people on what should be regarded as education. Non-formal education provided outside schools, colleges, training centres and universities is usually not considered real education and its results are often underestimated. The national education development programme analyses the current status of each stage of education using the traditional agency-based approach, i.e. within the framework of reflecting processes, which exist in the formal education sector. Therefore the findings of the analysis though being objective and true are not comprehensive and do not take into account the possibility of turning education into a powerful factor of human development and pre-condition of social and economic

Education for all: the key goal for a new millennium

progress. There is no system of public validation and certification for professional qualifications gained by people outside formal education structures. There is no information in the formal statistics directory about the network of additional education and training (though such data are available at MoES level).

The principles of human development through life-long learning allow for non-formal education and its place in the overall educational context. UNESCO in its study of non-formal education in 1999 found that more than 15,000 training centres operate in Kazakhstan, where services are in high demand and knowledge acquired is well rewarded. However, as a rule, most such centres are located in cities and access by rural people to non-formal education is far below the required level.

One of the reasons (and often consequences) of economic stabilization is the growing attention to training staff of medium and large-scale enterprises. Based on the survey under the European Education Fund Project "Education for enterprise development" in 2001-2002 most enterprises and organizations surveyed (61 in total) provide training for their staff or undertake other actions for their development. This can be seen from the summary data.

Training enrolment 85% of financial, transport, communications, media and industrial enterprises surveyed take measures to train their staff; in light and food industries, catering and hotel businesses the figure is more than 70%. About one third of the staff receive training on average.

Informal training, including self-training, is practically ignored in the overall education system, despite the fact that it is the most ancient form of knowledge and skills transfer and it continues to remain the basis of training in early childhood. The fact that micro-computer technology first established itself in the family and not at school underlines the significance of such training. However, its results are not properly taken into account as in the situation of non-formal education. Though the conditions required for self-training are in place: during the last three years the number of libraries increased (from 3,200 in the 2001 to 3,462 in the 2003), museums (from 103 in the 2001 to 143 in the 2003) and club-houses operating mostly in rural areas (from 403 in the 2001 to 2,042 in the 2003)⁴⁰. The context of spontaneous training provides a huge variety of methods of training and can become an important source of methodological innovations in education. An example of such training can be attracting the attention of parents to the development of vital skills in their children (independent decision-taking, ensuring their own safety, health protection etc.).

Conclusion: The notion "education system" in Kazakhstan is still related predominantly to formal sector operations, which are not fully in accord with the achievement of human development goals by offering the most diverse curricula and vocational training. Non-formal and informal (spontaneous) education, though quite common in the country, are not properly recognized, which significantly restricts the opportunities of people in gaining required skills and their public certification.



Development of new skills. These skills allow people to be true citizens with corresponding life chances, actively participating in public and economic life in a knowledge-based society – in the labour market and at the job place, in real and virtual spheres, in democratic and poly-cultural structures. These qualities include the new basic skills, wide and narrow competences related to information technologies, foreign languages, technological culture, entrepreneurship, and communication. Importance is attached to the ability to learn and adapt to change, new tasks and situations, the ability to act independently or interactively or work with different social groups. Of course, this incomplete list does not rule out the traditional basic abilities of literacy and numeracy.

In information society the focus is moved from remembering endless facts and basic data to knowledge and analytical skills required for thinking productively and independently. Today in some scientific disciplines data that are taught during the first year of studies can become obsolete long before the end of the course. Therefore training in how to study, how to transform information into new knowledge and how to apply new knowledge is becoming more important than remembering specific facts.

As surveys and analytical reviews of education over the last 5 years show, most existing curricula in all education levels are still far from the real situation in the country and people's needs. They are mostly oriented at learning abstract knowledge and practical actions that taken together do not form an independent person able to live and operate successfully in a market environment. Most youngsters do not have the ability to solve their own problems rationally; this inability is often accompanied by ill health. Based on data of the National Centre for healthy life style about 20,000 young people after finishing 9–11 years of study annually drop out of productive life, i.e. they neither

⁴⁰ Republic of Kazakhstan: 2004. Brief statistic directory. Almaty, 2004, p. 38

study nor work. Above 21% of 15–17 year old adolescents smoke, 39% take alcohol, and 7–8% first took drugs before they were 15 years old.

During the last years several programmes based on the concept of life skills were started in the schools of Kazakhstan. They include such courses as “Civics”, “Valeology”, “Basic life safety”, and “Healthy life style”. Methods are being developed for extracurricular preventive work based on development of skills for combating negative collective pressure, the ability to resolve conflict situations, overcoming stress, and making independent choices. However, these courses are not yet properly integrated into the regular school curriculum.

The task of forming new skills is addressed in non-formal vocational training which, driven by competition in the education services market is forced to respond rapidly and appropriately to the needs of employers and trainees. During the last 5 years the curricula of training centres and non-governmental organizations (NGOs) operating in the education sector have become more “individual-oriented”. Instead of general familiarizing lecture courses different programmes of training and re-training of youth and adults are introduced using interactive methods. Experience of some regions shows that the most successful in this respect are the programmes for training in business, management, computer literacy, banking, accounting, languages, and services and professions in high demand in the labour market. The emergence of these and other programmes is caused by the quality of new conditions, organizations and jobs in need of specialists with universal skills. However, as noted earlier, there is lack of access to such programmes for rural population and poor communities.

An important role in adaptation of the content, forms and technologies of education in Kazakhstan to the needs of a market economy is played by international organizations. Significant technical assistance to the education reform process is rendered under the projects and programmes of the EC TACIS and TEMPUS, EFO, UNESCO, UNICEF, UNDP, USAID, Soros Foundation Kazakhstan, GTZ (Germany), World Bank, Asian Development Bank and other organizations from more than 30 international institutions undertaking assistance programmes for human capacity development in Kazakhstan.

It is obvious that in future the significance of basic skills will increase. This trend should be reflected in the content of all levels of formal and nonformal education. The transition from isolated curricula to the introduction of their holistic learning at all stages of education will require:

- ✦ study of the global and domestic experience in the sector;
- ✦ development of original programmes and technologies of integrating new skills in the system of formal and nonformal education and training;
- ✦ preparation of required textbooks and methodologies;
- ✦ training teachers and trainers;
- ✦ strengthening the links between education and enterprises and businesses (through consultations, cooperation, business-incubators, techno parks ,project fairs etc.).

Conclusion: Development of new skills is integrated in education in the form of isolated curricula and courses.

More consistent and efficient work in developing information, entrepreneurial, social, analytical and other skills in adolescents and adults is carried out by non-formal training institutions and NGOs. Strengthening relations between formal and non-formal education and training can facilitate adaptation of curricular content to the needs of people of different ages.

Investments in human resources. This chapter does not strive to analyse how much and what institutions should be invested, this task is considered by the previous chapters of the Report (see Chapter 3, para. 1 subpara. Funding). The LLL principle is being considered to identify the social value of investments in human resources through education and training and the possible diversification of the forms.

Investments in education in an information society ensure major positive effects,. In particular:

- ✦ Innovation technologies, the dissemination of scientific and technical achievements and the increased education level of labour ensure increased economic productivity.
- ✦ Education facilitates the unity of nation, helping to strengthen social unanimity and trust in social institutions, a more active population and open discussion and better understanding of the issues of gender and ethnic, religious and social diversity.
- ✦ A pluralistic democratic society relies on scientific and analytical surveys carried out in social science and humanities programmes.
- ✦ Change to a healthy lifestyle and an improvement in life indicators also provide major social and economic benefits.

Despite the methodological difficulties related to the measurement of the effects of investment in education, the existence of these important social benefits speak underline the fact that losses from insufficient investment in education can be quite significant. Experts include the following among such losses:

- ✦ reduction of real competitiveness of the country in global and regional markets;
- ✦ growing economic and social disproportions;
- ✦ worsening of the quality of life and people's health;
- ✦ a reduction in average life expectancy;
- ✦ further increase of unavoidable public expenditure for social provision programmes; and
- ✦ a weakening of social unity.

Reduction of budget allocations to education and training in Kazakhstan have resulted not only in negative consequences: to a great extent “thanks” to this fact, the system of different budget levels (central, oblast, rayon) was developed and elements of multi-channel funding were introduced including the involvement of enterprises and the direct users of education services – students and their families. Lack of transparency of information on the volumes of income and spending funds from private sources does not allow clear identification of what proportions of investments are made by enterprises and students of all levels of education. This makes it difficult to compare the education allocations from public and private sources.

Education for all: the key goal for a new millennium

However, based on the data of the Ministry of Education and Science at the beginning of 2000 tuition costs in higher education institutions were between US\$500 to US\$1000 per annum, which means that higher education institutions were receiving about KZT 5 billion for training students. This is 35% of the central budget allocations for education. At the other levels of education investment into one's own education has grown as well (see Chapter 3).

During the next 3 years (2005-2007) the National Programme of education development will require additional funds of about KZT 149 billion, which is only KZT 2 billion less than the total education budget for 2003.

Existing investment practice already takes account of the involvement of employers and other social partners in the funding of educational programmes. So, in 2003 some companies and associations invested KZT 15.4 million in the development of vocational education programmes, which is about 1.75% (out of KZT8.8 billion of total funds allocated for primary and secondary vocational education) (*Source: MoES RK*). However, wide implementation of special purpose framework agreements with social partners and the provision of benefits to such companies who do invest in vocational education and life-long learning are still underdeveloped. Thus the practice of encouraging individual training through the opening education accounts is not properly used yet.

Non-formal education services involving mostly private organizations are normally paid by the trainees. Examples of investment in training by enterprises or trade associations are not numerous. The exceptions are the registered unemployed whose training and upgrading are funded under the national poverty reduction programme.

The contribution of most enterprises to the development of their own human resources is limited to the payment for on-the-job training or training courses. As was shown by the survey mentioned earlier (EFO Project "Education for the development of enterprises"), only 54% of organizations and companies have a special budget for training.

Staff training is not yet a part of the strategic plan of most enterprises, small and medium ones in particular. Training is often arranged on an irregular basis and responds to a new need caused mostly by the installation of new equipment or the implementation of a new technology. In general, however, as the interviews show, most managers recognize the need and significance of training and promotion of staff. The survey showed an acute lack of effective practical tools, methods and techniques for human resource management.

In international practice financial incentives are the key tool for the introduction of life-long learning and encouraging private investment. However, forms of investment such as discounted taxation of enterprises are widely used

Mechanisms for encouraging private investment in education and training

Many countries have a wide range of incentives for encouraging investment in vocational training. In **Austria**, for example, employers are exempt from tax if they provide jobs to students for the entire period of training. In **Luxembourg** companies that employ students are entitled to assistance in the form of grants or exemptions from social allocations and are given different subsidies if there is a demand for the specialisms that they train. In **Spain** in 1998 incentives were introduced in the form of tax reduction according to the programme of national vocational training so as to encourage employers to employ more students under contracts (it is also provided that at least 15% of work time should be devoted to the study of theory), and to move them onto permanent jobs.

Payment of charges

In **France** the method of collecting charges from companies to fund training programmes stems from 1970s. The amount of charges has gradually increased and now it is 1.55% of the payroll and for the companies with the staffing below 10 people it is 0.15%. The funds accumulated through these allocations is managed to a great extent by social partners. Employers can establish their own funds if they have the capacity to train in compliance with set criteria. In **France** about two thirds of funds for continuous training are financed by the state if the training is targeted at vulnerable communities through labour market policy. In **Ireland** where the costs of training is a much lower proportion of the payroll than elsewhere, in 2000 this share was increased to 5% of salary, partially by the increasing contribution of the Government in education from €11.5 million to €22.5 million. In **Luxembourg** centres for continuous vocational training spend 20% of their time on vocational training and 80% on training and upgrading those searching for a job. Courses for elderly people are shorter than for youth, which can be 1–2 years and are aimed at training them to start their own business. The curriculum is normally discussed with enterprises to enhance the possibility of getting a job after completion of the course.

Study leave

In **France** study leave was introduced at the beginning of 1970s. The firm with 10 or more employees could allocate 0.2% of the payroll to fund such leave and more than 30,000 employees enjoy the right. This is about 65% of the total number of applicants for such a leave and this share is declining, the reason being the lack of funds to cover the costs related to training. In **Denmark** a rotation scheme of work was introduced in 1993 with the dual objective of ensuring the possibility of taking study leave to improve their skills and for the unemployed to work for one year at their enterprise. The rotation scheme is being actively considered in **Finland** with the involvement of the ministry of labour, education and health and social partners. It also allows the ones returning from family leave the opportunity to change their qualification or get additional training.

Study leave in many countries is the issue that is raised in the negotiation between the employers and trade unions regarding labour conditions.

Source: Evelin Virtel. Establishment of continuous vocational training structure in the context of lifelong learning. Advice for the Governments of Central and East Europe. EFO, 2001

facilitating in one or another way the training of youth and adults, the establishment of special funds, provision of paid study leave, etc. The experience of European countries in widening training investment means is shown below.

Kazakhstan needs a clearly specified strategy linking economic growth with applied, human development-oriented utilization of knowledge to resolve the issues of improving investment in education. The basis of such a strategy can be the measures widely tested in the developed countries. They include:

- ✦ active involvement of the state and private sector;
- ✦ stronger focus of national policy on multi-channel investment in human development as a whole and not only in the formal the education sector;
- ✦ gradual increase of total investment in education to 5–6% of GDP (general international standard, ensuring the optimal functioning and development of education system);
- ✦ legal provision of the right to continuous training;
- ✦ efficient social partnership of employers and trade unions in resolving the issues of funding, arrangement of training, content and certification of vocational education and training;
- ✦ establishment of a network of public, non-public, regional, sector and inter-professional associations, unions and funds involved in education, training and investment;
- ✦ development of techniques to determine the rate of return of investment in education by region, level and training provider;
- ✦ ensuring greater transparency in information about investments in human resources to achieve greater confidence in current financial policy by employer organizations, employers, enterprises, other stakeholders and individuals;
- ✦ encouragement and incentives for individual training by opening special educational accounts on the basis of special accumulations and deposits combined with different additional grants and benefits from public and private sources of finance;
- ✦ improvement of investment in on-the-job training for youth and people over 35 years old (demographic trends result in the strategic importance of employing older staff);
- ✦ rationalization of the use of budget funds “released” as a result of major increases in private sector investment in education by allocating them to the most problematic areas of the education system;
- ✦ ensuring a balanced distribution of budget resources and proper prioritization of investment in all parts of the integrated education system.

Conclusion: Not all restrictions in education funding over the last ten years are the result of the general economic crisis; they are temporary and are being resolved as the economy grows. Problems are mainly related to a lack of policy for creating conditions for a wider attraction of investment in education and training; encouraging investment by people in their own education still needs to be addressed.

Innovations in teaching and training. In the context of lifelong learning, teaching and training are expected to

adapt to a huge variety of interests and needs of people of different ages. Consequently, the promotion of research and innovative training approaches is becoming more than a significant task for educational institutions.

It is known that the previous education system was to a great extent aimed at forming a personality of a type specified in advance “by high level management” and not an individual personality. This resulted in an authoritarian and conservative attitude displayed by most trainers and a low receptivity for innovations. Already from the beginning of 1990s some positive changes started in the structure, objectives, content and technology of all levels of education:

- ✦ the diversity of types and models of educational institutions has increased;
- ✦ in addition to public and formal education a wide variety of private and nonformal education institutions have been established;
- ✦ information programmes are implemented in secondary and higher education;
- ✦ the spectrum of developing technologies applied has increased in information training in particular;
- ✦ pre-school and secondary school curricula are oriented to using active learning methods;
- ✦ a number of unusual courses and programmes are operated under the national standard of vocational training developed in due recognition of the labour market (almost all public and private colleges and higher institutions have such disciplines as basic business, management, marketing, advertising, psychology of business communication, conflict resolution, computing, life safety, etc.)

These changes are in theory only in many cases. The establishment of new model schools and higher education institutions has resulted in the fact that many gymnasiums, lyceums, and academies just bear the name and have no proper staffing, facilities, curricula and methods, well-grounded concepts or development mission. Study plans are overloaded, and training is mostly process-oriented and not result-oriented. Most curricula offered by education and training institutions are not yet organized and are taught as if the traditional forms of planning and arrangement of people’s lives haven’t changed for the last half century.

As stated earlier in an information society the ability to function independently is becoming of utmost importance. Such an outcome of training mostly depends upon the readiness of trainers to use learner-oriented methods, primarily cooperative learning, training in small groups, setting individual projects etc. These methods can only work if trainers change their entire approach to training and their attitude to the trainee recognizing that it is not the trainer but the trainee who is the key person in the education process, that the key to the development of analytical skills is the cognition, learning and communication process and not the teaching. Most of what traditionally the teacher was doing can be done by trainees. In learner-oriented methods of teaching the trainer is no longer the core of training: serving not as a source of information but as a consultant he is on the periphery of the training process, supervising it and providing assistance to students only in the case of clear need. Thus he provides students with the option of studying and completing their tasks on their own.

National standards for all education levels allow time for the development of independence skills in trainees. Thus most teaching plans in higher education institutions allocate 30–33% of the total workload to independent work by students. That is out of 54 hours a week at least 18 hours have to be devoted to independent work by students. In practice this rule is normally not followed due to a high proportion of classroom teaching. This logistical (in essence) problem is exacerbated by the weak skills of trainers at higher education institutions in interactive teaching.

Lack of preparedness of trainers in teaching methods, which promote the development of independence, enterprise, responsibility, and good performance among students, is common for all educational institutions. A key reason for this is the lack of an integrated system of professional development of trainers. Existing training institutions (at republican, oblast and municipal levels) are oriented to working with pre-school and secondary school staff and have no capacity to train university lecturers on a regular basis – once every five years.

The nature of current and future innovations in the education process will be significantly determined by the process of overall modernization of the education system based on:

- ✦ ensuring wide access to quality education at all levels and stages;
- ✦ transition to the 12-year cycle of general secondary education;
- ✦ improving the quality of teaching and learning,
- ✦ an efficient system of monitoring and evaluation;
- ✦ information of all levels of education,
- ✦ the introduction of information technologies and distant learning;
- ✦ the development of “market” knowledge and skills;
- ✦ the professional development of teaching and management staff;
- ✦ the renovation of rural and small schools.

Special attention will be paid not to single innovations but to holistic innovation programmes that should be provided with proper legislation and funding. Education systems should be consistently adapted to the changing life of people, their new needs and professional expectations. The issues of the real assurance of gender equality and satisfying the needs of the active population of older people, the+ disabled, children from problem families etc. will be paid special attention to.

Conclusion: The professional mentality of most teachers of all institutions of formal and nonformal education has not changed in considering the trainee as a key and active player in the educational process. Formal and prescriptive teaching prevails over independent learning. In all regions of Kazakhstan educational institutions do not have much experience of innovation.

Training evaluation. The issue of modernization of national systems and procedures for testing according to new economic and social conditions has become an important political and professional problem not only in developed countries. Clear and adequate recognition of training as an integral element of the quality of services

provided is a priority in reforming all stages of education in Kazakhstan.

Traditionally internal and external systems of testing of education content were built into the regular teaching/training programmes and subject syllabi, developed by the ministry of education. There was a vertical hierarchy including the divisions of the Ministry of education responsible for control, regional education authorities, and educational institutions.

Pupils of general schools take state exams after finishing grade 9 and grade 11. Practice shows that the teachers who taught them play the decisive role in evaluation of pupils' knowledge. This fact combined with imperfect criteria for testing and evaluation means that testing pupils is purely subjective. To resolve the problem from 2003 the MoES arranged a pilot testing of the national baccalaureate to evaluate the knowledge of school graduates, which could then be used for entrance to higher education institutions.

At present the main criterion of student assessment is the national education standard. The methodological guidelines of the Kazakhstani Education Academy (KEA) are regarded as a set of regulating documents determining the main content of education, setting up its final objectives for particular disciplines and professions, and ensuring the guaranteed level and quality of teaching through the regulation of knowledge and skills. In recent years, in pursuit of better quality in higher education specialists the procedure for licensing and accrediting higher education institutions has been improved; the possibility and advisability of accreditation of primary, secondary and vocational education are being discussed now. The National Programme of education development includes proposals for the formulation of a national system of education quality assessment, incorporating internal and external procedures for assessing student attainment.

For non-formal education performance criteria are often used, e.g.:

- ✦ employment after graduation;
- ✦ salary increase;
- ✦ promotion;
- ✦ gaining new professional life skills;
- ✦ satisfaction with job and life etc.

The weak legal regulation of nonformal education as a part of an integrated system of continuous education can be regarded as a failure in education reform. Non-formal education curricula are not subject to licensing, certification, testing and accrediting, which often reduces the quality of services provided by this sub sector. Therefore wider opportunities for improvement of evaluation in nonformal educational institutions should be in future related to the establishment of the specified formal system. Studying the appropriate experience of other countries is of special urgency for Kazakhstan. Lack of state quality control of non-formal education is the main threat to the expansion and development of lifelong learning programmes. Approaches to ensuring adequate evaluation of education and training quality are focused mostly in the following spheres:

- ✦ modernization of the national testing system and procedures according to the new economic and

social conditions, and the changing needs of education service consumers;

- ✦ establishment of an independent testing system for secondary school leavers;
- ✦ adequate recognition of the results of previous training as an integral element of the quality of education services provided;
- ✦ separation of the system of knowledge certification from education and training;
- ✦ ensuring transparency of education certificates and the conclusion of international agreements of mutual recognition of those, in higher education, in particular;
- ✦ formation of efficient mechanisms of interim and final quality control of education.

It is important to develop systems for the recognition and accreditation of knowledge, skills and experience accumulated during a long period of time and in different contexts including nonformal education. Such an evaluation can identify additional abilities and competences that people can offer to their employers. The process of recognition should help the person feel self-confident and improve his or her work outcomes. The evaluation of results should be accompanied by a wider involvement of those who would eventually check and confirm the compliance of the certificates with the practical abilities of the people.

In the conditions of growing autonomy of educational institutions and responsibility for actions a vital and important requirement is the establishment and development of the internal evaluation and monitoring systems for their performance. As practice shows well organized self-evaluation of work really helps educational institutions to move towards more open management and an improvement of education quality.

Conclusion: The problems of modernizing student assessment and certification and the accreditation of educational institutions are being resolved at the appropriate political level.

Professional orientation and consultation. Until quite recently a person transferred from education to vocational training and to the labour market only once in his or her life. This happened to young people leaving school or university and finding a job; they can have vocational training during their work. In these conditions there was no great need to establish a wide network of professional orientation and consultation. Therefore traditionally in Kazakhstan study consultations were arranged within formal general or vocational education and were regulated by the timetables and curricula. A system of professional orientation, though it existed in schools and colleges, was not widely applied.

Institutions providing consultancy services in education and training have been established mainly in the nonformal sector. The topics for such consultancy are related mostly to the issues of business education, management, small and medium-size enterprising, social and psychological orientation of the unemployed, search for work, taxation, computer training, foreign languages study etc. Most consulting organizations train their staff under international projects or abroad. As most of such services operate as

non-governmental organizations no accurate statistics are available.

Transition from training process management to consultancy and advice, from restricted schemes managed by experts to open schemes available for all will be more active in the systems of post-diploma nonformal, higher or post-secoondary vocational education. There is a lack of trained staff and other resources in the other educational institutions who can perform broad consultancy or information services.

Many people these days may require information and advice on "what to do next" several times in their life and it is quite possible that this can happen very unexpectedly. While the traditional professional orientation was provided by the state and meant for the youth on leaving school for the labour market, during the last 30 years the labour market-oriented services for highly qualified specialists have spread widely. In some European countries many professional orientation services are fully or partially privatised. Enterprises have started to invest in professional development of their staff.

Conclusion: Professional orientation and consultation institutions operate predominantly in the information sector and in higher institutions. These services at schools, colleges and lyceums are rare cases.

Bringing education closer to users. Ensuring accessibility of education is a priority of the national education policy of Kazakhstan. During the last few years regional and local education management levels became better at complying with the requirement of making the services "closer to the users". Diverse and accessible (at the place of residence) education options allow people to stay within their region for training and vocational education.

Despite the generally well developed network of secondary schools 554 rural settlements of Kazakhstan have no schools, more than 36,000 children are transported to schools every day, and more than 11,000 children live in 305 boarding schools. There is plenty of evidence of lengthy (from 2 weeks to more than a year) periods of classes missed by schoolchildren (Source: MES RK). Most children and adolescents missing classes are from problem or low-income families that cannot afford the costs of education for their children.

Additional (nonformal) education institutions are still less accessible for rural peoples resulting in a lack of education for many youth and adults and, consequently, in their social separation. The accessibility level of vocational training for most children and adolescents, especially from rural areas and small towns remains rather low. Of those with a school graduation certificate less than 10% continue their studies at vocational schools and colleges. Chargeable educational services aimed at training people of different ages for business are hardly accessible for the largest proportion of those willing to study, primarily the youth and unemployed.

Most domestic and international local development projects including local community training do not fully take into account the real challenges and needs of people in the regions.

From the point of view of life-long learning information and communication technologies (ICT) have the capacity

Education for all: the key goal for a new millennium

for the cost-effective enrolment of scattered and isolated communities, not only in training but also in communication, fostering a sense of belonging to the wider society.

Bringing education closer to the place of residence can be ensured by establishing suitable training centres in the places where people congregate daily, not only in schools but, for example, in offices and commercial facilities, libraries and museums, rest areas and other places.

The LLL concept stresses the priority of the learner. Educational institutions will have to adjust the arrangement of their operations to the education and training needs of more diverse categories of people: working people, aged people, students studying at home, often travelling pupils, short-day students, day-time, night-time students, week-end students, etc. New forms of education are in demand suggesting study in several institutions or involvement in several curricula in parallel or consequently. Therefore the trainee takes the initiative in identifying his or her chosen career path.

To ensure the acquiring of comprehensive education by children and adults from socially vulnerable communities national targeted and institutional support is required for the network of organizations and training centres for local communities to be trained in modern social and professional skills, for the development and implementation of pilot projects in rural areas aimed at improving the professional or general business competence of people.

The national rural development programme of the Republic of Kazakhstan for 2004–2010 identifies the development of social infrastructure in the education sector in particular and its accessibility as a key priority. It allows for the relocation of people from non-promising areas. “Aul Mektebi” programmes provide for the construction of new schools in 529 villages and provision of computers to 1,218 rural schools. To ensure full-value primary education or to increase access to it for rural areas with a low population schools with combined classes will be widely spread.

As can be seen from the surveys of curricula and training programmes on remote sites (for example, Project of the European Education Fund in Kazakhstan “Education for local development”, 2003) and the examples from the experience of the other countries the best training results in remote places are achieved under the following conditions:

- ✦ implementation of human development programmes including educational projects in collaboration with public institutions, NGOs, international and donor organizations;
- ✦ mobilisation of local communities in the implementation of programmes of specific training of youth and adults;
- ✦ encouraging education providers to develop the content and methods of teaching close to the daily practice of local communities with the focus on development of the key skills (decision-making, analysis, team work and strategic thinking);
- ✦ Combination of transport of students to the places of residence with the option of training in other cities and countries;
- ✦ Training trainers, local governments, NGOs, education institution managers in efficient methods

and ways of human resource development,

- ✦ Establishment of resource and training centres ensuring information and methodological support of the education process, copying the required literature, training trainers and consultations;
- ✦ Establishment of an accessible database of possible training at the places of residence and other cities of Kazakhstan;
- ✦ Cooperation on permanent or contractual basis with universities, research and training organizations of major cities;
- ✦ Facilitation of better understanding of the significance of local culture (through the efforts of volunteers, involvement in the work of restoration of cultural heritage, arrangement of festivals, festivities, etc.);
- ✦ Development of communication Internet-based networks, video-conferences, multi-media, etc.).

Conclusion: Given the vast territory and distances of Kazakhstan and the large number of scarcely populated settlements life-long learning programmes can best be delivered through the use of ICT. Measures to orient the local government policy towards the establishment of resource centres, the involvement of local communities in self-training, mutual training, projects to restore cultural traditions and handicrafts will be of equal value. Therefore, despite the restrictions of the transition period the education system of Kazakhstan has all the required conditions and pre-requisites for practical implementation of life-long learning. Of the 6 principles of the concept the measures related to the formation of new basic skills and competences in children and adults, to an increase in investment in people and their education, and to the development of national systems of student assessment are of special and primary importance for the country's human resource development. The implementation of each of these measures very much depends upon the efficient use of information and communication technologies.

5.2. INFORMATION AND COMMUNICATION TECHNOLOGIES FOR QUALITY EDUCATION

5.2.1. Education information programme: expectations and outcomes

Due to accelerated technological development the ability of any country to take advantage of the knowledge-based economy depends on how quickly it can adapt its capacity in knowledge formation and exchange.

Development of the national education system and its entrance into the global educational system is impossible

without information communication and technology (ICT) development. The national education policy of Kazakhstan identifies this area as a priority for education system reform. The key idea of actions has been built on the need to combine two areas: use of ICT, and the professional development of teaching and management staff.

Computerisation of schools in Kazakhstan started in the middle of the 1980s when the curriculum of secondary schools included the new subject "Information science and computer engineering". In 1997 the National programme of the President of the Republic of Kazakhstan for the computerisation of the secondary education system was developed and approved for 1997–2002. The main sources of funding for this programme included the budget (central and local) and some part of the ADB loan.

Below are the sources of funding for the National programme for the computerisation of the secondary education system (1997 – 2002):

Sources of funding	Share of the total expenses, %
Central budget	29.20
Asian Development Bank	25.20
Local budgets	31.4
Other sources	14

Source: Ministry of Education and Science of RK

The implementation plan for this programme included a set of measures:

1. equipping all schools of the country with computers;
2. training and upgrading teachers;
3. use of information technologies in training;
4. implementation of an education information management system;
5. ensuring computer literacy of pupils.

For the purpose of implementing measures in all areas, coordinating activities, and providing school with methodological and technical assistance the Republican scientific centre for education information (RSCEI) was set up. 14 regional scientific and methodological centres for education technology and two municipal centres (Astana and Almaty cities) were also set up, duplicating the RSCEI at regional and municipal levels.

Out of the whole set of measures planned the first item was fully implemented: based on MoES data by 2002 all schools of RK including rural and small-scale ones had computer classes. At the moment the regions are replacing obsolete computers and supplying additional computers. The average supply rate at schools is 58 pupils per computer. As shown in the statistic report of the UNESCO Institute of information technologies in education Kazakhstan is among the first rated in CIS and Baltic countries based on computer equipment in secondary schools.

1,141 out of 7,989 schools have Internet connection, including 602 rural schools. In general this is about 17% of schools. Access to Internet is mostly for teaching using the network, finding the required information on particular subjects including printing and copying of it to be used as additional teaching and learning material for pupils and

teachers, and e-mail communication with other schools and educational institutions.

All oblast and municipal educational authorities were connected to the Internet in 2003 under central budget funding. All rayons will be connected in 2004 and all schools in 2005, but the budgets are not yet agreed.

During implementation of the National programme for computerisation of secondary schools teaching and learning materials, new textbooks on information science, software (including practical tasks), dictionaries of information technology terms, methodological guidelines on telecommunication technologies and a Russian-Kazakh dictionary for computer filing were developed.

Soft textbooks and multi-media training software for secondary education were developed in Kazakh and Russian for 16 subjects. They include: textbooks for the Kazakh language, history of Kazakhstan, biology, chemistry and other subjects. Soft multi-media training programmes are being developed for 11 subjects for grades 10–11 in Kazakh and Russian.

The National Programme for the computerisation of secondary education allowed for the establishment of an Education Management Information System (EMIS). to be used by management at all levels of the education system for:

- ✦ improving the quality and efficiency of management;
- ✦ regular pedagogic monitoring of schools;
- ✦ collection and processing of information, reduction of time for collection of information, ensuring much wider volume of information for analysis and management decision taking, avoidance of routine work in processing of statistical data;
- ✦ new types of analysis in cases that were not possible before;
- ✦ ensuring accurate information through multi-level monitoring;
- ✦ exchange of experience of education staff for professional development.

The first phase of the EMIS project is completed resulting in automated input of data from oblast departments to the Ministry under 10 subsystems (pre-schooling and schooling, primary vocational education, staffing, control of documents execution, licensing and testing, reporting and financial analysis, provision of textbooks and computers). Above 500 statistical and analytical forms are automated, helping to reduce the routine work in education management and facilitating improved analytical work and better management decision-making.

The education system information concept in RK for the period 2002 – 2004 includes the set of measures that should ensure the wide use of new information technologies in all educational institutions of the country.

The information programme for vocational institutions is aimed at:

- ✦ providing the workers and semi-professional staff with knowledge, skills and abilities in the use of new ICT;
- ✦ establishment of an integrated information and education system on the basis of the existing telecommunication networks and connection to

- them of the education information banks;
- ✦ improvement of coordination and control of training skills in using new ICT;
- ✦ integration of information in vocational training.

To develop a flexible training programme for pre-school and rural teachers in January 2003 the UNESCO

One possibility of EMIS implementation is the formation of a system in the MoES called “**E-Government (EG)**”. This means:

- open access to MoES documents for all;
- accessible and regularly updated legislation (including formal comments and responses to the most often asked questions);
- progress reports of the management bodies of all levels with the understanding that the government is for people and not the people for government;
- transparent financial policy;
- correspondence with public bodies without procrastination and long waiting periods.

The objective of introducing ICT in public management is to make it more efficient, to ensure that people and organizations can have network access to the different services of the state instead of visiting different offices and that conditions are created for information exchange between public institutions.

In Kazakhstan the idea of establishing e-government is quite realistic. There are no technical restrictions, at least in the big cities. Many households today have computers. Even if there is no computer with an Internet connection at home one can use the numerous Internet-cafes, Internet-kiosks appearing everywhere. Many educational institutions and libraries provide this service either for free for their students and readers or for a small fee.

Implementation of the EG concept is highly appropriate for Kazakhstan. Secretiveness, lack of openness in lawmaking resulting in uninformed decisions and “raw” draft laws can be eliminated.

Project “Distant training of specialists and experts of pre-schooling” was started. Under the pilot study a group of specialists was selected to develop curricula. Hard, soft and CD copies of the curricula are ready, including a web-site; a set of training materials has been prepared; simultaneous and parallel teleconferences have been held; an on-line system of testing and certification has been developed; and the teacher training programme is improved.

One quickly developing sector of the education system is distance learning (DL), which is of vital importance for Kazakhstan with its vast territory and the concentration of technological and scientific capacity predominantly being in big cities. The Ministry has developed the Concept of distance learning under the system of continuous education. Connecting schools to the corporate education network is a key pre-requisite for

implementing DL in the country. Some higher education institutions are now developing training materials to implement DL, and trials are being arranged to use the new information technologies in DL.

Based on the distance learning development surveys in remote regions of the country undertaken in spring 2004 by the Cluster bureau of UNESCO in Almaty the “Distance education using ICT for secondary schools of remote regions of Kazakhstan” was started. The survey shows that the education system including DL is progressing in general. Despite many constraints and challenges faced by DL, Government and educational institutions realise the significance of ICT in education for the purpose of development, which is an important pre-requisite for the operations in the sector. According to the Presidential Decree by September 2004 50% and by the middle of 2005 75% of all secondary schools should be connected to the Internet.

In light of the above it was decided that under the project in addition to the technical aspects of DL, priority would be given to the teaching capacity building. The low salary of schoolteachers has resulted in an outflow of many experienced teachers from rural areas. New teachers need support so that they can properly fulfil their duties. There are low levels of professional training. Therefore, inter alia, the project includes the training course on DL methods for the so-called “multipliers”, that is teachers of secondary schools who would then transfer the acquired knowledge and skills directly to the teachers of rural secondary schools. Training courses are required to ensure the readiness of the teachers for the time when all schools have Internet connection.

Recently the Central telecommunication unit of MoES that supports and controls the operations of the corporate network ensures communication between oblast and regional telecommunication units. The corporate network connects all oblast education departments. The MoES Central telecommunications unit has several servers: DL, mail, e-library, database. The system operates as a pilot project “Kazakhstan online”.

The development of high speed (digital) Internet-communication for schools is emphasised. It is suggested that the schools will be connected to high-speed networks via universities. At present with the support of Kazakhtelecom in this respect a number of projects are being implemented that will allow schools using high-speed Internet-communication within the next 2 – 3 years.

The pilot project of the UNESCO Institute “Distance learning for rural schools” is being carried out in East Kazakhstan, West Kazakhstan and Pavlodar oblasts. A distance learning satellite channel has been started to ensure interactive relations between teachers and students of different regions.

An important activity in education and ICT will be the establishment of national training television. For this the Ministry is taking measures to accumulate a national bank of training videos and to establish school technical centres serving to improve education quality. At present KATELCO broadcasts a 3-hour training programmes every day. The content of the programmes includes presentations prepared by the best teachers. About 500 schools have access to satellite television. Satellite dishes are procured with regional budget funding.

5.2.2. Main constraints for the success of implementation of the national ICT policy and methods of eliminating them

The implementation of national ICT policy faces a number of problems related to lack of funding, insufficient training and upgrading of teachers, weak facilities, the need for upgrading the software and implementation of new software based on open input technologies.

The emergence and rapid development of ICT poses such difficult problems for the education system related to ensuring proper integration of ICT in general education systems and education institutions, with them being used as tools for improving equal access, widening the opportunities of quality education for all with due regard for existing standards in DL.

Obviously, the installation of computers and other ICT alone does not ensure the high quality of education. A whole set of actions aimed at improving content, staffing, resources and facilities. The ADB-financed Project TA3939-KZ "Education sector development strategy" is focused on several elements, which are most important not only for electronic training but also for the entire education system. They are:

- ✦ infrastructure – providing schools with ICT equipment to be used by teachers and pupils;
- ✦ ensuring access of all institutions to Internet to acquire, develop and issue the materials with special attention to open educational resources;
- ✦ upgrading and re-training teachers to use the new methods and training resources on the basis of cooperation between developers and users;
- ✦ development of a consortium of materials developers to reduce the cost of ICT-based materials;
- ✦ professional development of management and administrative staff of oblast/region and institutions to create the corresponding conditions to implement new technologies;
- ✦ content – ensuring sufficient quantity and high quality hardware enhanced with high quality printed materials.

There are constraints for each of the above areas affecting the overall outcomes of education information.

As acknowledged by the MoES specialists during the implementation of the computerisation programme the strong point was the supply of computers and their use in training, but maintenance was the weakness. However, most observers note the lack of hardware in secondary schools. In some schools the number of pupils per computer is more than 80:1.

The striving of the administration at all levels to use ICT often results in an underestimation of the extent of regular

maintenance and replacement of equipment needed, with its cost being very high and often unaffordable for regional budgets and especially for schools. Depreciation is 17% per annum, which means that the hardware needs replacing every 6 years. It was initially thought that funds for the implementation of the computerisation programme would be allocated from the central budget, but now these costs are to be borne by the regions.

Most copying machines and printers are unsuitable for operation due to the high costs of spare parts and supplies (such as toner cartridges) and due to lack of timely maintenance. This work in most education institutions is carried out by computer teachers, who have to spend most of their time for it to the detriment of their normal responsibilities. School libraries need to be better equipped to ensure equal access to ICT. As at the moment they are installed in computer classrooms, causing a digital gap between teachers of technical and humanities subjects.

The main constraints to increasing Internet access and distance learning are also related to their high cost and the prevailing slow modem communication and unreliable telephone lines in the regions.

Despite the fact that satellite television programmes are a success with both students and teachers they are obviously not enough to satisfy the current demand. Teachers record the programmes on videotapes to use them at the most convenient time. Schools provide the tapes to other schools with no satellite communication.

Plans of Government for the attraction of private capital for ICT infrastructure development are not completely implemented as the focus from the very beginning was of education information in the public sector predominantly by Kazakhtelecom mostly owned by the state.

The issues of who will bear the additional costs related to ICT development, and to more frequent and longer training of teachers, are still unresolved. Should the problem be resolved by the local governments or should the main contribution be from the central budget?

The actions for the implementation of the National secondary school computerisation programme show that a key condition leading to successful introduction of computers and their use in training and education is well-



prepared staff. Given the ICT development and the fact that the computer teachers play a key role in the training of other teachers to use computers, their own re-training and upgrading, especially in rural schools, is insufficient. The main problem, as perceived by the MoES, is the lack of funding and the major lack of computer teachers. The flow of staff at oblast level is more than 70%, which, most likely, is explained by the opportunities available for a better paid job.

Teacher training courses do not pay proper attention to the improvement of teaching skills to develop in students a sense of independence that forms the basis of ICT and DL. Special attention should be paid to the interactive aspects of DL presuming the availability of two-way communication using dialogue sessions between a teacher and a groups of students, real time dialogue inside the group and such tools as network forums and chatrooms (discussion panels).

There is still a major need for increasing the training of school principals, administrative staff at all levels of education in information and ICT. MoES reports on EMIS implementation state that staffing problems are the most significant as well.

Structural links, both horizontal – between organisations at the central level, and vertical – between the central and oblast levels, are not stable and efficient enough to carry out a holistic policy of implementing and using ICT and EMIS at all levels. This is related not only to a lack of funding for the permanent corporate communication between management (the monthly payment for communication is US\$700), but also to the weak coordination of operations of schools and education offices.

Some functions of the National centre for testing and national education standards (NCTNES), of the Republican centre for education information and of regional centres of new education technologies are duplicated. The same is noted in the operations of RIEPU and oblast TUI.

Wide implementation of ICT and distance learning has great potential from the points of view of reducing the amount of printed training materials. However there are also some constraints. Some electronic textbooks contain too much text and are not interactive enough. Most teachers and pupils print out electronic text materials available from the Internet or CDs as large amounts of text are difficult to read on the screen. Both procurement of electronic textbooks and printing out of materials require major additional expenses. However, following the international practice of developing distance materials one should not use too much animation, video-images and graphs, which are not always used functionally. Though this is justified in CD-ROM-type technologies for network information it radically increases the cost and reduces the accessibility.

The average current cost of developing one electronic textbook is KZT 1 million. Improvement of quality of the image and sound and the application of multi-media is 2–3 times more expensive. With the existing scheme of funding this work the production of quality electronic textbooks will take several years. Reduction of this time to 2–3 years will require additional funding. The same is applicable to DL, which also requires an increase in investment. This is possibly why there is no clear and consistent policy for distance learning yet.

For efficient use of advanced technologies more frequent and good quality training of teachers of computers is required. More attention should be paid to rural teachers. The recommended approach is for training organisations to be selected on a competitive basis, then the government would allocate grants to schools amounting to 1.5% of the total amount of school budget for re-training and upgrading teachers' qualifications. Also the professional development of teachers can be facilitated through DL and ICT.

To attract and retain qualified computer teachers their salary should be increased. The issue of employing computer technicians in schools needs consideration.

The experience of several oblast teachers' upgrading institutes creating and funding "computer reading halls" is rather promising. The same structures can be arranged at schools. However, without improvement of telecommunications and appropriate investments these tasks are impossible to resolve.

Mostly the same problems are in the development of electronic training materials, electronic textbooks in particular. To cover the main school subjects more than 150 electronic textbooks need to be developed. As noted above with the existing volume of funding the process of developing these aids may last up to 10 years. Given the fact that for their practicality major additional funds is required to train teachers there is an issue of the degree of the need for introducing this type of electronic material in the training process.

More lengthy experience of implementing ICT in a number of developed countries shows that quality education presumes the use of different teaching aids including printed materials. The above-mentioned ADB-financed Project "Education sector development strategy" refers to the data of the survey of open and distance learning at colleges and universities supported by the European Commission reflecting the opinion of the students of the media that were essential for successful completion of training. The results are the following:

These examples are useful for future thinking on which media are most appropriate for ensuring the successful completion of education programmes under different conditions, taking into account the remoteness of regions, types of institution, location in the city or a village, etc.

The use of ICT to improve the quality of training suggests regular surveys, the monitoring of electronic media and teaching activities and making appropriate adjustments.

Conclusion: Efficient ICTs are vital for the entire education system as they can: (a) optimise and reduce the administrative work and increase the responsiveness and efficiency of system and institutional management; (b) increase access to quality education and training at all levels; (c) radically increase access to information and data – both within a region or city and globally and (d) facilitate greater public involvement in education management.

A knowledge-based human development strategy for the social and economic development of Kazakhstan requires a comprehensive, holistic education system for the whole population. It is important that the system caters for the continuous education of people of all ages giving

special attention to the ability to adapt to the changing demands of a knowledge-based economy. This can result in the gradual elimination of the distinction between basic and further education and between the vocational training of youth and training people during their professional life.

The adaptation of Kazakhstan to changing socio-

economic conditions requires reform in the education system and the application of new concepts and technologies. Education in the 21st century should not only be focused on access to the global knowledge base in science and management but should also facilitate the preservation of the national cultures and values.

Chapter 6.

MAIN AREAS FOR IMPROVEMENT OF EDUCATION SYSTEM IN KAZAKHSTAN TO ENSURE QUALITY EDUCATION FOR ALL

If you want to move forward, you should often look back, otherwise you would forget where you started from and where you should go.

L. N. Andreyev

6.1 IMPROVEMENT OF EDUCATION EFFICIENCY FOR HUMAN DEVELOPMENT

The analysis of the education system provided in the previous chapters clearly shows the deficiencies and problems of education development in Kazakhstan. The national education development programme and concept set out the objective of resolving these issues. However, these documents were developed on the basis of the current situation where the challenge of providing the economy of Kazakhstan with highly qualified staff was the top priority. The concept of human capacity development on the other hand assumes that policy is aimed at the interests of individuals, putting other problems (economic, political, social) into direct relation with the demands and abilities of those persons.

An informed approach to education system development in the country is governed by the fact that education is a sort of guarantor of social development in the future; what is set out as the social and economic tasks for national development today will be implemented by school graduates of tomorrow. Thus, for these tasks to be implemented, we should start thinking today how the education system should be developed so that our children will realize the significance of this activity for the rest of their lives, such that they will understand that the success and well-being of not only themselves but all society depends on the quality of the knowledge, abilities and skills they acquire.

Taking into account the economic transition and shift of society to a post-industrial stage of development, the role of education should be reviewed not only as a factor of economic development but as a factor of human development and human capacity formation. Moreover, due to the changing social requirements of the education system, its modernization should go in line with the reforms being carried out in other social and economic areas. Education should become a general national priority in this age of industrial and innovative development of society.

The objectives of educational system reforms in Kazakhstan are to bring the system into harmony with the dynamically developing society and economy and to develop mechanisms for the sustainable development and regular renovation of the educational system, with due account given to social and economic requirements and the demands of the individual, society and the state.

Even more than these objectives can be achieved through the intensive involvement of two basic factors:

- ✦ *Maximum mobilization of internal resources of the education sector, including optimisation of education content, structure, organizational forms and technologies, economic and management mechanisms, different forms of stimulating education renovation, etc.*
- ✦ *More active mobilization of external resources, including financial, physical, logistical, informational, human, intellectual, etc, and deployment of a wide system of social partnership in education, using the mass media, telecommunications networks, Internet, public unions and organizations, etc.*

In addition to attracting and mobilizing resources, the content of education should also change. Education reform is primarily and for the most part improvement of educational content. Educational content is the basis of all education activities and at the same time a key indicator of the correlation between the education system and the current requirements of the society, economy, state and every individual.

Three main challenges faced by the global society can be identified. They are restructuring the school system, adopting the principles of independent activity and awareness of learning as the key principles of education and upbringing, and integrating information technologies into the education process. Today no state in the world can take decisions in isolation.

Though much can be learned from the experiences of other countries in the development of a national concept of education system reforms – for example, the

need to improve the material and resource information base to ensure the access of students to the wide-scale information – still, some specifics of the education system inherited from the Soviet system should be preserved and strengthened. For example, Kazakhstan should retain the primacy of primary and secondary schools, with a key ingredient being the unique communication and contact between the teacher and student and not just the formal transfer of information between them as is the case in the education institutions of some other countries.

Thus the integration of Kazakhstan into the global sphere of education should be comprehensive and take into account the national peculiarities of its own system, the possibility of building a Eurasian education model within the Eurasian economic community, and the adoption of best practices from other countries. The future objectives of the national education system should include the following: easy use of several languages by school graduates, including the national language; increasing mobility of students, teachers and other staff to exchange experiences through the introduction of 2-cycle training and crediting system; ensuring employment of graduates by orienting the education toward the final outcome – the applicability and practicality of knowledge acquired.

Possible areas for modernizing and reforming the education system of Kazakhstan are covered in the following sections of this chapter. However the most important objective and the main area of education system modernization is, in the view of this report, the radical renovation of educational content at all levels.

6.2. SEARCH FOR NATIONAL CONSENSUS

An important approach to developing appropriate principles for education policy is to consider the political savings of reforms. The implementation of the concept in the form of successful reforms and innovations depends on the ability of politicians to promote a consensus

between different stakeholders in the education process, establishing a strong basis for tolerance concerning issues of doubt and dispute.

A potentially results-oriented approach to tackling the problem of the political sensitivity of proposed reforms is to provide for the beginning of a wide consultation process to discuss the need and content of the proposed changes. This work includes rational analysis, political consensus-building and personal interaction to ensure concord between all participants in the process.

National consensus should unite all stakeholders around raising up the next generation to strengthen the nation, ensure prosperity and feel confidence in the future. The main task in creating an efficient education system is to coordinate and agree on dividing responsibilities between the interests of the following groups:

- ✦ **The public sector (central and local governments)** establishes the legal framework for the education system by setting standards. The standards are applied to regulate the education services provided. The standards are set upon agreement with all stakeholders. The key “players” are normally the state represented by officials and public unions (for example, teachers associations).
- ✦ **The private sector** uses the mechanism of competition to provide the right of choice. Competition, ensuring choice in educational services, facilitates improved efficiency and the use of market mechanisms, which in turn leads providers to reduce their costs and improve education quality.
- ✦ **Civil society** (taxpayers, parents, trainees, employers, employees) uses the mechanism of involvement through exercising their right to vote. Involvement or voting rights entails participating in establishing the standard input resources and education outcomes. The use of information on the performance of the public and private sectors also encourages improvements in efficiency and facilitates choice between educational options.



Establishing such a system is only possible based on a partnership dialogue between the state and other participants in the education process, with continuously increasing capacities both of the education sector and its members. A clear example of unilateral decision-making on an issue of national importance was the introduction of the National Baccalaureate. This decision to introducing the National Baccalaureate was a surprise for teachers, pupils, parents and even for some oblast educational management bodies.

A major contribution in resolving problems in education can be made by the **National Education Council chaired by the President of the Republic of Kazakhstan**. This body, involving all stakeholders in the education process, should serve as the moderator for new ideas and approaches aimed at education system reforms.

Agreement within society regarding changes in the education system can only be achieved on the basis of public involvement in those changes and broad attraction of civil society to participate in education management.

One should not forget that the people most interested in education quality are the parents. Therefore they need to participate in the management of the education system and serve as the key client of the education system and corresponding public institutions, the executors of public directives.

Increasing the involvement of society in the management of educational institutions can be achieved by establishing a system of Trustee Councils for those educational institutions. This would increase the attention of the local community to development problems and education needs, ensure the inflow of additional resources – financial, material, staffing – to the educational institutions, and promote their efficient use and public control of management operations.

Restructuring in the sector can be achieved through establishing institutions such as: school councils (with broad rights in the areas of finance and content) with the involvement of parents; councils of vocational educational institutions with the involvement of students and employers; trustee councils for universities with the involvement of students, professors and representatives of the state and civil society.

A number of other initiatives would help improve the education system as a whole. These include: institutionalising the involvement of employers in regulating and funding the vocational education sector; arranging dialogue between non-governmental organizations and public bodies responsible for decision-making in the education sector; and developing legal frameworks and mechanisms that would allow the opinions of civil society organizations to be incorporated into official documents and programmes.

It is only through continuous testing, monitoring and evaluating proposed educational policies, providing access to information and advanced experience, and broadly attracting public and professional expertise that one can talk about comprehensive reforms in the education sector. In Russia the All-Russian Internet Teachers' Council is functioning quite effectively in facilitating wide involvement of the population in discussions on issues regarding the education system that are of interest for them. Thus people in the Russian Federation can take an active part in discussing the introduction of a national baccalaureate, asking questions that are of concern to the minister of education and science, sharing their views and expressing their opinions on different problems in the Russian education system. Such an approach to involving the public in discussions on strategic issues can be applied in Kazakhstan as well.

An Internet Teachers' Council could be established to promote wide participation of the population in discussions on issues of concern regarding the education system. Such issues might include providing the appropriate conditions – perhaps through tax benefits – to encourage different forms of self-organisation of the population and companies to support education. Establishing education support funds for educational institutions and then accumulating and spending funds from companies and individuals to solve particular problems in the sector

could do this, for example. In this way, the interest of society in educational issues could be enhanced and the conditions created to incorporate their proposals into educational system improvements. The establishment of the non-governmental organizations will increase with the recognition of their role in education.

An important aspect of the changing demands for education and vocational training is the short "life cycle" of knowledge, skills and professions. As a result life-long learning, regular upgrades of individual abilities and qualifications are becoming more important. It is expected more and more that graduates will periodically return to the education system to acquire, learn to apply and update their knowledge and skills needed for their profession.

6.3. IMPROVING THE EDUCATION SYSTEM

While analysing the education system as a whole and focusing attention on current problems, the most telling component of a comprehensive survey of the system would still be the critical analysis of each education level separately. In this way attention can be given to the effectiveness of each of them. The necessity of such an analysis is explained by the fact that each level of education has its specific deficiencies and advantages. Thus certain institutions in the education system should be reformed with due consideration given to the specifics of each level. In addition education reform should be systematic from a strategic point of view: to enhance learning efficiency, each education level should be a logical continuation of the previous level. Thus an important objective in modernizing the national system is to create the conditions for multi-tier continuous education to increase the competitiveness of the economy of Kazakhstan and to satisfy the needs of individuals and society.

PRE-SCHOOL EDUCATION

The most important cause of the extensive collapse of pre-schooling was inefficient institutional arrangements, uniting expensive day-care of the child and his or her pre-school education. In this respect the task of maintaining children in kindergartens should be separated from the task of preparing them for school and early development. To solve this problem, the establishment of pre-school groups at schools, short-term classes and groups arranged by local communities and parents can be recommended.

Improving the pre-school education system should begin through widening the network of pre-school institutions with different forms of ownership, including pre-school centres of different profiles (related to physical culture, health, special needs, sports, aesthetics, linguistics, the environment, parents' training, gifted children, etc.), family kindergartens, and mini-centres based on general schools with short-term classes. A special place should be given to the process of establishing centres and developing programmes for training parents for educating and raising children. The specific development level of individual children should be taken into account in developing flexible curricula for 5- to 6-year-old children with personalized attendance schedules (short week, short day, etc.). To increase the enrolment of pre-schools, all children should

have equal access to pre-school education and raising. The comprehensive development of pre-school training should be accompanied by the establishment of a system of family support in early training and raising children with restricted abilities. The establishment of a national scientific and practical centre "Pre-School Childhood" would be one of the most important restructuring measures taken to improve pre-school education. The centre would deal with the development and coordination of strategic plans for early childhood education and carry out the surveys and analysis of pre-school activities. Developing national standards for pre-schooling, stimulating and activating innovations, and checking textbooks, manuals, toys and play tools psychologically and pedagogically would also be the subject of operations of this scientific and practical centre.

"We practically have to recreate the pre-schooling system. Only 18% of children go to kindergartens and day nurseries. The situation is not improving at all. The need to make pre-schooling accessible to the maximum extent possible, for the children from low-income families in particular, forces the Government and Akims to start restoring kindergartens."

From the speech of the President of the Republic of Kazakhstan at The Third Congress of Education and Science Professionals 12 October 2004

Even so, improving the pre-school education system will not require only short-term, tactical measures to be taken; it will include a number of long-term initiatives in this area as well. An important area for work should be improving the legal and regulatory framework for implementing pre-schooling programmes under different arrangement schemes. To preserve the continuity of pre-school and primary school curricula, and to integrate children with restricted abilities into pre-school education, a methodology should be developed for pre-schooling programmes. Identifying priorities for pre-school education development would become more efficient with the introduction of pre-school specialists into education management bodies.

SECONDARY EDUCATION

The main path of strategic development for the general secondary education system is in adapting to the changed socio-economic conditions in education content, the internal structure of schools, institutional and economic mechanisms, and management. The necessary conditions for taking this path include: personalized orientation and individualized approaches to the education process; diversity of education institutions and curricula; efficient support to innovative measures; and active involvement of society in education activities and education development. Primary and secondary education should be recognized as a key priority for human development in Kazakhstan.

Adopting an open education model in general education requires setting up technical infrastructure that

is permanently available to participants in the education process, such as work stations in school libraries or at home for disabled children. It also requires developing the appropriate software including virtual environments for training, information and directory resources. The task of infrastructure improvement should allow for the establishment of regional centres of open education, university Internet-centres and methodological support facilities. It should also allow upgrading and training staff. An important area of secondary education development should be the training and re-training of coordinators of information technologies of all levels. Renovation of secondary education content includes qualitative changes in the further development of the system. The main result of operating education institutions should not be a system of knowledge, skills and abilities as such, but a set of key competences in intellectual, socio-political, communications, information and other areas.

A practical orientation and utilitarian direction in general secondary education allows for the realization of an optimal combination of theoretical and practical knowledge, directing the education process toward not only learning facts but developing thinking abilities too. Developing practical skills, learning processes and technologies, increasing various practical classes and interactive and collective forms of study, and finally linking the materials studied with the problems of everyday life can all become the areas of focus. It is necessary to increase the role of communications, primarily information technologies and Kazakh and foreign languages. Differentiation and individualization of the training process is achievable through developing a varied curricula oriented towards different groups of pupils – from gifted children to children with restricted abilities – and through developing individualized programmes and schedules of studies taking into account the personal abilities and characteristics of the pupils.

Qualitative changes in the secondary education system can include reducing the number of hours of mandatory coursework and increasing the number of hours of independent work (abstracting, designing, research and trial works) in the study plan as students move up higher levels of education.

VOCATIONAL EDUCATION

The main goals of the medium-term plans in primary education include increasing graduation standards, orienting them towards international quality levels, and allowing the participation of employers, investors and experts in developing these standards. Restructuring the secondary education system should be supported by optimising NGO educational institutions through: renewing facilities and establishing resource centres; developing infrastructure for the productive activities of students; and creating conditions to support the use of all types of businesses for organising practical studies in the NGO system. Further improvements in the secondary education system include developing combined finance systems for NGOs from the budgets of different levels; and creating, testing and introducing new models of primary vocational education financing. It is important to make the primary vocational education system more attractive for potential investors. Qualitative changes in the secondary education system can be ensured by creating the legal basis for

developing multi-level primary education institutions as a new type educational institution; and by implementing programs in primary and secondary vocational education, vocational education for schoolchildren, and adult retraining. It is important that these improvements are backed by government resources allocated to: retrain the unemployed population of working professions; support primary vocational educational institutions; and involve employers in providing quality primary vocational education through establishing employers' associations and councils of vocational education institutions. It is necessary to use different approaches for different groups of children with special needs during the development of special education institutions.

In order for students from the primary and secondary levels of vocational education to better adapt to the demands of the labour market and enjoy vertical mobility, it is necessary to promote the multi-level integration of specialised secondary education institutions with other types of institutions. It is necessary to divide vocational, post-secondary and vocational education within the secondary education system while laying out the details of co-existence between the old and new systems in the future.

SECONDARY VOCATIONAL EDUCATION

Providing specialists with secondary vocational education is aimed at covering the needs of both national and regional labour markets. The structure of vocational secondary education at the central level must include manpower training under special national programs for science-intensive and high-technology industries that serve national infrastructure systems, quality control systems, and manpower training in the arts.

Special secondary institutions will be further integrated with institutes of higher learning and incorporated into the university system (in diverse forms, preserving their legal status). The practice of creating affiliates of institutes of higher learning on the basis of specialised secondary schools will make higher education more accessible from the point of view of location.

Integrating specialized secondary education institutions with primary vocational education and creating on this basis multi-level educational institutions – which will then train semi-professional specialists and qualified workers and retraining personnel – is a promising area of development.

HIGHER AND POST-GRADUATE EDUCATION

Higher education takes a special place in the public education system. Being the uppermost formal level in the system, it fulfils the difficult task of training qualified specialists. In this respect all innovations being introduced in this system must be carefully analysed since they could negatively affect the quality of education. The strengths of the existing well-functioning system of higher education and past experiences should be taken into consideration in any proposed reforms. However, one shouldn't deny the need for improvements in the system: weaknesses in the system are a fact and should be eliminated.

To improve the system of higher education, it is necessary to provide equal opportunities and availability of higher education to all people, especially to children from poor families or families with many children. Essential

directions in improving higher education include providing non-governmental education institutions with high-quality specialists. It is important to attract a new generation to develop the scientific-innovative potential of the country, commercialise science and build connections between science, industry and entrepreneurship. Restructuring is based on creating and strengthening research centres internally, with external support from the government and private businesses. Qualitative changes in the system of higher education that would have positive effects on the development of the sector could be achieved by: creating conditions for the effective competition between institutions in securing funds according to their actual contributions to solving scientific and educational tasks; involving employers in providing quality higher and post-graduate education by establishing employers' associations and councils of higher education institutions; and developing clear mechanisms for the co-existence of candidates and doctors of science with PhDs.

6.4. WAYS OF IMPROVING BASIC ASPECTS OF EDUCATIONAL PROCESS

A comprehensive study of the education system would not be complete without considering other aspects of the educational process that also need to be improved and play an important role in the development of national education. Of special importance in constructing a democratic and just society is the provision of equal access to educational services. Education should be available to the socially vulnerable segments of the population. In light of the creation and development of market relationships in the country, the financial mechanisms related to education should be changed too. Education finance should be adequate to economic conditions and government needs. It is necessary to improve the education management system, to provide it with autonomy, and to expand public involvement in the educational process. Efficiency in the education system can be achieved through developing new organizational forms and institutional methods, qualified teachers and a national system of educational quality evaluation. Specific recommendations on improving of the education system are provided below.

ENSURING EQUAL ACCESS TO EDUCATION

A major problem in the current education system requiring urgent attention is the provision of equal access to education. It is necessary to focus on providing access to secondary education. Universal enrolment of children with equal and high quality secondary education irrespective of their place of residence (whether in city or village, in subsidized oblast or net contributor oblast) is becoming the key tool for the government to ensure an equal starting point for children to gain higher education and successful careers in the future. Even so the problems remain of ensuring equal quality education for rural and urban children, organizing high-quality study processes, and transporting children to small-scale rural schools.

To overcome growing regional disparities in access

to constitutionally-guaranteed services in Kazakhstan, it is necessary to invest the required funds and management resources, to increase the social status of teachers (especially in rural areas), and to improve the quality of training at kindergartens in preparation for continued schooling. The enrolment of poor people and rural areas with pre-school education should be increased through special institutional conditions. Moreover, it is important to organize support to children from socially-disadvantaged groups in cities and pay special attention to those children who do not attend school. To organize special work with parents, assistance programs to parents should be started.

STRENGTHENING TEACHING STAFF

One of the most important tasks in developing a quality education system that is adequate to the present requirements is to provide the education system with highly-qualified professional staff. At present the standards and forms of teachers' training should be reviewed to provide the level of staff in accordance with society's needs. To do so it is already necessary today to provide continuity in teacher training through upgrading and retraining teachers at appropriate institutions.

To attract teachers to work in education it is necessary to raise the social status of education professionals through strengthening the legal and regulatory framework that regulates social relationships in the civil service and guarantees the social and legal protection of educational personnel. The education sector can also attract young specialists by providing accommodations and other privileges, especially in the province.

The development of a mechanism and criteria for selecting teachers on a competitive basis (similar to the employment testing conducted by the Civil Service Agency) should be considered, and a competitive system for hiring managers in educational institutions should be introduced.

RENOVATING INSTITUTIONAL STRUCTURES, TECHNOLOGIES AND MECHANISMS TO IMPROVE EDUCATION QUALITY

Education system reforms should focus on the efficiency of methods, structures, technologies and mechanisms that influence the quality of education. To address these challenges it is necessary to establish educational scientific associations for higher educational institutions and general schools; to develop approaches to open education using the Internet and televised educational programs; to provide educational institutions in Kazakhstan with Internet resources; and to develop and implement the project "School Library and Media Library" with further expansion of funds and resources for students and teachers. It is important to develop and introduce integrated information systems, allowing "student-teacher-parent-administration-society-government" interaction in education.

An important step in improving institutional mechanisms to increase education qualifications is to develop approaches to professional cooperation between the public and private educational sectors. It is also important to develop and introduce new forms of interaction between general education, continuing education and higher education institutions.

ESTABLISHING A NATIONAL SYSTEM OF EDUCATION QUALITY EVALUATION

The importance and need for a quality evaluation system is seen in the fact that the effectiveness of education can be judged based on survey results and analyses made by this system. Monitoring the quality of education should be wide-ranging, comprehensive and efficient. The task remains to create a harmonious, modern and solid system to evaluate the quality of education.

The first steps in establishing a national quality evaluation system on the basis of monitoring education outcomes are to: bring the national education system into harmony with international standards through participating in international systems of accreditation; develop measurable quality indicators for education; evaluate the quality of education based on competence; and test student achievement beyond simply checking knowledge levels. It is also necessary to consider the issue of establishing a monitoring system (exercised at least four times per year) covering the psychological, physical and social development of students.

Efficiency in the quality evaluation system can be ensured by enhancing the information and analytical functions of the methodology units; training, re-training and upgrading skills related to educational quality control; and involving expert institutions in certification procedures. Structural innovations should be on establishing quality monitoring systems through regional networks. It is of particular importance to organize a national Centre of Education Quality, which would be responsible for developing systems for quality management in education; collecting and summarizing quality control information from the entire state examination and monitoring system; preparing annual reports on the status of education in Kazakhstan; and analysing the conformity of the education system to established quality standards.

All procedures in the qualitative evaluation and control of the education system should be as open to the society and all participants of the educational process as possible.

RENOVATING FINANCIAL-ECONOMIC MECHANISMS IN EDUCATION

This area of improvement in the education system is predicated on the need to introduce efficient financing mechanisms for pre-schools, schools and continuing education (including elaborating financial standards and models of per capita financing) using the past experience in education financing, especially for higher education. Introducing new approaches to financing pre-schools and secondary schools and reconsidering the salaries and wages of teachers will significantly increase the efficiency of education. Improving the national education system can be achieved through different financial instruments. On the one hand it is necessary to develop an economic model of education system taking into account increasing non-budget funding (including by businesses); on the other hand it is necessary to increase the proportion of GDP spent on pre-school and school education.

IMPROVING EDUCATION SYSTEM MANAGEMENT

Education system management can be improved by developing educational institutions and expanding their autonomy both in content and financing. Improvements

can also be realized through developing mechanisms to monitor the efficient implementation of strategic documents issued during the last three years, including the draft “Concept of Education System Development” and the 2010 National Education Development Program. Efficiency in the education system depends in part on proper legal regulation; in this respect, it is necessary to review the legal and regulatory framework of the entire education system to enact needed revisions. There are more than 140 inconsistencies and contradictions in the Education Law, and there is a need for it to be edited and new terms and regulations added. The system of public education management needs qualitative changes, as there is a need to shift from administrative management to regulatory management, to decentralise and diversify the education system, and to delineate powers between different levels of government.

It is very important to develop public and social systems for education management based on self-

development, synergy and self-government, involvement of society in resolving the problems of education, and involvement in education management by different institutions. Participation of civil society and the public is a necessary condition for transparency, accountability, corruption prevention, and efficient use of funds. The non-involvement of some education stakeholders in educational policy is one factor that produces negative influences on the potential success of many reform initiatives. Taking this into consideration, it is necessary to create efficient mechanisms for involving representatives from all levels of the education management system and all interested groups (associations of parents, students, employers, non-governmental organizations, media, etc.) in the process of educational policy development. It is necessary to develop an incentive system (in addition to administration and financial incentives) for the involvement of regions, municipalities, teachers and parents.

CONCLUSION

The last decade has been characterized by remarkable changes and new global trends on a major scale. We are now faced with new and difficult tasks which provide both new opportunities and new dangers which will determine and shape the way the education system functions, in form and content, and the primary objectives of education.

The world community makes high demands of the education system, to provide high quality, life-long education to the individual as any analysis of development trends in education at a global level, will show. This concept of education as life-long, born in the high demands of highly industrialized societies on human development, sets as a key task, and individual's satisfactory adaptation to new information and a market-oriented environment. Moreover, an individual's ability to acquire new skills that are in demand in a knowledge-based economy and his or her ability to not only learn but learn how to learn, are the pre-requisites for both his or her personal development and development as a full member of the society, contributing to the successful development of the nation and the economy.

Our intention was to identify aspects of interdependence between education and human development. For this reason the current system of education in Kazakhstan was analysed thoroughly from the points of view of the pertinent legal framework, funding for education, content of the curriculum, and education infrastructure.

An evaluation and analysis of the influence of education on different aspects of human development in many different ways, show that education promotes comprehensive development of an individual and thus is the basis for sustainable development of the entire society.

The Government of Kazakhstan has done significant work during the last few years to improve the education system. However, the system of managing education is still underdeveloped, including finding a role for different kinds of partners in civil society and private sector organizations and activities.

In general the problems of securing quality education are being solved in Kazakhstan. However reforms are required and they in turn need efficient mechanisms of organizing the education system so that it functions adequately.

In Kazakhstan at present there are still problems of relations between management levels, lack of cooperation between central and local management bodies, and further, civil society does not play a significant role.

The lack of coordination between central and local management bodies can have a negative effect on implementing initiatives of the Ministry of Education at the regional level. If it is the intention of the Ministry of Education to strengthen its planning capacities, it is necessary to strengthen capacities at the regional level in parallel, where it is also important to provide realistic timeframes for implementation and to improve capacity for planning and development.

The lack of effective mechanisms for involving representatives of all education management levels and stakeholders (associations of parents, students, employers, non-governmental organizations, media, etc.) in the development of educational policy is a factor that has a negative impact on the success of reform initiatives undertaken.

Analysis of the legal framework of government policies in education shows that legislation should be reviewed in view of the strategic development of the education system. Analysis of the methods of development and implementation of educational policy in Kazakhstan shows that current approaches and practices are obsolete and require radical revision.

The content of education should provide people with the ability to adapt to new conditions of life, to improve quality of their lives, and to participate in society.. First, to ensure quality education it is necessary to monitor educational institutions for compliance with quality standards. The enforcement mechanisms of government standards for all levels of the education system are not yet fully developed. The starting point for developing standards should be changing the approaches to training so as to respond to the rapidly changing conditions of life not only in our country but also in the entire world. There is a critical need to provide quality education, taking into account international experience and the needs and interests of students.

Second, when considering the problem of the content of education, one should focus on the problem of staffing all education levels with highly professional personnel. Unfortunately, at present, this criterion is not realized at all levels. This is not only because of poor financial support to the sector, but also because of the low social status of the teaching profession. Third, the lack of good facilities and adequate financing of the sector influences

Education for all: the key goal for a new millennium

the quality of education. Existing facilities do not comply with current requirements, and financing of the sector does not correspond to global standards of provision for education.

Low enrolment with pre-schooling, poor quality of education, concentration of institutions in certain regions of the country hampering access to higher education, and an insufficiently developed network of vocational institutions – these are some of the problems faced by the current

education system in Kazakhstan and covered in this report..

The authors of this National Human Development Report made an attempt to discuss the problems of education from the point of view of the individual, with the ability to make a deliberate choice. This report will hopefully be the basis for wide discussions of the problems of accessibility and quality of education in the light of the issue of improved human development in Kazakhstan.

GLOSSARY

Academy – higher educational institutions implementing curricula of higher vocational education and post-graduate vocational training, training and re-training and (or) upgrading qualification of specialists with higher education for certain industrial, scientific and pedagogical spheres; carrying out scientific research works preferably in a science or culture sector;

Accreditation of educational institutions – acknowledgement (confirmation for the next term) by the state of the status of organisations providing services of higher vocational and post-graduate vocational education by type (higher educational institution) and form (institute, academy, university) setting up the list of curricula that they are entitled to issue graduation certificates of the national sample to the graduates;

Additional education – process of upbringing and training carried out on the basis of additional curricula of all levels for comprehensive satisfaction of educational needs of the people, society and the state;

Affiliate of the educational institution – structural unit of the institution located outside the main location and providing the curricula to the full extent;

Authorised education – is a network programme of the Open society institute, New-York, Soros Fund. Authorised education in Kazakhstan is developed under support of Soros-Fund-Kazakhstan;

Bachelor, master – academic degrees and qualifications awarded to persons having completed the corresponding curricula of the higher vocational education;

Boarding institutions – institutions of the secondary education system ensuring the guaranteed by the state the right for education for certain categories of people with accommodation;

Civil society – a set of relations in the economy, culture, etc. developing within the democratic society irrespective of and independent from the state. Civil society is implemented in the form of aggregate non-governmental institutions and self-arranging intermediary groups ready for organised and responsible collective actions to protect socially significant interests within the preset rules of civil or legal nature;

College – institution providing secondary vocational training curricula;

Concept – guiding idea, overall intention i.e. the main way to achieve the set objective;

Curriculum – document identifying the content and the volume of knowledge, skills and abilities to be learnt under each subject;

Demography – science of population. It studies, for example, number of population and its content, geographic distribution, reproduction processes (birth rate, death rate, life expectancy) and the dependence of these features upon socio-economic and cultural factors;

Deviant behaviour – system misbehaviour by children and adolescents resulting in application of administrative punitive actions, deliberate missing classes, work, system leaving the family and training and upgrading institutions for children and socially dangerous actions by them with the features of a crime not subject to legal punishment;

Distant learning (education remotely) – a form of education, targeted and methodologically arranged guidance by the learning process and development of persons located remotely from the education institutions by electronic and telecommunication means;

Economic development – quality transformation, restructuring of economy according to the requirements of technological and social progress.

Education – continuous process of training and upbringing the purpose of achieving high level of moral, intellectual, cultural and physical development and professional competence of the society members;

Education enrolment – the proportion of total pupils (accepted) at all stages of education irrespective of their age of the total number of population from 5 to 24 years;

Education process – system of interrelations of training and learning ensuring the development of a person;

Educational grant – special cash amount provided for free to the students to pay for vocational education;

Educational loan – special loan provided to the students to pay for their vocational training;

Elite education – education acquired under curricula provided in the special educational institutions for gifted persons;

External studies – a form of training for a special category of persons, when they learn the curricula without regularly attending classes and are allowed to take the final state examination;

Final state testing of students – procedure arranged to determine the degree of mastering of the national mandatory standard of the corresponding education level with the certificate to be issued on the result of this procedure (certificate, graduation certificate, license, diploma);

Formal education – training carried out in educational and training institutions and proved by the completion or graduation certificate or diploma;

Gender – the social or psychological sex, in accordance with which the person builds up his or her behaviour in the society.

General education school – secondary general educational institution providing basic and additional curricula and consisting of three stages: primary, basic and upper school, each can function independently;

Gross Domestic Product (GDP) – cumulative value of all goods and services produced during the year in the country.

Gymnasia – secondary general educational institution providing basic and additional general educational curricula providing deep, profile, differentiated training of pupils according to their gifts and abilities;

Gymnasia-school (lyceum-school) – secondary general educational institution providing training under general education programmes in gymnasia classes and lyceum classes respectively;

Higher vocational education – higher basic education (bachelor), higher scientific and pedagogical education (master), higher special education and doctorate;

Human development – process of providing the people with wider choice in all aspects of human life with the main ones being the opportunity to live a long and healthy life, acquire knowledge and have access to resources required for the worthy living standard.

Human development index (HDI) – indicator that was first proposed and calculated in the Human development report issued by the UN Development programme in the 1990. Joining several social and economic indicators HDI may serve a useful statistic tool to compare the development levels of different countries;

Informal training – education provided by additional educational institutions and vocational training, and which normally doesn't result in issuance of formally recognised certificate;

Institute – higher educational institution providing curricula of higher vocational education and carrying out scientific research of applied nature;

Knowledge-based society – society where people have equal access to knowledge and the public standards, laws and technologies ensure freedom and absence of constraints in getting wide spectrum information and knowledge, and the accessibility of the formal education acquired increases economic activity and mobility of people;

Life-Long Learning (LLL) – concept for future socio-economic development providing for the ensuring social unity and civic stand in the information and knowledge-based society. All people without exceptions should have equal opportunities to respond to the requirements of social and economic changes and actively participate in the formation of the future of their states. The concept identifies three key categories of specific training activities: formal training (see below), informal training (see above), spontaneous or, unofficial training (see below).

Lyceum – secondary educational institution implementing the basic and additional general curricula; carrying out profession-oriented training of pupils of upper stage;

National educational standards – a set of mandatory requirements for each education level, set to the content of education, maximum study loading, rules and procedures of public control of education quality, level of knowledge of trainees, format of documents certifying the completion of certain curricula by the graduates;

Non-governmental organisations (NGOs) – non-public, non-commercial organisations not restricted by professional specifics and not striving for state power. NGOs are the indispensable fascies of democracy, directly increasing democratic methods and allowing carrying out control of governance operations;

Parliament – supreme representative body of the country, carrying out legislative power in the system of political arrangement of the state;

Poverty – socio-economic phenomenon where certain groups of the population suffer constraints in satisfying their priority needs related to the enjoyment of the right to life, and are deprived of the opportunity to participate in the life of society within constitutional rights and freedoms. Poverty is relative, it depends upon:

Primary vocational education – education acquired at vocational schools, vocational lyceums, training centres, at courses etc. on the basis of basic general education; primary vocational education is combined with acquiring general education and is aimed at training the qualified staff for different activities;

Profession – basic type of a person's activity or job, proven by the appropriate graduation certificate;

Programme – document representing a set of social and economic or other tasks and actions aimed at the programme implementation specifying the resources, responsible for execution and timing for completion;

Public educational institutions – educational institution established according to the law of the Republic of Kazakhstan;

Public educational organisation – organisation established by the Government or the National Bank of the Republic of Kazakhstan or by a local government according to the law of the Republic of Kazakhstan;

Qualification – type and degree of professional readiness of the graduate for professional activities or the next stage of education reflected in the graduation document;

Secondary vocational education – education ensuring training of specialists at colleges, vocational schools on the

basis of basic general education on a competitive basis; can be combined with primary vocational education and general secondary education;

Senior lecturer, professor: academic degrees awarded by the appropriate higher educational institution; scientific degrees awarded by the public testing body of the Republic of Kazakhstan under the request of the higher institution or scientific research organisation;

Small-scale school – general school with low number of pupils, combined classes and with specific form of studies;

Specialty – a set of skills, knowledge and abilities acquired by special training and experience, required for a certain type of work and proven by the appropriate graduation certificate;

Spiritual (religious) educational organisations – educational institutions providing vocational curricula for priests;

Spontaneous training – education that is considered as the natural component of daily life events;

State – the system of governmental, quasi-governmental and non-governmental institutions coordinating, regulating economic and social life of society and control them;

State educational order – plan of training qualified workers and specialists set up by the relevant public authorities to be implemented under budget funding: procurement of services of primary vocational, secondary vocational, higher vocational and post-graduate education; provision

of state educational grants and loans on the competitive basis;

Strategy – general areas of activities of the state; a set of its main objectives and basic ways of their achievement.

Study plan – basic document regulating the list and scope of study disciplines (subjects) of the corresponding education level, the process of studies and forms of control;

Testing of educational organisations – procedure to control the compliance of the services provided by the institutions with the requirements of the national mandatory standard of the corresponding education level;

Trial area – secondary educational institution operating in trial regime to test new teaching technologies and curricula.

University – multi-profile higher educational institution providing training under higher vocational and post-graduate curricula under the wide range of specialties; providing re-training and/or upgrading of qualification of specialists with higher education, scientific and pedagogical staff; carrying out applied scientific researches; being the lead scientific and methodological centre in the corresponding sector;

Vocational lyceum – secondary educational institution providing training under general secondary and primary vocational training and training semi-professional staff;

Vocational school – secondary educational institution providing training under curricula of general secondary, primary vocational training and ensuring training of qualified staff in different job activities;

APPENDIX

TECHNICAL NOTES

1. Human Development Index (HDI)

The human development index is calculated as an arithmetic mean of three other indices: longevity, as measured by the life expectancy at birth, educational attainment and standard of living, as measured by real per capita GDP (PPPUSD). Educational attainment is measured by a combination of adult literacy (two-thirds weight), and access to education (one-third weight).

Four components are used in calculating the HDL To construct the index, fixed minimum and maximum values have been established for each of these indicators:

Indices	Minimum	Maximum
Average life expectancy at birth, years	25	85
Adult literacy rate, %	0	100
Total share of students among the age group of 6 to 24, %	0	100
Real per capita GDP, USD (according to purchasing power equality)	100	40,000

Individual indices can be computed according to the general formula:

$$I = \frac{\text{Actual } x \text{ value} - \text{Minimum } x \text{ value}}{\text{Maximum } x \text{ value} - \text{Minimum } x \text{ value}} \quad (1)$$

A new formula for the construction of the index has been used with decimal logarithms of per capita GDP:

$$I = \frac{\log_{10} (\text{Actual } x \text{ value}) - \log_{10} (\text{Minimum } x \text{ value})}{\log_{10} (\text{Maximum } x \text{ value}) - \log_{10} (\text{Minimum } x \text{ value})} \quad (2)$$

The calculation of the HDI is illustrated here by the example of Kazakhstan. In 2003 the values of indicators in Kazakhstan were:

Indicators:	Values
Life expectancy, years	65.9
Adult literacy rate, %	99.5
The aggregate share of students aged 6-24, %	82
Real GDP per capita, PPP USD	6,527

According to the aforementioned formula, the life expectancy index equals 0.682:

$$(65.9 - 25) / (85 - 25) = 40.9 / 60 = 0.682.$$

Adult literacy index equals 0.995:

$$(99.5 - 0) / (100 - 0) = 0.995.$$

Taking into account the aggregate share of students of gross primary, secondary, and tertiary enrolment as 82% and the index as 0.82, the overall index of the educational level equals 0.937:

$$(0.995 \times 2 + 0.820) / 3 = 0.937.$$

According to the more than formulae the adjusted real per capita income index equals:

$$(\log(6527) - \log(100)) / (\log(40,000) - \log(100)) = (8.784 - 4.605) / (10.597 - 4.605) = 4.179 / 5.991 = 0.697$$

The calculation of human potential development index based on these three indices will constitute 0.772:

$$(0.682 + 0.937 + 0.697) / 3 = 0.772.$$

2. Kazakhstan's HDI by Regions

Human development index can be improved if disaggregated. The overall index of a country can mask the fact that different groups of the country's population may have different levels of human development whether due to region of residence, gender or place of settlement (urban or rural).

When calculating regional HDI the main problem is the choice of an indicator most adequately reflecting access of the population to resources. At the country level, per capita GDP serves this purpose according to the UNDP methodology. Gross regional product (GRP) calculated by manufacturing method is used instead of GDP for regional HDIs. Usage of this indicator when computing HDI is the most vulnerable point in regional HDI measurement methodology. High proportions of export-oriented sectors in GRP may produce a picture of token economic welfare of the region's population. That is why such resource-rich regions as Atyrau and Manghistaу oblasts emerge as leaders by human development in Kazakhstan.

Taking into account critics of using per capita GRP as an indicator describing the population's access to resources, the index of monetary income has also been used when gathering data and calculating regional HDIs for national human development reports.

It should be noted that per capita GRP and the national level of monetary incomes differed by 2.9-3.5 times in the 1993-2003 for three main reasons. Firstly, monetary incomes of the surveyed households contain a systematic mistake connected to their underestimation. As estimated, macro level underestimation in the 1999-2003 ranged from one fourth to one third of declared monetary incomes. Secondly, GRP contains in-kind incomes of the population, accounting for up to one fourth of monetary incomes and cost estimates of individual commodities that households already own. These include, for example, the relative cost of living in owned housing. Thirdly, from the viewpoint of consumption, GRP includes incomes used both for consumption and savings. In addition, it is worth noting that

summary GYP by oblasts (GRP) does not make up GDP relative to GYP when not distributed by regions.

For these reasons any exchange of per capita monetary incomes into USD at PPP will lead to underestimation of access to resources. Therefore, to ensure that the results are the same at the national level per capita, monetary incomes exchanged into USD through PPP are multiplied by a coefficient equal to the ratio of per capita GDP to per capita monetary incomes. This coefficient is used to correct regional per capita monetary incomes, which results in regional monetary incomes of the population coinciding with the average national.

This procedure allows assessment of GDP (GYP) for regions by the consumptive use method, taking into consideration proportional distribution and undistributed part of GDP. As a result, GDP values calculated by the method of production and method of consumptive use will coincide at the national level - with discrepancies in evaluations of produced and consumed incomes at the regional level - and will indicate the impact of redistribution of produced incomes through the national budget. Overall, regions with a high production of per capita incomes tend to have lower consumed per capita incomes, and vice versa.

3. Gender Development Index (GDI)

The Gender Development Index (GDI) uses the same indicators as HDI. They differ by the fact that for GDI average values of each country's indicators (life expectancy, educational attainment and income) are adjusted by the gap between male and female attainment. In order to make this adjustment, a weighting formula is used. This formula is based on the quality of the average power function to depend on the exponent of the mean (majority median rule).

S. Anand and A. Sen suggested the following formula to calculate gender-adjusted indices:⁴²

$$I = [d_f \times I_f^{1-\varepsilon} + d_m \times I_m^{1-\varepsilon}]^{1/(1-\varepsilon)} \quad (3)$$

where

d_f, d_m are proportions of women and men in the overall population, respectively; and
 I_f и I_m – are indices relative for women and men;
 $(1-\varepsilon)$ – is the exponent of the average.

When different values of ε exponent of $1-\varepsilon$ middling) are used, different types of median emerge:

$\varepsilon = 0$ – arithmetic median;
 $\varepsilon = 1$ – geometric median;
 $\varepsilon = 2$ – harmonic median, etc.

The more the accepted exponent differs from the exponent of arithmetic median, the more significantly this affects the reduction of the average indicator. All Global Human Development reports use the parameter of weighting of ε fixed at 2 ("moderate deviation toward inequality"). The result is a harmonious middling of indicators of female and male attainment.

GDI is also corrected in terms of maximum and

minimum life expectancies considering that women generally live longer than men do. Thus, maximum female life expectancy is fixed at 87.5 years and minimum at 27.5, with 82.5 and 22.5 for males, respectively.

The equally distributed index of average life expectancy (using the parameter of weighting $\varepsilon = 2$) is calculated by the formula:

$$I = \left(\frac{d_f}{I_{FIE}} + \frac{d_m}{I_{MIE}} \right)^{-1}, \quad (4)$$

where

d_f и d_m – are, respectively, proportions of women and men in the overall population, and
 I_{FIE} и I_{MIE} – are indices of female and male life expectancies.

Equally distributed indices of education and income are calculated similarly. The summary human development index adjusted for gender is an arithmetic mean of the three equally distributed indices.

Calculation of an income index adjusted for gender is more complicated. It is expected that incomes generated in the country are distributed between men and women in proportion to their salaries. Two types of data are used when proportions of women and men in earned income are calculated: ratio of average salary of women to average salary of men and percentages of women and men in the economically active population aged 15 and older. When data about the ratio of average salaries of women and men are not available, a weighted mean ratio of 75% for all countries that have data on salaries is used.

The proportion of salaries for females (S_f) is calculated by the formula:

$$S_f = d_{FEA} \times I_{ISF} / (d_{EAF} \times I_{ISF} + d_{EAM}). \quad (5)$$

where d_{EAF} и d_{EAM} – are the proportions of women and men in the total economically active population, and

I_{ISF} – is the index of the average female salary relative to average male salary.

Taking into account age and gender makeup of the population, we can calculate incomes (GDP) per one woman and one man:

$$\begin{aligned} GDP_f &= GDP \times S_f / d_f, \\ GDP_m &= GDP \times (1-S_f) / d_m, \end{aligned} \quad (6)$$

where

GDP, GDP_f, GDP_m – are GDPs per capita, per one woman and per one man.

4. Human Poverty Index (HPI)

Depending on the socio-economic conditions of individual countries different indicators can be included in the Human Poverty Index (HPI). In the Global Human

⁴² Anand S., Sen A. Human Development Index: Methodology and Measurement // Background Paper for Human Development Report 1993. - New York: UNDP, 1992.

Development Report for 1997 Human Poverty Index (HPI) suggested for developing countries reflects all three aspects of human life that are included in HDI - namely longevity, knowledge and adequate standard of living.

The first aspect refers to the likelihood of dying at a relatively early age. This aspect is represented in HPI by the percentage of people who can die at the age of 40 at the level of mortality existing during an individual year.

The second aspect is about the likeliness of people being excluded from the world of reading and communications as determined by the proportion of illiterate adults in the population.

The third aspect is about the likely absence of adequate standards of living as determined by percentage of population without access to safe water and healthcare, as well as the percentage of children under 5 suffering from malnutrition.

Below is a general formula to calculate HPI if proportions of each aspect of human development are equal:

$$\text{HPI-1} = P(\alpha) = [1/3(P_1^\alpha + P_2^\alpha + P_3^\alpha)]^{1/\alpha}. \quad (7)$$

If $\alpha=1$ (full substitution of weighted indicators), aggregated index $P(\alpha)$ is an arithmetic mean of the other three indices. If α is infinite (zero substitution of indicators), aggregated index $P(\alpha)$ is equal to the maximum value of the three indices included in it. When calculating HPI $\alpha=3$ is chosen.

Considering the completely different social and economic conditions in developed industrial countries, UNDP, in its Global Human Development Report 1999, suggested a different formula to measure poverty of the populations in these countries.

Likely death at a relatively early age for industrially developed countries is determined by the percentage of people who can die under the age of 60 (not 40 as for developing countries) at the level of mortality existing during an individual year.

The probability of people being excluded from the world of reading is determined by the proportion of functionally illiterate adult population, which is taken to mean people's ability to understand instructions and complete questionnaires.

The likelihood of absence of adequate living standards is determined by percentages of population with incomes

below 50% of average national incomes and the percentage of the economically active population without a job for 12 or more months.

Human poverty index for industrial countries is calculated by the following formula:

$$\text{HPI-2} = [1/4(P_1^3 + P_2^3 + P_3^3 + P_4^3)]^{1/3}, \quad (8)$$

where

P_1 – percentage of population not reaching the age of 60;

P_2 – percentage of functionally illiterate adult population;

P_3 – percentage of population below income below 50%;

P_4 – percentage of economically active population without a job for 12 or more months.

The following formula for calculation of HPI is adopted (as of in four previous National Human Development Reports) for Kazakhstan:

$$\text{HPI} = [1/4(P_1^3 + P_2^3 + P_3^3 + P_4^3)]^{1/3}, \quad (9)$$

where

P_1 – percentage of population not reaching the age of 60;

P_2 – percentage of 16 year-olds not enrolled in schooling;

P_3 – percentage of population with consumption below the subsistence minimum;

P_4 – unemployment level (general unemployment - until then, the officially registered unemployment rate had been applied.)

Illustration of calculation of HPI for Kazakhstan for 2002. The baseline data are: $P_1 = 30,3\%$, $P_2 = 3\%$, $P_3 = 19,8\%$, $P_4 = 8,8\%$.

If using the formula of arithmetic median, then the result would be 15.5%. If using the cubic formula, HPI will be equal to 20.9%, i.e. there is poverty among over one-fifth of the country's population in terms of the four human development indicators chosen for integral evaluation of poverty.

STATISTIC DATA

(Data of the Statistics Agency of RK, Ministry of Education and Science of RK, Center for system research of the President's Office, if the sources is not specified)

1. Basic data in Kazakhstan

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Area, '000 sq.m*	2724.9	2724.9	2724.9	2724.9	2724.9	2724.9	2724.9	2724.9	2724.9	2724.9
Population density, per sq.km	5.9	5.8	5.7	5.6	5.5	5.5	5.5	5.5	5.5	5.5
Population (at the year end), million people	16.0	15.7	15.5	15.2	15.0	14.9	14.9	14.9	14.9	15.0
People below able age, %	32.5	32.2	31.8	31.4	30.7	30.1	29.4	28.7	27.9	27.2
People more than able age, %	12.2	12.3	12.2	11.9	11.7	11.5	11.1	10.7	10.6	10.5
Rural population, %	44.3	44.3	44.2	44.0	44.0	43.9	43.7	43.5	43.4	43.3
Urban population, %	55.7	56.7	55.8	56.0	56.0	56.1	56.3	56.4	56.6	56.7
Men, %	48.3	48.3	48.2	48.2	48.2	48.2	48.2	48.2	48.2	48.2
Women, %	51.7	51.7	51.8	51.8	51.8	51.8	51.8	51.8	51.8	51.8
Ethnic Kazakhs, %	46.0	47.9	49.4	50.6	53.3	55.8	54.9	55.8	56.5	57.2
Ethnic Russians, %	35.0	33.8	32.9	32.2	30.0	28.3	28.9	28.3	27.7	27.2
Other ethnics, %	19.0	18.3	17.7	17.2	16.7	15.9	16.2	15.9	15.8	15.6
Life expectancy, years	64.9	63.5	63.6	64.0	64.5	65.7	65.5	65.8	66.0	65.8
Infant mortality (per 1000 births)	27.1	27.0	25.4	24.9	21.6	20.4	18.8	19.1	17.0	15.7
Natural growth, '000 people	145.3	107.4	87.1	72.2	68.1	70.2	72.3	73.6	77.8	92.7
Migration growth, million people	- 0.5	- 0.4	- 0.3	- 0.4	- 0.3	- 0.1	- 0.1	- 0.08	- 0.06	- 0.01
Able population, million people	8.9	8.8	8.7	8.7	8.6	8.7	8.8	9.0	9.1	9.3
Employment, million people	6.6	6.6	6.5	6.4	6.1	6.1	6.2	6.7	6.7	7.0
Unemployment level, %	1.1	2.1	4.1	3.8	3.7	3.9	12.8	10.4	9.3	8.8
Number of disabled entitled to state social benefits (% of total population)	2.1	2.4	2.5	2.5	2.3	2.4	2.6	2.6	2.5	2.6

*) Data of the land management agency of the Ministry of Agriculture of the Republic of Kazakhstan.

2. Human development indicators

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Life expectancy, years	64.9	63.5	63.6	64.0	64.5	65.7	65.4	65.6	65.8	65.9
Literacy of adults, %	98.5	98.7	98.9	99.1	99.3	99.5	99.5	99.5	99.5	99.5
Total share of students of all levels of education (6 – 24 years), %	65.8	65.6	65.9	65.9	66.9	67.9	70.9	71.3	75.4	76.9
Gross domestic product in current prices, KZT billion	423.5	1014.2	1415.7	1672.1	1733.3	2016.5	2599.9	3250.6	3776.3	4449.8
Gross domestic product, US\$ billion	11.88	16.64	21.04	22.17	22.14	16.87	18.29	22.15	24.64	29.75
Agriculture, % of GDP	14.9	12.3	12.1	11.5	8.6	9.9	8.1	8.7	8.0	7.3
Industry, % of GDP	29.1	23.5	21.2	21.4	24.4	28.2	32.6	30.7	29.5	29.5
Construction	9.6	6.5	4.4	4.2	4.9	4.7	5.2	5.5	6.3	6.2
Services, % of GDP	43.1	53.3	57.3	58.4	56.1	51.6	47.5	48.2	49.1	50.1
Consumption										
Personal, % of GDP	83.7	79.2	75.1	77.4	79.1	79.0	67.3	63.3	63.9	62.1
Public, % of GDP	4.6	5.5	5.1	5.5	5.0	5.0	6.3	8.0	6.1	5.9
Gross accumulation, % of GDP	28.7	23.3	16.1	15.6	15.8	17.8	18.1	26.9	27.3	26.6
Gross domestic savings, % of GDP	11.7	15.3	19.8	17.1	15.9	16.0	26.4	28.7	30.1	32.0
Tax collection, % of GDP	14.8	15.8	12.6	12.2	12.4	16.4	20.2	19.6	19.9	21.3
Public general services, % of GDP	2.3	0.8	1.0	1.8	1.8	1.4	1.4	1.6	1.2	1.5
Export of goods and services as % of GDP	37.1	39.0	35.3	34.9	30.3	42.5	57.0	46.2	47.2	50.4
Import of goods and services as % of GDP	47.1	43.5	36.0	37.4	34.9	40.1	48.4	47.1	46.3	44.2
Index of physical volume of GDP as % of the previous year	87.4	91.8	100.5	101.7	98.1	102.7	109.8	113.5	109.8	109.2
Public allocation for education, % of GDP	3.2	4.5	4.6	4.4	4.0	3.9	3.3	3.3	3.2	3.3
Public allocation for health care, % of GDP	2.2	3.0	2.5	2.1	1.5	2.2	2.1	1.9	1.9	2.0
Wealth, poverty and social investments										
GDP per capita, official exchange rate of US\$	735.9	1052.1	1350.4	1445.5	1468.6	1130.2	1229.7	1490.9	1658.1	1995.4
GDP per capita, KZT	26227.8	64123.1	90880.2	109045.2	114991.3	135076.1	174684.7	218778.8	254152.7	298469.7
Correlation between highest quintile income households and lowest income quintile	...	...	4.3	6.5	6.1	6.2	6.1	7.2	7.0	7.9
Public allocations for social provision and social assistance, % of GDP	0.8	0.8	0.7	1.6*	3.1	7.9	6.6	5.7	5.3	5.4
Total allocations for education, % of GDP	3.2	4.5	4.6	4.4	4.0	3.9	3.3	3.3	3.5	3.3
Total allocations for health, % of GDP	2.2	3.0	2.5	2.1	1.5	2.2	2.1	1.9	1.9	2.0

*)1997 – social protection includes social insurance.

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Resource inflow										
Correlation of import and export (export volume as % of import)*	71.8	90.4	99.8	97.5	83.1	116.8	180.7	135.9	149.6	146.2
Export growth rate as % of import growth rate	...	125.9	110.5	97.7	85.3	140.5	119.0	75.2	96.0	109.8
Trade relation (export plus import as % of GDP)	71.6	74.8	63.9	65.7	60.2	63.6	77.5	84.9	66.2	74.7
Share of net direct investments as % of GNP	5.1	5.0	6.2	5.6	5.8	8.7	7.0	12.3	12.5	7.0
Consumption of energy										
Total, million kWth	79428.1	73495.9	64601.0	56600.7	53045.7	50262.9	54369.4	60291.7	58159.1	62148.3
Per capita, '000 kWth	4.9	4.6	4.1	3.6	3.4	3.4	3.4	3.8	3.8	
Consumption of water										
Total, km3	26.1	23.4	21.7	19.4	16.8	14.9	14.7	14.6	14.9	15.2
Per capita, m3	1631	1464	1382	1254	1105	991	985	986	1000	1023

* - export and import volumes make allowance for non-organised trade (FOB prices)

3. Human development index

	Human development index	Income per capita, US\$	Life expectancy, years	Total share of students of all stages of education (age 6-24), %
Republic of Kazakhstan				
1994	0.738	4711	64.9	65.8
1995	0.726	4508	63.5	65.6
1996	0.732	4682	63.6	65.9
1997	0.735	4628	64.0	65.9
1998	0.736	4379	64.5	66.9
1999	0.742	4293	65.7	68.9
2000	0.743	4488	65.5	70.7
2001	0.754	5220	65.8	72.5
2002	0.767	5870	66.0	75.4
2003	0.772	6527	65.8	76.9
Akmola oblast with Astana city				
1994	0.733	4577	64.8	62.9
1995	0.706	3419	63.1	63.5
1996	0.701	3061	63.5	60.8
1997	0.704	3026	63.9	64.4
1998	0.715	3372	63.8	64.4
1999	0.737	4541	64.9	64.7
2000	0.740	4591	65.3	65.7
2001	0.747	5481	65.1	66.6
2002	0.769	6486	66.1	66.1
2003	0.775	7336		72.0
Akmola oblast				
1997	0.696	2698	63.7	60.4
1998	0.692	2331	63.2	62.3
1999	0.715	3134	64.3	67.6
2000	0.708	2733	64.3	70.0
2001	0.715	3325	63.3	71.9
2002	0.724	3487	64.6	72.9
2003	0.725	3854	63.7	72.6
Aktyubinsk oblast				
1994	0.750	5652	65.0	66.6
1995	0.734	5077	63.8	65.2
1996	0.729	4204	64.6	63.8
1997	0.738	4995	64.4	63.4
1998	0.746	5108	64.0	69.5
1999	0.747	4391	65.3	66.6
2000	0.742	4506	63.9	65.2
2001	0.751	5208	63.9	63.8
2002	0.763	6169	63.9	63.4
2003	0.772	6996	64.3	80.8
Almaty oblast				
1994	0.706	2560	66.4	61.0
1995	0.693	2263	65.7	60.6
1996	0.712	2919	66.0	60.8
1997	0.713	2767	66.6	60.3
1998	0.707	2381	66.5	62.9
1999	0.700	2073	66.7	63.4
2000	0.696	2036	66.8	62.6
2001	0.710	2489	67.4	62.8
2002	0.715	2685	67.4	63.5
2003	0.718	2956	66.9	63.9

Atyrau oblast				
1994	0.760	8558	63.3	63.9
1995	0.766	9987	62.8	64.8
1996	0.776	11096	63.1	65.2
1997	0.781	11431	63.2	66.3
1998	0.777	9120	63.6	70.7
1999	0.785	10207	63.7	73.4
2000	0.813	15351	64.4	76.6
2001	0.825	17402	64.9	79.1
2002	0.837	21478	64.4	81.6
2003	0.854	26887	65.3	82.2
East-Kazakhstan oblast				
1994	0.731	4656	64.1	64.9
1995	0.723	5063	62.4	63.5
1996	0.716	4394	62.6	61.5
1997	0.720	4539	62.8	60.8
1998	0.730	4755	63.0	65.4
1999	0.737	4438	64.9	67.5
2000	0.729	4050	64.5	69.1
2001	0.738	4417	65.2	69.9
2002	0.743	4513	65.4	71.8
2003	0.747	4812	65.3	73.2
Jambyl oblast				
1994	0.686	2010	65.0	62.1
1995	0.664	1557	64.4	58.9
1996	0.695	2501	64.9	59.2
1997	0.685	2049	64.8	58.9
1998	0.684	1784	65.4	60.8
1999	0.684	1551	66.6	63.7
2000	0.676	1478	65.5	65.9
2001	0.687	1611	66.4	67.2
2002	0.699	1852	66.7	70.3
2003	0.707	2231	66.2	70.6
West-Kazakhstan oblast				
1994	0.721	3611	64.8	64.4
1995	0.703	2962	63.9	64.0
1996	0.699	2693	63.9	63.4
1997	0.726	3856	64.9	63.0
1998	0.728	3712	64.6	66.3
1999	0.739	4103	65.2	71.4
2000	0.754	5190	65.3	73.8
2001	0.764	6340	65.1	75.0
2002	0.775	7215	64.8	79.3
2003	0.781	7900	65.0	79.9
Karaganda oblast				
1994	0.752	6710	63.9	64.9
1995	0.744	7444	62.0	63.7
1996	0.723	5257	61.3	63.6
1997	0.729	5489	62.0	62.5
1998	0.729	5178	61.7	65.7
1999	0.745	5347	63.9	69.2
2000	0.748	5448	64.1	72.5
2001	0.754	5768	64.2	74.7
2002	0.762	6046	64.3	77.6
2003	0.764	6659	63.8	79.3

Kostanai oblast				
1994	0.768	7086	66.4	65.1
1995	0.729	4320	64.4	66.0
1996	0.728	4019	64.7	64.8
1997	0.746	5380	64.8	64.5
1998	0.736	4621	64.3	65.2
1999	0.734	4349	65.0	65.1
2000	0.731	4248	64.8	66.1
2001	0.739	4462	65.7	67.6
2002	0.746	4637	66.0	68.1
2003	0.749	5308	65.2	71.1
Kyzylorda oblast				
1994	0.707	2727	63.5	71.5
1995	0.695	2662	62.0	71.4
1996	0.710	3155	63.3	68.8
1997	0.699	3016	64.3	64.0
1998	0.702	2486	63.7	65.4
1999	0.699	2084	65.4	65.1
2000	0.710	2489	65.6	66.1
2001	0.721	2924	65.8	67.6
2002	0.739	3916	65.6	68.1
2003	0.752	4635	66.2	74.3
Mangistau oblast				
1994	0.758	7373	65.3	59.9
1995	0.777	11894	64.1	60.1
1996	0.785	13571	63.9	59.7
1997	0.769	9838	63.6	61.8
1998	0.768	7388	64.0	74.5
1999	0.780	8813	64.2	73.7
2000	0.793	11078	64.2	76.3
2001	0.795	11797	63.3	80.1
2002	0.819	14723	63.9	80.7
2003	0.821	13850	65.0	87.4
Pavlodar oblast				
1994	0.764	8457	64.3	62.5
1995	0.755	8489	63.1	61.8
1996	0.754	7377	63.9	62.6
1997	0.737	5115	64.0	63.1
1998	0.755	6500	63.8	68.1
1999	0.745	4831	65.2	68.8
2000	0.751	5530	64.8	71.5
2001	0.763	6431	65.0	74.0
2002	0.772	6560	65.7	76.6
2003	0.776	7090	65.7	78.0
North-Kazakhstan oblast				
1994	0.748	5116	65.8	66.1
1995	0.744	5790	64.2	65.5
1996	0.750	6404	64.2	64.4
1997	0.734	4689	64.4	63.5
1998	0.710	3268	63.6	61.8
1999	0.719	3234	65.2	65.8
2000	0.706	2598	65.0	68.2
2001	0.725	3540	65.1	69.7
2002	0.722	3493	64.8	69.9
2003	0.723	3615	64.8	69.3

South-Kazakhstan oblast				
1994	0.700	2002	66.9	64.1
1995	0.676	1574	65.4	63.3
1996	0.699	2304	65.5	62.9
1997	0.703	2194	66.1	64.1
1998	0.699	1915	66.2	66.2
1999	0.706	1942	67.4	67.2
2000	0.713	2211	67.3	69.0
2001	0.724	2620	67.4	70.8
2002	0.729	2635	67.2	75.2
2003	0.729	2697	67.1	76.2
Astana city				
1997	0.724	4041	64.6	60.4
1998	0.757	6207	65.8	70.8
1999	0.773	7777	67.6	58.5
2000	0.782	8156	69.2	57.9
2001	0.786	9019	69.1	58.0
2002	0.814	11016	69.4	64.3
2003	0.827	12486	70.4	70.9
Almaty city				
1994	0.769	5185	65.2	83.4
1995	0.767	5188	64.5	86.3
1996	0.802	9369	65.0	83.7
1997	0.821	10327	66.5	87.2
1998	0.823	10448	67.3	88.8
1999	0.828	10024	67.9	90.4
2000	0.821	9117	67.8	94.1
2001	0.839	11774	68.4	100.6
2002	0.850	13861	68.7	107.3
2003	0.853	15288	68.2	113.8

4. HDI rating of the Regions of Kazakhstan among the countries of the world

Country (scale) ¹	Rating in the world ¹	HDI countries ¹	HDI of the region by GDP ²	Region of Kazakhstan ²	HDI of the region by income ²	Region ²
	2001	2001	2003		2003	
Brunei Dar-es-Salam	31	0.872	0.853	Almaty city		
Czech Republic	32	0.861	0.864	Atyrau		
Malta	33	0.856			0.847	Almaty city
Argentina	34	0.849				
Poland	35	0.841				
Hungary	38	0.837			0.837	Astana city
Slovakia	39	0.836	0.836	Mangistau		
Uruguay	40	0.834				
Estonia	41	0.833	0.833	Astana city		
Mexico	55	0.800			0.799	Mangistau
Antigua and Barbuda	56	0.798	0.795	West-Kazakhstan	0.796	Aktyubinsk
Bulgaria	57	0.795	0.791	Pavlodar	0.790	Karaganda
Malaysia	58	0.790	0.790	Aktyubinsk	0.789	Atyrau
Panama	59	0.788	0.788	Kazakhstan	0.788	Kazakhstan
Macedonia, FYR	60	0.784			0.785	Pavlodar
Lebanon	61	0.783	0.783	Karaganda	0.785	East-Kazakhstan
Mauritius	62	0.779			0.782	West-Kazakhstan
Russian Federation	63	0.779			0.779	Akmola
Columbia	64	0.779			0.779	Kostanai
Brasilia	65	0.777				
Saint Lucia	71	0.775				
Rumania	72	0.773			0.773	North-Kazakhstan
Saudi Arabia	73	0.769			0.772	South-Kazakhstan
Thailand	74	0.768	0.768	Kostanai		
Ukraine	75	0.766			0.767	Almaty
Kazakhstan	76	0.765	0.763	Kyzylorda	0.763	Jambyl
Surinam	77	0.762	0.761	East-Kazakhstan	0.760	Kyzylorda
Georgia	88	0.746	0.746	Akmola		
Jordan	90	0.743	0.745	South-Kazakhstan		
Grenada	93	0.738	0.738	North-Kazakhstan		
Albania	95	0.735	0.736	Almaty		
China	102	0.727	0.725	Jambyl		

Sources: ¹ UNDP human development report, 2003.

² Estimate of the developers on the basis of Statistics Agency of RK database.

5. Population poverty index

	1998	1999	2000	2001	2002	2003
Akmola with Astana	23.1	24.6	22.4	20.7	19.7	19.6
Akmola	24.6	27.5	25.0	24.0	22.5	23.4
Aktyubinsk	36.5	22.6	23.1	26.0	23.8	22.5
Almaty	40.0	30.4	31.7	27.8	25.9	21.4
Atyrau	39.9	34.7	34.4	29.6	27.0	25.4
East-Kazakhstan	26.1	21.1	21.9	22.1	21.9	21.1
Jambyl	33.2	31.2	33.1	32.8	26.0	23.8
West-Kazakhstan	24.5	23.8	20.6	24.1	24.5	21.7
Karaganda	29.4	22.6	22.7	23.6	22.7	22.9
Kostanai	25.9	22.3	22.9	23.0	21.7	22.0
Kyzylorda	31.7	36.5	34.4	28.0	24.4	21.6
Mangistau	23.0	27.9	39.4	32.4	29.1	22.6
Pavlodar	26.6	32.8	21.1	21.5	21.4	20.3
North-Kazakhstan	30.9	23.9	21.1	20.8	21.4	21.4
South-Kazakhstan	55.7	36.4	34.8	27.3	21.7	21.0
Astana city	21.5	18.9	23.5	21.8	16.2	14.4
Almaty city	19.1	18.4	17.6	16.8	16.26	16.9
KAZAKHSTAN	31.2	26.2	25.1	23.7	22.0	20.9

6. Human development index adjusted to gender

Both sexes	1998	1999	2000	2001	2002	2003
Life expectancy index	0.658	0.675	0.675	0.680	0.683	0.680
Education accessibility index	0.921	0.921	0.921	0.9241	0.934	0.937
Income index	0.631	0.627	0.635	0.660	0.680	0.697
HDI	0.737	0.7412	0.743	0.755	0.766	0.772
Female						
Life expectancy index	0.757	0.767	0.768	0.772	0.775	0.775
Education accessibility index	0.925	0.9252	0.925	0.929	0.940	0.945
Income index	0.583	0.576	0.549	0.583	0.607	0.625
HDI	0.755	0.756	0.748	0.761	0.774	0.782
Male						
Life expectancy index	0.567	0.588	0.587	0.592	0.595	0.592
Education accessibility index	0.915	0.915	0.915	0.919	0.927	0.929
Income index	0.670	0.669	0.695	0.716	0.734	0.751
HDI	0.717	0.724	0.732	0.742	0.752	0.757
Both sexes adjusted to gender						
Life expectancy index	0.588	0.611	0.609	0.614	0.617	0.612
Education accessibility index	0.905	0.905	0.905	0.908	0.915	0.915
Income index	0.475	0.461	0.380	0.415	0.440	0.451
HDI	0.656	0.659	0.631	0.646	0.657	0.660

7. EFA Development index (DI1) and its components (2000)*

Rating by DI	Countries	DI	Net acceptance to primary school (%)	Literacy of adults (%)	Gender equality index	% of pupils attending 5th grade
High DI countries						
1	Italy	0.990	0.998	0.984	0.985	0.992
2	Poland	0.989	0.977	0.997	0.988	0.993
3	Estonia	0.987	0.976	0.998	0.982	0.992
4	South Korea	0.986	0.995	0.978	0.988	0.985
5	Belarus	0.983	0.994	0.997	0.984	0.956
6	Maldives	0.980	0.990	0.969	0.977	0.983
7	Cyprus	0.975	0.949	0.971	0.986	0.994
8	Gayana	0.974	0.979	0.985	0.983	0.948
9	Malta	0.970	0.979	0.920	0.986	0.995
10	Cuba	0.966	0.973	0.967	0.971	0.953
11	Trinidad and Tobago	0.964	0.924	0.983	0.967	0.982
12	Argentina	0.961	0.997	0.968	0.977	0.903
13	Chile	0.957	0.888	0.958	0.983	0.999
14	Bulgaria	0.954	0.943	0.984	0.979	0.909
15	Tajikistan	0.953	0.962	0.992	0.916	0.940
16	Panama	0.951	0.999	0.919	0.969	0.919
Medium DI countries						
17	Bahrain	0.942	0.959	0.875	0.946	0.989
18	Jordan	0.941	0.936	0.898	0.952	0.977
19	Mexico	0.939	0.994	0.912	0.966	0.885
20	Samoa	0.936	0.969	0.986	0.961	0.826
21	Mauritius	0.935	0.947	0.845	0.954	0.996
22	Mongolia	0.935	0.888	0.984	0.928	0.940
23	Uruguay	0.935	0.904	0.976	0.951	0.908
24	Macao	0.931	0.848	0.938	0.943	0.994
25	Peru	0.928	0.999	0.899	0.940	0.874
26	Thailand	0.927	0.854	0.955	0.958	0.941
27	Belize	0.924	0.982	0.932	0.965	0.815
28	Indonesia	0.923	0.922	0.868	0.950	0.951
29	Vietnam	0.918	0.954	0.925	0.937	0.857
30	Ecuador	0.917	0.993	0.916	0.981	0.778
31	Jamaica	0.916	0.949	0.869	0.956	0.889
32	Venezuela	0.912	0.880	0.925	0.935	0.908
33	Armenia	0.910	0.692	0.984	0.967	0.998
34	Costa Rica	0.908	0.911	0.956	0.963	0.802
35	China	0.907	0.927	0.852	0.867	0.982
36	Lebanon	0.902	0.865	0.860	0.915	0.969
37	Qatar	0.902	0.953	0.812	0.969	0.875
38	Paraguay	0.901	0.921	0.933	0.969	0.781
39	Bolivia	0.897	0.969	0.854	0.935	0.830
40	Kuwait	0.893	0.831	0.819	0.966	0.957
41	UAE	0.889	0.866	0.762	0.945	0.981
42	Capo Verde	0.888	0.998	0.738	0.912	0.905
43	Philippines	0.885	0.927	0.949	0.969	0.694
44	Swaziland	0.885	0.928	0.796	0.972	0.842
45	Tunisia	0.879	0.992	0.710	0.883	0.931
46	Namibia	0.877	0.816	0.820	0.951	0.922
47	Algiers	0.872	0.983	0.667	0.866	0.972
48	Syrian Arab Republic	0.866	0.963	0.744	0.836	0.921
49	Botswana	0.860	0.843	0.772	0.959	0.866
50	Columbia	0.859	0.885	0.916	0.968	0.666
51	Dominican Republic	0.859	0.925	0.837	0.922	0.751
52	Iran	0.845	0.736	0.760	0.909	0.975
53	Zimbabwe	0.834	0.796	0.887	0.920	0.733

Education for all: the key goal for a new millennium

54	SAR	0.834	0.889	0.852	0.948	0.645
55	Egypt	0.828	0.926	0.553	0.845	0.990
56	Oman	0.806	0.646	0.717	0.903	0.959
57	Lesoto	0.804	0.784	0.834	0.855	0.745
Low DI countries						
58	Mianmar	0,795	0,832	0,847	0,949	0,552
59	Saudi Arabia	0,792	0,579	0,762	0,891	0,937
60	Kenia	0,785	0,685	0,824	0,918	0,712
61	Zambia	0,777	0,655	0,782	0,866	0,806
62	Gwatemala	0,742	0,843	0,685	0,880	0,560
63	Rwanda	0,741	0,973	0,668	0,932	0,391
64	Tansania	0,726	0,467	0,750	0,868	0,818
65	Nikaragua	0,725	0,807	0,665	0,944	0,484
66	Kamboja	0,721	0,854	0,680	0,722	0,628
67	Togo	0,709	0,912	0,571	0,613	0,738
68	Morocco	0,705	0,780	0,488	0,752	0,800
69	Ghana	0,700	0,582	0,716	0,838	0,663
70	Bangladesh	0,697	0,889	400	0,850	0,649
71	Madagascar	0,691	0,677	0,665	0,911	0,511
72	Sudan	0,689	0,495	0,577	0,817	0,868
73	Laos	0,688	0,814	0,648	0,759	0,532
74	Comoro	0,678	0,562	0,559	0,820	0,771
75	Iraq	0,671	0,929	0,393	0,620	0,740
76	India	0,658	0,857	0,572	0,733	0,468
77	Ivery Island	0,633	0,622	0,486	0,647	0,777
78	Gambia	0,626	0,687	0,366	0,760	0,692
79	Benin	0,618	0,703	0,374	0,529	0,866
80	Mauritania	0,614	0,640	0,402	0,803	0,612
81	Senegal	0,610	0,631	0,374	0,711	0,723
82	Djibouti	0,609	0,326	0,646	0,698	0,767
83	Nepal	0,607	0,724	0,417	0,667	0,622
84	Equatorial Guinea	0,607	0,717	0,832	0,715	0,163
85	Burundi	0,591	0,537	0,480	0,764	0,584
86	Liberia	0,587	0,834	0,535	0,646	0,333
87	Eritrea	0,576	0,410	0,557	0,731	0,605
88	Ethiopia	0,541	0,467	0,391	0,668	0,638
89	Pakistan	0,528	0,601	0,432	0,580	0,497
90	Chad	0,518	0,582	0,426	0,525	0,539
91	Mozambique	0,510	0,544	0,440	0,628	0,427
92	Burkina Faso	0,469	0,355	0,239	0,590	0,691
93	Guinea Bissau	0,462	0,535	0,384	0,549	0,381
94	Nigeria	0,439	0,304	0,160	0,554	0,740

8. Expected longevity of men and women

	Expected longevity (years)		Mothers death rate (on 100000 born)
	women	men	
Republic of Kazakhstan			
1994	70,4	60,0	48,4
1995	69,5	58,4	57,6
1996	70,0	58,5	52,9
1997	70,2	59,0	59,0
1998	70,4	59,0	54,8
1999	70,9	60,6	65,3
2000	71,1	60,2	60,9
2001	71,3	60,5	48,6
2002	71,5	60,7	50,5
2003	71,5	60,4	42,1
Akmola			
1994	70,7	59,4	59,8
1995	69,0	57,8	38,0
1996	69,6	58,1	73,5
1997	69,7	58,3	61,9
1998	69,6	67,9	61,5
1999	69,8	59,1	83,6
2000	70,4	58,7	68,4
2001	69,6	57,6	39,2
2002	71,0	58,7	39,1
2003	69,5	58,5	38,2
Aktobe			
1994	70,6	60,0	20,5
1995	69,9	58,4	45,7
1996	70,7	59,1	41,2
1997	70,6	58,8	76,3
1998	70,1	58,3	58,9
1999	70,5	60,3	71,2
2000	69,3	58,7	61,3
2001	69,9	58,3	42,5
2002	70,1	58,4	40,0
2003	70,5	58,6	36,9
Almaty oblast			
1994	71,3	61,7	36,9
1995	71,1	60,7	47,8
1996	71,7	60,6	64,0
1997	71,8	61,7	41,7
1998	71,5	61,9	8,5
1999	71,2	62,5	63,7
2000	71,5	62,3	50,1
2001	72,1	63,0	38,8
2002	72,0	63,1	39,6
2003	71,8	62,3	36,6
Almaty city			
1994	71,1	59,5	52,0
1995	70,7	58,5	98,6
1996	70,9	59,1	69,1
1997	71,1	60,4	80,2
1998	73,0	61,3	26,0
1999	73,6	61,8	19,5
2000	73,5	61,6	66,4
2001	73,6	62,6	27,6
2002	74,0	62,9	64,8
2003	73,6	62,2	28,0

Education for all: the key goal for a new millennium

Atyrau			
1994	68,5	58,1	28,0
1995	68,7	57,7	93,5
1996	69,1	57,7	22,3
1997	68,9	57,9	63,3
1998	69,3	58,2	36,5
1999	69,6	58,5	73,3
2000	70,3	59,1	108,6
2001	71,5	58,7	35,7
2002	70,9	58,6	79,5
2003	71,3	59,8	8,6
East Kazakhstan			
1994	69,7	58,9	90,1
1995	68,8	56,8	82,1
1996	69,4	56,8	90,5
1997	69,6	56,8	112,4
1998	69,7	57,0	123,5
1999	70,6	59,5	102,1
2000	71,0	58,5	71,0
2001	71,2	59,4	72,9
2002	71,7	59,5	64,5
2003	71,3	59,6	49,7
Jambyl			
1994	69,9	60,3	40,0
1995	69,6	59,8	33,7
1996	70,4	59,7	27,4
1997	70,1	59,8	23,2
1998	71,2	60,0	18,3
1999	71,1	62,2	111,8
2000	71,0	60,2	60,6
2001	71,5	61,7	48,5
2002	71,5	61,9	41,7
2003	71,6	61,1	39,8
West Kazakhstan			
1994	70,3	59,6	40,2
1995	69,8	58,6	46,2
1996	70,4	57,9	93,3
1997	71,0	59,3	65,8
1998	70,4	59,2	78,4
1999	70,8	59,9	39,7
2000	72,0	59,4	27,2
2001	70,7	59,9	88,0
2002	70,9	59,6	35,9
2003	71,1	59,3	44,6
Karaganda			
1994	69,9	58,4	35,4
1995	68,0	56,5	62,3
1996	68,1	55,5	73,4
1997	68,8	56,3	74,0
1998	68,5	55,9	49,3
1999	69,8	58,4	52,2
2000	70,4	58,2	43,9
2001	70,3	58,4	31,2
2002	70,3	58,7	35,2
2003	70,4	57,7	22,1
Kyzylorda			
1994	67,9	59,4	22,9
1995	66,4	58,0	12,8
1996	67,8	59,3	20,9

National human development report for 2004

1997	68,4	60,5	7,4
1998	67,8	60,0	41,3
1999	68,9	62,2	15,9
2000	69,9	61,8	47,4
2001	69,9	61,7	84,5
2002	69,9	61,5	33,3
2003	70,5	62,4	57,0
Kostanai			
1994	71,9	61,0	32,6
1995	70,8	58,4	80,3
1996	71,0	58,8	55,0
1997	70,9	59,1	76,3
1998	70,6	58,6	90,3
1999	70,8	59,6	75,3
2000	70,8	59,3	92,9
2001	71,5	60,2	9,4
2002	71,7	60,5	37,0
2003	71,4	59,6	35,6
Mangistau			
1994	70,1	60,8	42,3
1995	69,8	58,8	76,2
1996	70,4	58,6	14,5
1997	69,3	58,7	14,7
1998	70,0	58,7	15,0
1999	69,8	58,8	97,3
2000	70,3	58,6	160,5
2001	69,8	57,8	59,7
2002	70,2	58,5	66,5
2003	71,2	59,5	112,2
Pavlodar			
1994	70,2	58,8	51,6
1995	69,8	57,0	40,7
1996	70,4	58,0	35,2
1997	70,6	58,4	80,0
1998	70,0	58,0	32,1
1999	70,6	59,9	68,6
2000	70,8	58,9	22,7
2001	71,2	58,9	56,6
2002	71,5	59,9	43,5
2003	72,1	59,5	41,3
North Kazakhstan			
1994	71,2	60,5	51,3
1995	70,2	58,8	84,0
1996	70,5	58,6	47,4
1997	70,8	58,7	67,9
1998	69,9	58,0	84,0
1999	71,1	59,8	54,6
2000	71,1	59,3	66,2
2001	71,3	59,4	53,4
2002	71,3	59,0	53,4
2003	70,7	59,3	13,2
South Kazakhstan			
1994	70,8	62,8	65,8
1995	70,0	61,2	53,4
1996	69,8	61,2	43,6
1997	70,6	61,9	54,5
1998	70,9	61,6	80,2
1999	71,4	63,4	65,5
2000	71,6	63,2	51,3
2001	71,8	63,1	57,0

Education for all: the key goal for a new millennium

2002	71,4	63,0	63,4
2003	71,6	62,7	33,6
Astana city			
1994	...	...	...
1995	...	...	...
1996	...	...	...
1997	72,1	59,2	...
1998	71,8	60,1	...
1999	72,7	62,2	21,3
2000	73,8	64,2	65,0
2001	73,9	64,4	20,6
2002	74,2	64,6	17,6
2003	75,4	65,7	90,8

9. Medicine and health care

	Death rate from blood circulation problems (% of total)	Deaths from malignant tumors (% of total)	AIDS incidence (number of cases)	Number of people per doctor
Republic of Kazakhstan				
1994	48.1	14.2	1	261
1995	47.6	13.1	-	261
1996	47.6	12.8	2	267
1997	47.6	12.8	7	279
1998	48.7	13.0	10	281
1999	49.8	13.1	5	295
2000	49.8	12.9	8	303
2001	49.8	12.9	20	289
2002	50.6	12.7	28	277
2003	51.7	12.1	68	274
Akmola				
1994	51.3	14.3	-	262
1995	49.7	13.9	-	254
1996	50.1	18.1	-	264
1997	49.2	13.2	1	271
1998	49.8	13.6	-	516
1999	52.5	13.7	-	375
2000	52.4	13.5	2	349
2001	48.8	13.3	-	327
2002	49.2	12.2	1	340
2003	51.8	11.8	-	343
Akt'yubinsk				
1994	46.2	16.4	-	209
1995	46.4	15.8	-	212
1996	47.9	15.3	-	221
1997	48.7	14.4	-	256
1998	47.9	15.0	-	252
1999	50.9	14.9	-	278
2000	48.2	12.9	-	236
2001	48.5	10.8	-	228
2002	48.0	11.0	-	224
2003	46.6	11.2	-	215
Almaty				
1994	51.8	12.6	-	400
1995	50.1	11.9	-	415
1996	50.0	12.4	-	426
1997	50.9	11.8	-	419
1998	55.1	11.9	-	432
1999	55.2	10.9	-	483
2000	53.6	11.8	-	506
2001	54.6	11.5	-	491
2002	55.0	11.1	-	480
2003	55.9	10.1	-	469
Almaty city				
1994	54.5	15.4	-	113
1995	53.3	15.1	-	113
1996	53.1	15.2	-	111
1997	53.3	15.9	-	115
1998	54.4	15.1	-	117
1999	54.6	15.2	-	134
2000	54.1	15.6	-	161
2001	55.2	15.9	1	137
2002	55.5	15.1	1	119
2003	55.5	13.2	1	117

Education for all: the key goal for a new millennium

Atyrau				
1994	32.1	12.6	-	282
1995	34.1	12.3	-	290
1996	37.9	10.6	-	300
1997	37.6	12.3	-	311
1998	39.0	11.6	-	339
1999	39.9	11.7	-	351
2000	38.6	12.0	-	331
2001	39.9	11.9	-	327
2002	41.7	11.2	-	327
2003	46.3	10.5	-	326
East-Kazakhstan				
1994	49.8	14.6	1	253
1995	48.3	13.2	-	250
1996	48.4	13.0	-	253
1997	47.9	13.4	-	252
1998	48.4	13.9	-	275
1999	50.1	14.1	-	278
2000	51.6	13.3	-	288
2001	52.4	14.1	-	283
2002	52.4	14.9	1	277
2003	53.4	14.8	-	270
Jambyl				
1994	44.6	12.2	-	342
1995	45.7	11.4	-	337
1996	44.8	11.2	1	356
1997	45.2	10.6	-	373
1998	47.1	10.6	-	380
1999	47.6	11.5	-	398
2000	47.8	10.6	-	393
2001	51.7	11.3	-	381
2002	54.1	11.0	-	371
2003	51.7	10.4	-	390
West-Kazakhstan				
1994	45.0	14.6	-	312
1995	46.1	13.2	-	315
1996	45.0	13.3	1	322
1997	47.1	13.9	-	315
1998	47.0	14.5	-	393
1999	52.6	14.3	-	308
2000	51.1	13.7	-	308
2001	50.4	13.8	-	312
2002	49.5	14.4	-	304
2003	51.2	13.5	-	297
Karaganda				
1994	50.0	14.1	-	201
1995	50.2	14.5	-	196
1996	49.7	10.7	-	208
1997	49.3	11.2	6	227
1998	50.2	11.3	9	233
1999	51.1	12.4	5	233
2000	51.9	12.1	4	238
2001	51.2	12.7	18	234
2002	52.2	12.6	18	233
2003	53.2	11.8	53	230
Kyzylorda				
1994	41.9	12.1	-	277
1995	40.8	11.1	-	311
1996	40.4	11.7	-	312

1997	40.6	12.6	-	353
1998	41.4	13.2	-	345
1999	42.4	12.5	-	339
2000	42.6	13.0	1	324
2001	45.5	13.5	-	317
2002	46.1	12.8	-	308
2003	49.3	13.2	-	314
Kostanai				
1994	50.3	15.3	-	354
1995	48.5	13.9	-	347
1996	48.2	19.3	-	344
1997	48.4	12.7	-	375
1998	48.8	13.2	-	389
1999	49.5	13.0	-	409
2000	49.6	13.4	-	413
2001	49.5	12.1	-	405
2002	50.9	12.5	1	405
2003	52.0	11.4	3	408
Mangistau				
1994	35.3	14.6	-	353
1995	33.9	13.1	-	253
1996	34.9	11.7	-	261
1997	32.6	12.6	-	267
1998	37.3	12.8	-	259
1999	38.2	12.7	-	280
2000	39.2	11.5	-	279
2001	35.4	11.0	-	283
2002	35.3	11.2	-	278
2003	42.3	11.0	-	293
Pavlodar				
1994	47.9	14.6	-	286
1995	47.2	13.2	-	282
1996	46.2	13.5	-	283
1997	47.3	13.8	-	306
1998	46.8	13.4	-	308
1999	48.4	13.5	-	294
2000	46.6	14.2	1	297
2001	46.0	14.7	-	282
2002	49.5	14.0	-	275
2003	50.3	14.1	9	262
North-Kazakhstan				
1994	44.7	17.3	1	254
1995	46.8	15.3	-	252
1996	46.3	15.2	-	261
1997	44.7	14.9	-	271
1998	42.8	15.2	-	255
1999	45.4	15.3	-	429
2000	45.3	14.4	-	432
2001	46.2	13.8	-	433
2002	48.7	13.3	2	429
2003	49.9	12.8	-	428
South-Kazakhstan				
1994	45.9	11.1	-	364
1995	45.7	11.2	-	360
1996	46.5	10.5	-	388
1997	48.6	10.1	-	387
1998	50.1	10.3	-	390
1999	51.0	11.2	-	387
2000	51.3	9.9	-	382

Education for all: the key goal for a new millennium

2001	48.4	10.5	1	355
2002	49.1	9.8	4	349
2003	50.3	9.7	1	346
Astana city				
1994			-	...
1995			-	...
1996			-	...
1997	46.2	15.8	-	...
1998	45.5	16.2	-	172
1999	44.5	16.2	-	149
2000	42.9	16.0	-	201
2001	42.1	14.8	-	210
2002	43.9	13.8	-	184
2003	42.4	13.5	-	183

10. Allocations of the central budget for education to the bodies of the Ministry of Education and Science (including ADB loans)

	1999(fact)	2000(fact)	2001(fact)	2002(fact)	2003 (fact)	2004 (plan)
Including central budget	10 386	10 959	17 234	14 290	21 031	31 545
Including local budgets	61 833	70 457	85 842	104 687	128 490	159 770
Total	72 219	81 416	103 076	118 977	149 521	191 315
% of GDP	3.6	3.1	3.1	3.2	3.4	3.8

11. Allocations of the central budget for education to the bodies of the Ministry of Education and Science (including ADB loans)

Level of education	1999(fact)	2000(fact)	2001(fact)	2002(fact)	2003 (fact)	2004 (plan)
Pre-schooling	2 236	2 975	3 322	3 880	4 553	5 742
% of GDP	0.1	0.1	0.1	0.1	0.1	0.1
Secondary education	49 433	60 007	67 224	81 744	98 906	124 979
% of GDP	2.6	2.3	2.0	2.2	2.2	2.5
Primary vocational education	2 284	2 693	3 018	3 910	5 299	6 540
% of GDP	0.1	0.1	0.1	0.1	0.1	0.1
Secondary vocational education	2 512	2 662	2 528	2 989	3 495	5 001
% of GDP	0.1	0.1	0.1	0.1	0.1	0.1
Higher vocational education	7 182	8 120	9 344	11 783	12 763	15 506
% of GDP	0.4	0.3	0.3	0.3	0.3	0.3
Other educational programmes	8 572	4 959	17 640	14 671	24 505	33 547
% of GDP	0.5	0.2	0.5	0.4	0.6	0.7
Total	72 219	81 416	103 073	118 977	149 521	191 315
% of GDP	3.6	3.1	3.1	3.2	3.4	3.8

12. International educational conventions and declarations

Name of the convention/declaration, year and place of adoption	Member countries	Convention/declaration objective	Basic principles	Bodies responsible for execution
"Inter-state sharing scientific and technical information" Minsk, 26 June 1992	Azerbaijan Republic, Russian Federation, Republic of Armenia, Republic of Tajikistan, Belarus Republic, Turkmenistan, Republic of Kazakhstan, Republic of Uzbekistan, Kyrgyz Republic, Ukraine, Republic of Moldova	<p>a) Preservation and mutually beneficial use of the available information resources and integration of efforts to develop it;</p> <p>b) Open access for scientists and specialists irrespective of their citizenship and residence to the sources of information;</p> <p>c) The need for the creation and development of national systems of scientific and technical information;</p> <p>d) Ensuring conditions for all possible acceleration of scientific and technical progress, improvement of scientific research efficiency;</p> <p>e) Formulation of integrated information environment and information market;</p> <p>f) Establishment of common conceptual and methodological framework for the arrangement of cooperation in scientific and technical information</p>	<p>Each member country will:</p> <p>a) Ensure the development of information resources, conditions of their joint use and the access to the jointly created information resources;</p> <p>b) Render support to the joint scientific and technical programmes, projects, scientific research and information developments;</p> <p>c) Facilitate establishment and application of legal, technical and technological elements of information infrastructure compatible with the corresponding elements of national and international information systems</p>	<p>The Inter-state coordination council for scientific and technical information (ICCSTI). ICCSTI includes authorized representatives appointed by the governments of member countries and is chaired by an elected representative under regular rotation. Functions, working bodies, location, and financing of the ICCSTI are determined by the regulations, issued by the governments of the member countries. A special fund is approved by the member countries to implement the coordinated development plans for information resources, joint programmes, and projects. The procedure of establishment and use of the fund are set up by the regulations approved by the governments of the member countries.</p>
Izmeer agreement of 14 September 1996	Islamic state of Afghanistan, Azerbaijan Republic, Islamic Republic of Iran, Republic of Kazakhstan, Kyrgyz Republic, Islamic Republic of Pakistan, Republic of Tajikistan, Republic of Turkey, Turkmenistan, Republic of Uzbekistan	<p>a) Creation of conditions for social and economic development and improvement of life standards in the member countries;</p> <p>b) Taking measures to remove trade barriers in ECO region and increasing inner and inter-regional trade;</p> <p>c) Increasing economic cooperation and removal of unfair trade policy by working out common approach at the international forums;</p> <p>d) Integration of the economy of the member countries to the world economy;</p> <p>e) Establishment of regional cooperation;</p> <p>f) Accelerated development of transport and communication infrastructure;</p> <p>g) Facilitating integration of public and private sectors;</p> <p>h) Development of joint programmes for human development in ECO region;</p>	<p>a) Sovereign equality of member countries that comply with their responsibilities under this Agreement with the good will without prejudice to their bilateral and international commitments;</p> <p>b) Linking national development plans of member countries with the nearest and long-term ECO plans;</p> <p>c) Aiming joint efforts at ensuring more open access to the markets outside ECO region for the raw materials and ready products of member countries;</p> <p>d) Efficient use of agreed institutions, regional contracts and partnership agreements of ECO with other regional and international organisations;</p> <p>e) Joint efforts of member countries to develop the agreed approach;</p>	<p>The key bodies of the Organisation will be the Council of Ministers, Council of Permanent Representatives, Council of regional planning, Secretariat and the specialized institutions in particular areas of cooperation. Regional institutions and temporary committee can also be established by the decision of the Council of Ministers</p>

<p>"Convention on recognition of qualifications related to higher education in the European regions". 11 April 1997 Lisbon</p>		<p>i) Mobilisation and use of natural resources of ECO region; j) Efficient use of agricultural and industrial capacity of the ECO region; k) Development of regional cooperation to combat abuse of drugs and psychotropic substances; l) Environment protection; m) Establishment of cooperation of ECO with other regional and international organisations; n) Strengthening historic and cultural links between the peoples of ECO regions and trade in tourism</p>	<p>f) Experience sharing in education, science, technology and culture.</p>	
<p>The Convention can be joined by a) member countries of the European Council; b) UNESCO European region member states; c) any other joining, agreeing State or a country of the European culture convention of the European Council and/or the UNESCO Convention on appreciation of study courses, higher education diplomas and degrees in the European states that were invited to the Diplomatic conference to sign the Convention.</p>	<p>a) Facilitate access for the communities of each member state to the educational resources of other countries; b) Increasing academic mobility between the parties; c) Recognition of qualifications, search of joint solutions for recognition in the European region and improvement of current recognition practice.</p>	<p>a) Holders of qualifications issued by the Parties have proper access, at the request to the appropriate body, to the assessment of such qualifications; b) In this respect to discrimination is allowed. Each Party will ensure taking proper measures to consider the applications for recognition of qualifications on basis of acquired knowledge and skills only; c) Each Party will ensure the openness and coordination of procedures and criteria used for the assessment and recognition of qualifications; d) Provision of the required information is primarily the responsibility of the applicant; e) Higher institutions issuing the specified qualifications are obliged to provide at the request of the applicant the related information to the qualification holder, institution or the authorized bodies of the country asked for recognition; f) Parties will instruct all educational institutions involved in their education system to satisfy all grounded requests for provision of information for the assessment of qualifications granted by the more than institutions; g) The body carrying out the assessment is responsible for proving that the application complies with the appropriate requirements.</p>	<p>a) Convention for recognition of qualifications related to higher education in the European region; b) European network of national information centers for academic recognition and mobility (ENIC network) established on the basis of decisions taken on 9 June 1994 by the Ministers' Committee of the European Council of UNESCO for Europe.</p>	

<p>"Agreement between the Government of Belarus Republic, Government of the Republic of Kazakhstan, Government of Kyrgyz Republic and the Government of Russian Federation on mutual recognition and equivalence of educational documents, scientific degrees and ranks", Moscow 24 November 1998</p>	<p>Belarus Republic, Republic of Kazakhstan, Kyrgyz Republic, Russian Federation</p>	<p>a) Intention of the Parties to establish the integrated job market; b) Facilitate further development and strengthening of 4-party cooperation in education, science and culture; c) Setting up standards of mutual recognition of educational certificates, scientific degrees and ranks.</p>	<p>The agreement extends to the national standard documents certifying the graduation, scientific degrees and ranks issued in the member countries and the documents of national standard issued by the educational institutions be a member country in any other country.</p>	<p>Parties establish the body for the mutual recognition of educational documents on the basis of equal representation by each party consisting of managers of national bodies of testing scientific and training professionals of highest qualifications of the member countries. The body takes decisions on the criteria of recognition of educational documents and operates on the basis of regulations approved by the Integration committee of Belarus Republic, Republic of Kazakhstan, Kyrgyz Republic and Russian Federation, with the administration being responsible for the provision of its operations.</p>
<p>"Agreement for the open access and sharing procedures of open scientific and technical information of CIS member countries", Moscow 11 September 1998</p>	<p>Azerbaijan Republic, Republic of Moldova, Republic of Armenia, Russian Federation, Belarus Republic, Republic of Tajikistan, Georgia, Turkmenistan, Republic of Kazakhstan, Republic of Uzbekistan, Kyrgyz Republic, Ukraine</p>	<p>a) Facilitate sharing experience and information on condition and development of own information resources; b) Stimulating activity of inter-state information sharing through the system of economic measures; c) Development of information infrastructure including establishment of the Fund of development of inter-state scientific and technical information sharing; d) Scientific and technical cooperation with measures of revision in addition to amendments and changes of the legislation; e) Joint development of inter-state classifier of the scientific and technical information of CIS countries; f) Agreed actions to develop and implement principles and mechanisms of state support to the inter-state information sharing.</p>	<p>Each Party shall: a) Ensure open access for the users to the open scientific and technical information; b) Carry out agreed actions of the information structures to ensure formulation and efficient use of scientific and technical resources of joint application; c) Create conditions for open access to scientific and technical information of joint use by the Parties; d) Arrange accounting and record of information resources; e) Ensure setting up soft directories and databases for scientific information.</p>	<p>Governments of the Parties and the organizations of the Parties responsible for formation and use of information resources within their authority ensure the conditions for timely provision of the users with full and reliable information.</p>
<p>"European higher education area" (joint statement by European Ministers of education), Bologna 19 June 1999</p>	<p>Austria, Belgium, Bulgaria, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Greece, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland,</p>	<p>a) Adoption of the easy and comparable degrees including by implementation of appendices to a diploma; b) Adoption of the system based on two basic cycles – pre-degree and post-degree; c) Implementation of credit system of ECST type – system of re-testing of testable units of labour</p>	<p>a) Implementation of 2-cycle higher education; b) Implementation of credit system (ECTS) to unify the system of accounting for the volume of academic work; c) Ensuring quality of education by introducing methodologies and criteria;</p>	<p>Ministries of education of the Parties</p>

Education for all: the key goal for a new millennium

Portugal, Rumania, Slovak Republic, Slovenia, Spain, Sweden, Swiss Confederation, United Kingdom	intensiveness. The credits can be granted within the education beyond higher education if those are accepted by the appropriate universities; d) Overcoming obstacles to open movement; e) Facilitate European cooperation in ensuring quality of education; f) Facilitate European view for higher education.	d) Improving mobility of students and teachers; e) Adoption of more convenient and comparable system of stages of higher education with appendices to diplomas; f) Formation of European approach to the development of higher education.	UNESCO coordinates EFA partners' activities and supports their collaboration. Director General of UNESCO annually convokes the meetings of a small high-level group. It serves the tool for the implementation of political commitments and mobilization of technical and financial resources.
"The Dakar action framework. Education for all: fulfillment of our joint responsibilities" 26-28 April 2000, The Dakar	a) Increase and improvement of measures of baby care and upbringing; b) Ensure that by 2015 all children, girls, in particular, children from poor environment and from ethnic minorities have access to free and mandatory high quality primary education and can complete it; c) Ensure equal access to the corresponding curricula; d) 50% increase by 2015 of the literacy level of adults, women in particular and ensure equal and fair access to all adults to basic and continuous education; e) Removal by 2005 of the gap between boys and girls in primary and secondary education and achieving by 2015 the equity of men and women in education; f) Improvement of the quality of education in all aspects.	a) Ensure political commitment to education for all, develop national action plans and significantly increase investments in basic education; b) Ensure ownership of society of the formulation, implementation and monitoring of education development strategies; c) Develop systems of management and administration of education; d) Satisfy the needs of the damaged education systems; e) Implement comprehensive strategies of ensuring equity of men and women in education; f) Implement urgently the educational programmes and actions to combat HIV/AIDS epidemics; g) Form healthy inclusive training environment; h) Increase status and professionalism of teachers; i) Develop new information and communication technologies to facilitate EFA implementation.	
Republic of Armenia, Belarus Republic, Georgia, Republic of Kazakhstan, Russian Federation, Republic of Tajikistan	The objective of the Protocol is to facilitate the formation of integrated (common) educational environment of the Commonwealth of Independent States by establishing the system of recognition and identification of equivalence of national education documents, scientific degrees and ranks of the Parties	Each Party shall: a) Identify national bodies to carry out recognition and identification of equivalence of national standard documents, scientific degrees and ranks; b) Develop the procedures ensuring the implementation of the Protocol; c) Cooperate with other Parties in collection and sharing the information related to recognition and identification of equivalence of the specified documents; d) Take other required measures to ensure recognition and identification of equivalence of the specified documents. The Parties will jointly develop and adopt common terminology and criteria for assessment.	1. National bodies for testing scientists and teachers and education management bodies; 2. Council for cooperation in education of the member countries of the Commonwealth of Independent States.
"Protocol of recognition of graduation documents of national standard, scientific degrees and ranks of member states if the Commonwealth of Independent States" Yerevan 10 October 2000			

Source: "Education for all in Kazakhstan" /EFA in Kazakhstan. HHII, 2003 – 2004 available on www.efa.kz

13. Comparison of The Dakar Framework of Actions with other documents

HD principles	EFA objectives and strategies	LLL provisions
1. Performance People should have an opportunity to improve their performance, be fully involved in the revenue making process and work for fair cash remuneration.	Objectives 4 (access to continuous education) 6 (education quality).	Provision 1 (new basic abilities for all) 2 (investments in HD).
2. Equity. All people should presumably have equal opportunities. Restrictions related to sex, race, ethnic identity etc. obstructing the abilities in economic and political life should be eliminated so that people can be equally involved in the enjoyment of these opportunities and use of benefits	Objectives 1 (better infant care), 2 (ensuring access to girls, children from problem families and ethnic minorities to high quality education), 3 (satisfaction of the needs of all youth and adults), 4 (provision to all adults of the equal access to continuous education), 5 (full and equal access for girls to high quality education and its completion).	Provision 6 (getting closer to users), 4 (improvement of mechanisms of assessment of involvement in training and its outcomes), 5 (reconsideration of the role of professional orientation and consultations).
3. Sustainability. Access should be ensured not only to the existing, but to the future generations to ensure sustainability of HD, it should be made possible for all types of capita – physical, human, natural without making debts that will have to be paid by future generations.	Objective 1 (infant care and upbringing for the most vulnerable and deprived) Objective 3 (satisfying the needs of adolescents and adults on the basis of access to life skills development programmes) Strategy 1 (political commitments and investments in basic education) Strategy 2 (sustainable functioning of the education sector in relation with termination strategies	Provision 2 (Increase of investments), 4 (improvement of evaluation mechanisms of involvement in training and outcomes), 3 (innovations in education).
4. Wider opportunities. Development should be done by people and not only in their interests. People should be fully involved in the decision taking process and other processed affecting their lives. HD objective is to create an environment for the person to develop his or her abilities and the opportunities for such a development should be increased.	Strategy 3 (ownership and involvement of civil society in the formulation and monitoring of education strategies), 4 (education management in the basis of accounting the needs, wide participation and accountability), 9 (increase the status, morale and professionalism of teachers) and 10 (learning ICT).	Provision 3 (innovations in education), and 4 (improvement of mechanisms of evaluation of involvement in education and outcomes).

Education for all: the key goal for a new millennium

14. Number of students in pre-schools (for the year end) (2001 - 2003)

Oblast, city	Number of students			including					
				urban			rural		
	2001	2002	2003	2001	2002	2003	2001	2002	2003
Akmola	6273	6690	6857	4740	5048	5165	1533	1642	1692
Akt'yubinsk	7921	8880	8607	6608	7398	7360	1313	1482	1247
Almaty	4502	4872	4729	3726	3915	4017	776	957	712
Atyrau	7713	7817	8553	5596	5620	6142	2117	2197	2411
East Kazakhstan	9174	10682	11751	8650	9759	10659	524	923	1092
Jambyl	6508	7238	8168	4644	5216	5772	1864	2022	2396
West Kazakhstan	7638	8235	8498	6344	6537	7033	1294	1698	1465
Karaganda.	17556	18372	19382	17442	18272	19129	114	100	253
Kyzylorda.	4010	4055	4476	3154	2309	3655	856	1746	821
Kostanai	8239	8257	8726	7302	7391	7790	937	866	936
Mangistau	6456	6563	6500	6319	6370	6275	137	193	225
Pavlodar	11352	10432	10950	10988	9869	10284	364	563	666
North Kazakhstan	3298	3501	3561	2883	3000	3068	415	501	493
South Kazakhstan	13953	14658	14780	12346	10976	11867	1607	3682	2913
Astana city	9173	9947	9970	9173	9947	9970	0	0	0
Almaty city	22609	23766	25200	22609	23766	25200	0	0	0
TOTAL	123766	153965	160708	109915	135393	143386	13851	18572	17322

15. Information of the enrolment of 5 – 6 year old children with pre-schooling at the beginning of the 2003/2004 school year

Oblast, city	Total				Total number of pre-school children	% of enrolment of 5 – 6 year old children with pre-schooling	including	
	Number of pre-school groups in nurseries	Number of children	Number of pre-school classes at schools	Number of children			Urban	Rural
Akmola	135	3184	828	9206	12390	70	74	68
Akt'yubinsk	209	4071	528	7273	11344	70	71	67
Almaty oblast	95	2447	701	12288	14735	33	31	34
Atyrau	104	2876	300	5447	8323	88	95	80
East-Kazakhstan	237	6201	809	12074	18275	61	61	60
Jambyl	120	3360	586	10693	14053	59	65	56
West-Kazakhstan	108	3214	460	6008	9222	64	69	59
Karaganda.	335	8967	685	10859	19826	97	99	90
Kyzylorda	105	2952	177	3770	6722	35	32	40
Kostanai	149	3819	746	8465	12284	66	70	62
Mangistau	125	3165	140	2619	5784	54	62	42
Pavlodar	271	6485	388	3734	10219	86	96	71
North-Kazakhstan	42	1218	706	7325	8543	63	63	63
South-Kazakhstan	324	7794	1645	34600	42394	66	71	64
Astana city	144	4812	18	337	5149	59	59	0
Almaty city	749	14166	69	1158	15324	67	67	0
TOTAL	3258	78731	8786	135856	214587	63	67	57

16. Information on pre-school teachers at the beginning of 2003/2004 school year

Oblast, city	Total teachers	With higher education	% of total	With higher education in pre-schooling	% of total number with higher education	With incomplete higher education	% of total number of teachers
1	2	3	4	5	6	7	8
Akmola	789	214	27.1	23	10.7	54	6.8
Aktyubinsk	912	374	41.0	163	43.6	42	4.6
Almaty oblast	548	268	48.9	171	63.8	23	4.2
Atyrau	970	411	42.4	244	59.4	39	4.0
East-Kazakhstan	1204	482	40.0	103	21.4	55	4.6
Jambyl	875	313	35.8	95	30.4	61	7.0
West-Kazakhstan	793	249	31.4	29	11.6	47	5.9
Karaganda.	2005	621	31.0	342	55.1	219	10.9
Kyzylorda	525	210	40.0	25	11.9	33	6.3
Kostanai	795	248	31.2	116	46.8	19	2.4
Mangistau	585	147	25.1	102	69.4	44	7.5
Pavlodar	1231	307	24.9	83	27.0	15	1.2
North-Kazakhstan	331	121	36.6	7	5.8	5	1.5
South-Kazakhstan	1500	683	45.5	79	11.6	180	12.0
Astana city	818	305	37.3	58	19.0	75	9.2
Almaty city	2448	1360	55.6	709	52.1	131	5.4
TOTAL	16329	6313	38.7	2349	37.2	1042	6.4

Continued

Oblast, city	With incomplete higher education in pre-schooling	% of total number with incomplete higher education	With vocational education	% of total number of teachers	With pre-school vocational education	% of total number with pre-schooling vocational education	With secondary education	% of total number of teachers
	9	10	11	12	13	14	15	16
Akmola	2	3.7	485	61.5	324	66.8	36	4.6
Aktubinsk	29	69.0	467	51.2	344	73.7	29	3.2
Almaty oblast	0	0.0	255	46.5	182	71.4	2	0.4
Atyrau	7	17.9	516	53.2	360	69.8	4	0.4
East-Kazakhstan	8	14.5	645	53.6	508	78.8	22	1.8
Jambyl	48	78.7	480	54.9	365	76.0	21	2.4
West-Kazakhstan	0	0.0	497	62.7	405	81.5	0	0.0
Karaganda.	124	56.6	1050	52.4	897	85.4	115	5.7
Kyzylorda	0	0.0	275	52.4	241	87.6	7	1.3
Kostanai	7	36.8	504	63.4	395	78.4	24	3.0
Mangistau	25	56.8	370	63.2	298	80.5	24	4.1
Pavlodar	0	0.0	909	73.8	633	69.6	0	0.0
North-Kazakhstan	1	20.0	196	59.2	141	71.9	9	2.7
South-Kazakhstan	20	11.1	597	39.8	373	62.5	40	2.7
Astana city	16	21.3	425	52.0	336	79.1	13	1.6
Almaty city	94	71.8	957	39.1	815	85.2	0	0.0
TOTAL	381	36.6	8628	52.8	6617	76.7	346	2.1

17. Computerisation of secondary schools by oblast as of December 2003

№	Number											
	Oblast	Schools		Computerised		Computers	Students per 1 computer	Number of computers in need of replacement	Computer classes	Have access to Internet		Telephone connection
		Total	Including rural	Total	Including rural					Total	Including rural	
1	Akmola	718	618	718	618	3,843	38	340	706	72	34	322
2	Aktubinsk	479	389	479	389	2,966	50	351	503	50	19	131
3	Almaty oblast	730	614	705	589	4,387	73	88	717	70	45	526
4	Atyrau	192	115	192	115	2,362	59	261	210	27	10	158
5	East-Kazakhstan	815	616	815	616	5,968	45	526	863	33	20	536
6	Jambyl	457	362	457	362	2,600	83	987	504	48	29	265
7	West-Kazakhstan	492	438	492	438	3,367	37	455	637	74	66	441
8	Karaganda	600	345	600	345	3,571	67	47	505	157	33	286
9	Kyzylorda	281	192	281	192	1,977	76	1,203	368	28	3	100
10	Kostanai	716	594	716	594	3,687	42	963	921	150	42	243
11	Mangistau	100	48	100	48	1,493	53	156	172	78	48	95
12	Pavlodar	464	369	464	369	3,120	44	0	589	240	169	302
13	North-Kazakhstan	737	672	737	672	3,470	35	345	629	111	68	389
14	South-Kazakhstan	978	810	978	810	7,281	74	94	1,390	207	143	469
15	Astana city	174	0	174	0	2,382	75	649	225	51	0	174
16	Almaty city	49	0	49	0	1,088	49	0	97	45	0	49
	TOTAL	7982	6182	7957	6157	53562	57	6465	9036	1441	729	4486

18. Background of teachers of day secondary schools for 2003-2004 school year (urban and rural)

Oblasts	Total number of teachers (people)		From the total number of teachers (column 1)											Category			
			Education						Years of experience								
	Total	Including women	Higher	Incomplete higher	Vocational		Secondary	Below 3 years	3 to 8 years	9 to 16 years	17 to 20 years	Above 20 years	To category	First category	Second category	No category	
					Total	Including teachers' training											
Akmola	14141	11571	7924	1372	4177	4099	668	1566	2530	3294	3216	3535	1795	3705	3699	4942	
Akt'yubinsk	14615	11757	10122	739	3337	3157	417	2511	3117	3450	1919	3618	1784	3088	3310	6433	
Almaty oblast	31055	24628	22993	2434	5541	5387	87	3710	4946	6988	5121	10310	5594	7851	7691	9919	
Atyrau	9980	8279	7926	525	1417	1298	112	1441	1980	2565	1162	2832	830	2436	2677	4037	
East-Kazakhstan	23241	18883	17612	252	5102	4880	275	2297	4074	5674	3363	7833	2824	5998	5882	8537	
Jambyl	20162	14937	14201	1519	4245	3065	197	2866	3620	4765	3235	5680	3079	4448	4709	7925	
West-Kazakhstan	13478	10632	8692	512	4153	4090	121	2212	2505	3051	1994	3716	956	4070	4423	4029	
Karaganda	19913	16804	14407	808	4569	4239	129	2546	3906	4739	3097	5625	2351	5118	5206	7238	
Kyzylorda	15124	12109	11527	1037	2550	2494	10	1937	3073	3848	2271	1838	522	4083	4475	6044	
Kostanai	14095	11391	9356	409	4062	3747	268	1820	2599	3103	2166	4407	1668	2568	3287	6572	
Mangistau	6216	5675	4177	335	1575	1485	129	1023	1192	1461	717	1823	403	1372	1355	3086	
Pavlodar	12612	10363	8071	389	3807	3552	345	2863	2553	2570	1423	3203	1813	2836	2636	5327	
North-Kazakhstan	13399	10624	8475	303	4028	3816	593	1940	2188	2854	2359	4058	1705	3693	3347	4654	
South-Kazakhstan	50202	36341	36568	3667	9914	9877	53	6486	9563	11388	11188	11577	6975	11671	13604	17952	
Astana city	3800	3239	3213	142	444	439	1	220	597	925	1062	996	898	1188	894	820	
Almaty city	12105	10841	10593	363	1149	1078		1472	2470	2221	1883	4059	3340	2877	2536	3352	
TOTAL	274138	218074	195857	14806	60070	56703	3405	36910	50913	62876	46176	75110	36537	67002	69731	100867	

19. Background of teachers of 1 – 4 grades of day secondary schools for 2003-2004 school year (urban and rural)

Oblasts	Total number of teachers (people)		From the total number of teachers (column 1)											Category			
			Education			Years of experience											
	Total	Including women	Higher	Incomplete higher	Vocational		Secondary	Below 3 years	3 to 8 years	9 to 16 years	17 to 20 years	Above 20 years	To category	First category	Second category	No category	
					Total	Including teachers' training											
Akmola	3227	2887	1025	140	2016	1968	46	355	587	824	508	953	217	839	997	1173	
Akt'yubinsk	2973	2928	1260	64	1616	1608	33	393	520	814	393	853	241	639	842	1251	
Almaty oblast	6258	6214	2650	726	2880	2840	2	606	894	1585	1213	642	70	482	771	892	
Atyrau	2215	2114	1315	171	728	718	1	273	441	546	313	642	70	482	771	892	
East-Kazakhstan	4542	4487	1983	52	2484	2468	23	346	795	1324	661	1416	315	999	1478	1750	
Jambyl	4312	4260	1737	293	2230	1845	52	525	814	1095	659	1219	404	870	1328	1710	
West-Kazakhstan	3063	3007	929	73	2048	2038	13	494	601	714	443	811	106	798	1238	921	
Karaganda	4163	4131	1601	212	2344	2314	6	407	841	1134	665	1116	217	1006	1439	1501	
Kyzylorda	3153	3078	1487	319	1347	1345	0	319	548	940	499	847	39	653	1210	1251	
Kostanai	2954	2942	1036	62	1823	1795	33	267	476	741	508	962	185	424	913	1432	
Mangistau	1800	1774	676	92	1004	991	28	304	441	483	271	301	61	295	446	998	
Pavlodar	2486	2357	793	71	1592	1578	30	287	430	639	348	782	241	578	638	1029	
North-Kazakhstan	2709	2693	1113	37	1510	1503	49	285	405	665	477	877	235	695	840	939	
South-Kazakhstan	11007	9802	4749	833	5402	5400	23	1418	2283	2446	2455	2405	1086	2328	3740	3853	
Astana city	796	557	495	55	246	246		76	189	207	110	214	134	231	235	196	
Almaty city	2136	2130	1291	150	695	673		231	478	449	345	633	115	423	633	965	
TOTAL	57794	55361	24140	3350	29965	29330	339	6586	10743	14606	9868	15991	4208	12624	19296	21665	

20. Background of teachers of 5 – 11 grades of day secondary schools for 2003-2004 school year (urban and rural)

	Total number of teachers (people)	From the total number of teachers (column 1)										Category					
		Education			Years of experience												
		Total	Including women	Higher	Incomplete higher	Vocational		Secondary	Below 3 years	3 to 8 years	9 to 16 years	17 to 20 years	Above 20 years	To category	First category	Second category	No category
Total	Including teachers' training																
Oblasts																	
Akmola	7135	6504	4464	1117	1068	1177	486	773	1251	1512	2009	1590	1005	1757	1771	2603	
Aktubinsk	7861	6715	6413	486	725	650	237	1517	1713	1661	996	1974	972	1683	1644	3562	
Almaty oblast	17605	14513	15693	1025	849	792	38	2133	2792	3753	2834	6093	3588	5035	3663	5319	
Atyrau	5573	5010	5049	211	281	261	32	864	1118	1472	591	1528	534	1347	1389	2303	
East-Kazakhstan	12719	11274	11364	133	1091	1005	131	1481	2296	2763	1684	4495	1548	3394	3061	4716	
Jambyl	10964	9349	9278	812	808	724	66	1695	1861	2384	1784	3240	1810	2478	2238	4438	
West-Kazakhstan	6816	5797	5604	318	861	852	33	1095	1131	1502	1092	1996	598	2281	2122	1815	
Karaganda	10820	9404	9401	430	912	768	77	1632	2177	2358	1563	3090	1318	2646	2506	4350	
Kyzylorda	8408	7110	7671	355	381	379	1	1205	1739	1972	1241	2251	314	2416	2344	3334	
Kostanai	7548	6674	5984	229	1219	1082	116	1081	1419	1512	1115	2421	910	1471	1639	3528	
Mangistau	3247	3069	2794	192	230	209	31	555	570	743	287	1092	198	774	701	1574	
Pavlodar	6956	5420	5296	258	1208	1118	194	2213	1547	1135	579	1482	1006	1475	1364	3111	
North-Kazakhstan	6935	5869	5011	192	1378	1248	354	1212	1133	1313	1234	2043	875	1899	1666	2495	
South-Kazakhstan	27843	21212	24249	2065	1517	1504	12	3979	5065	6112	6230	6457	3793	6470	7000	10580	
Astana city	2302	2141	2117	74	110	110	1	89	325	578	704	606	501	739	532	530	
Almaty city	8184	7590	7985	157	42	7		1011	1625	1437	1249	2862	2634	2016	1551	1983	
TOTAL	150916	127651	128373	8054	12680	11886	1809	22535	27762	32207	25192	43220	21604	37881	35191	56241	

21. 2004 results of the Unified National Test in Kazakhstan (grade point average)

Oblast	Urban, male	Urban, female	Rural, male	Rural, female
Akmola oblast	54,26	58,18	45,04	51,66
Almaty oblast	51,00	55,89	44,49	51,15
Aktobe oblast	50,50	53,93	43,78	50,31
Atyrau oblast	47,45	52,12	45,21	49,19
Eastern Kazakhstan oblast	53,72	58,06	48,16	54,25
Mangystau oblast	45,33	52,08	40,55	48,31
Western Kazakhstan oblast	51,91	58,11	45,92	53,60
Zhambyl oblast	54,10	57,47	45,29	49,39
Karaganda oblast	51,98	56,07	43,11	50,41
Kyzylorda oblast	49,67	54,42	47,27	52,32
Southern Kazakhstan oblast	51,92	55,47	44,98	49,63
Kostanai oblast	52,57	56,29	42,27	48,59
Pavlodar oblast	59,60	61,16	47,79	52,87
Northern Kazakhstan oblast	57,91	62,39	46,79	53,47
Astana	59,20	63,17		
Almaty	58,81	63,03		

BIBLIOGRAPHY

National documents

1. Constitution of the Republic of Kazakhstan, 1995
2. Strategy "Kazakhstan 2030. Prosperity, security and welfare of all Kazakhstan citizens"
3. 2010 Strategic development plan of the Republic of Kazakhstan. Astana. Yelorda, 2002
4. Address of the President to the people of Kazakhstan "Towards competitive Kazakhstan, competitive economy, competitive nation" - Astana, 19 March 2004.
5. National action plan of the Republic of Kazakhstan "Education for all", Ministry of Education and Science of the Republic of Kazakhstan, Astana, 2003.
6. Concept of education development in the Republic of Kazakhstan to 2015, Astana, 2004.

Laws

7. Education Law of the Republic of Kazakhstan, 1999
8. Law of the Republic of Kazakhstan "On local governance in the Republic of Kazakhstan", 2001
9. Law "On budget system", 1999 (with amendments on 2003)

National programmes

10. Aulı mekteby National programme for 2003 – 2005, 2003.
11. National programme of secondary education information, 1997
12. National programme "Education", 2000
13. National programme of education development in the Republic of Kazakhstan for 2005 – 2010, October 2004.

Governmental resolutions

14. Resolution of the Government "On measures of further reform of the secondary education system in the Republic of Kazakhstan", 1998
15. Resolution of the Government "On the issues of mandatory pre-school education for children", 1999
16. Resolution of the Government "On the implementation of national baccalaureate", 2004

Reports

17. UNDP Report on Poverty in Kazakhstan: reasons and ways of improvement, 2004;
18. National report "UN millennium goals in Kazakhstan", Almaty, 2002
19. World Bank Report "Education in transition economies: development goals", 2000;
20. Report on the implementation of joint MES and UNESCO project "Facilitation to basic education of children with special needs". – Almaty May 2000.
21. Project of the Ministry of Education and Science of the Republic of Kazakhstan and Soros-Kazakhstan Foundation "Development of the national standard of general secondary education in the changing environment", 2002;
22. Ministry of Education and Science and Asian Development Bank, "The education sector development strategy", Astana 2004;
23. Kazakhstan: Summary of public allocations for education and health care. – Asian Development Bank, 2003.
24. Entitlement for proper education: schools of friendly treatment of children. - UNICEF, Almaty, 2002
25. Training centers for local communities in Kazakhstan: international experience and local context. – Almaty, Association "Education for all in Kazakhstan", 2002.
26. The Dakar action framework "Education for all: fulfillment of our joint commitments". - UNESCO, 2000.
27. Resolution of UN General Assembly 56/116 "Ten years of literacy UN: education for all". - UNESCO, 2002.

28. World education Forum. Final report. - UNESCO, 2000.
29. Official summary "Status of children in the world". - UNICEF, 2002.
30. "Education for all" voices of children", UNESCO, 2003.
31. Evaluation of informal education to mitigate economic transit influence" (1999). Project report. – Almaty, 1999.
32. "Human development report 2004: Cultural liberty in today's diverse world", UNDP 2004.

Publications

33. "Involvement of parent society in education issues", Round table Memorandum of understanding, newspaper for parents "Tutorial Board";
34. Parkhomenko M. "Single testing is approaching, are we ready for it?", *Kazakhstanskaya Pravda*, 20.11.2003;
35. Boyarchuk Yu.V. Upbringing in Japanese schools // *Pedagogika*. 1995. № 5. pp. 85-90.;
36. Kolmakova M.N., Kuzmin N.N.. Stories from the history of school and pedagogical thought of USSR peoples. 1961-1986. M.: *Pedagogika*, 1987. 414 p.;
37. Stepanenko M.. Classic Chinese education // *Training abroad*, №2, 2003.;

Conference materials

38. "Global trends in the education development" in the draft "Concept of the structure and content of general secondary education", Materials of scientific and practical conference "All-Russian August Teachers' Council – 2000" available on site www.2000.pedsovet.alledu.ru
39. "Investments in education in the context of human development", A.B.Maidyova, directory of thesis of the II International conference "Universities and society. Cooperation of universities in XXI century"; (Moscow, MSU named after Lomonosov)
40. S.A.Abdymanapov "Bologna process and prospects of higher education in Kazakhstan" (Report at the Academic readings of MAS of HS), 2004 available on site www.emu.kz

Literature

41. Al-Farabi Philosophic treatise. Alma-Ata, 1974;
42. Human development in Kazakhstan: Textbook/Overall edition by N.K.Mamyrova and F.Akhura – Almaty: *Ekonomika*, 2003, pp. 184-185
43. Vasilkova Yu.V. From domestic education: history of Russia, Orthodoxy, literature from ancient times till the end of XVII century. Lecture course. Book one. M.: *МНЭПУ*, 1996. 396 p.;
44. State and education: experience of western countries / Edited by S.L. Zaretskaya. M., 1992. 140 p.;
45. Kara-Murza S.G.. Soviet civilisation. Book 2. Part 1. M., 1998.;
46. Kara-Murza S.G.. Manipulating the awareness. M.: *Algorithm*, 2000.;
47. Kudryavtsev M.K.. Buddha university in Naland // *Oriental pages and peoples*. Issue M.1972.;
48. Modzalevsky L.N.. Story of upbringing and education from ancient to modern times. СПб: *Aletaiya*, 2000. 429 p.;
49. Neronova V.D.. Common features of the third period of ancient history // *Ancient world history*. Fall of ancient communities. M., *Znanie*, 1983.;
50. Radischev school // *Education age*, 1932.;
51. Real education // *Pedagogical encyclopedic dictionary*, 1997.;
52. Kolesnikova I.A. Basic andrology. – M., *Academia*, 2003.
53. Materials of Statistics Agency of the Republic of Kazakhstan. Social area series. - Almaty, 1998-2004.
54. Solovov A.V. "Introduction in DL problems" (analytical survey of DL status in the world), Samara 1999, http://cnit.ssau.ru/do/review/do_world/;
55. T. Tasbulatov. Management of student contingent formation in the countries of the world. - Almaty, 2003.

Internet-sites

56. State Council of RF on education reform
<http://atheismru.narod.ru/Science/Authority/President02.htm>
57. Site "Reason or belief?", 21.04.2003,
<http://www.atheismru.narod.ru/Science/Authority/President02.htm>

Education for all: the key goal for a new millennium

58. Kazakhstan information agency, www.kazinform.kz.
59. Press-service of the President of Russian Federation 29 August 2001
<http://president.kremlin.ru/text/docs/2001/08/30255.shtml>
60. Kara-Murza S.A. "RF and Bologna Convention",
www.contr-tv.ru
61. Wufner Clausse, External aspects of Bologna process: higher education in South-East Europe and European higher educational environment in the globalised world, "Higher education as public weal: methods and forms of provision",
<http://logosbook.ru/hee/art004.html>;
62. Prof. Polat E.S. "Basic trends of education development in the world",
<http://edu.km.ru/metoda/tendencii.htm>;
63. www.edu.gov.kz, Ministry of Education and Science of the Republic of Kazakhstan;
64. www.bilim.kz, Soros Foundation Kazakhstan;
65. www.parlam.kz, Parliament of Kazakhstan;
66. www.stat.kz, Statistics agency of the Republic of Kazakhstan;
67. www.efa.kz, "Education for all in Kazakhstan"

Foreign literature

68. Edwards R., Usher R. Globalization and Pedagogy. Space. Place and Identity. Routledge, London and New York, 2000.;
69. Cogburn D.L. Globalization, Knowledge, Education and Training in Information Age, www.unesco.org.;
70. Dimmock C., Walker A. Globalization and societal culture: redefining schooling and school leadership in the twenty-first century. Compare, Vol.30, No.3, 2000.;
71. EFA Global Monitoring report "Education for All. Is the world on track? – UNESCO, 2002/
72. EFA Global Monitoring report "Gender and Education for All. The Leap to Equality" – UNESCO, 2003/4.

GROUP OF AUTHORS

Azamat Abdymomunov	– Chief of the Center for Systems Research, Administration of the President of RK
Layzzat Tatikova	– Expert of the Center for Systems Research, Administration of the President of RK
Zhanibek Imanaliyev	– Expert of the Center for Systems Research, Administration of the President of RK
Erbol Suleimenov	– Executive director of the “Strategic vision” Expert club
Zhanara Zhamankulova	– Expert of the “Strategic vision” Expert club
Sania Ismailova	– Expert of the “Strategic vision” Expert club
Zhanna Dosova	– Expert of the “Strategic vision” Expert club
Evgeniy Teremov	– Expert of the “Strategic vision” Expert club
Alma Alpeissova	– Expert of the “Strategic vision” Expert club
Yuriy Shokamanov	– First Deputy Chairman of the RK Statistics Agency
Maira Amirkhanova	– Head of Social and Gender Statistics Department of the RK Statistics Agency
Shaizada Tasbulatova	– Director of “Education for all in Kazakhstan” Association
Valentina Beloslyudtseva	– Expert of “Education for all in Kazakhstan” Association

Advisory Group

Kulyash Shamshidinova	– Vice minister of Education and Science
Alzhan Braliyev	– Deputy Chairman of the RK Statistics Agency
Ardak Malaiyeva	– Director of Human Development Institute
Yuriy Anoshenko	– Vice-President Of the Center for Engineering and Technology's Transfer
Timur Mustafin	– Manager of the Center for Engineering and Technology's Transfer
Nurlan Karynbayev	– UNDP national expert
Shamshabanu Akhimbekova	– President of Innovative schools Association
Rakhman Alshanov	– President of Higher Education Institutions Association

Consultative Board

Fikret Akchura	– UNDP Resident Representative in Kazakhstan (2001-October 2004)
Gordon Jonson	– UNDP Deputy Resident Representative in Kazakhstan
Anjum R. Haque	– UNESCO Head of Cluster Office
Zhanar Sagimbayeva	– UNDP Chief of Good Governance and Sustainable Development Team
Malin Berggren	– UNDP Poverty Reduction Team Programme Officer
Gaukhar Mukhatzhanova	– UNDP Public Relations and Mass media specialist
Aigul Khalafova	– UNESCO Education specialist
Inna Melnikova	– UNESCO Culture Specialist

UNDP Task Force

Zhanar Sagimbayeva	– Chief of Good Governance and Sustainable Development Team
Shynar Imangaliyeva	– Human Development, Senior Programme Assistant
Togzhan Assan	– Programme Assistant

Technical Support

Timur Dzhiembayev	– Cover page design
Nikolai Georgiadi	– Layout
Alexandr Lebedeyev	– Maps
Valentina Semykina	– Editing of the Russian text
Natalia Petrova	– English translation
Wolton Berns, Malcolm Mercer	– Editing of the English text
Zhanar Zhamankulova,	
Oraz Baigonyshiev	– Translation and editing of the Kazakh text

The photos used in the Report presented by C. Herwig (www.herwigphoto.com), A. Ustimenko, “Student Debates on Millennium Development Goals” UN project, UNESCO and authors

Notes

National human development report for 2004
Education for all: the key goal for a new millennium

Printed in «Pilot TC»
Tel./Fax: 7 (3272) 61-09-17
E-mail: pilot_tc@yahoo.com



Kazakhstan

United Nations Development Programme in Kazakhstan

67 Tole Bi Street,

480091, Almaty,

Republic of Kazakhstan

tel.: 7 (3272) 582643

fax: 7(3272) 582645

<http://www.undp.kz>