

MINISTRY OF EDUCATION AND SCIENCE
OF THE REPUBLIC OF KAZAKHSTAN

NATIONAL CENTER FOR ASSESSMENT
OF THE QUALITY OF EDUCATION



**NATIONAL REPORT ON THE STATE AND
DEVELOPMENT OF EDUCATION**
(SHORT VERSION)

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H 35

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H 35 National Report on the State and Development of Education
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The National Report is an annual information-analytical review of the current status of education and tendencies of its development in terms of the inter-regional and international benchmarking.

The 2007 Report contains a full comparative and contextual analysis, interpretation of indicators and factors about the status and development of the educational system in its dynamics for 2000-2006 years, and determines the major trends and issues.

The given Report is aimed to be used by the bodies of the legislative and executive authorities, workers of the educational system to provide reliable information to them in making managerial decisions. The Report will be also be available to pupils and students' parents, various social groups of the population and the mass media and will fully inform them about the current status, development and results of functioning of the country educational system.

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THE FOREWORD

The modern educational system of the Republic of Kazakhstan develops under rapidly and intensively changing socio-economic conditions, thus causing changes in the character of activities of educational bodies. All levels of functions of the educational bodies also have to undergo significant transformations. The specific situation in the system of education preconditions a higher demand of various groups of the public community to the diverse actual and objective information about education, its status and tendencies of development.

Under conditions of the information-based community development this tendency is constantly facilitated and logically brings to the point whereby the issue of maintenance of the population with complete and reliable information about the educational system is already understood by the society as one of the major functions of the educational bodies.

The National Centre of Estimation of Quality of Education (NCOKO) has developed for the first time in 2006 the Public Report which was presented in the form of the National Report about the status and development of education in the RK for 2000-2004. The conclusions and recommendations resulting from the National Report have been used by the MOES of the RK for a more precise determination of priorities for further development of the educational system, determination of its priority objectives and tasks, and also for acceptance of necessary solutions.

One of the main priorities of development of the global educational system in the XXI-st century is to improve the quality of education, to improve the quality of teaching and study of natural - mathematical, technical disciplines and foreign languages.

For achievement of the set up goals the government has considerably increased the public funds allocated in 2006 to purchase multimedia cabinets and to open different cabinets in various subjects, to improve the material and technical base of educational institutions as a whole, develop new generation textbooks, prepare and improve teachers' professional skills.

For benchmarking in terms of comparison of the achievements and the results of the domestic educational system and its functioning on the basis of similar indicators of other countries of the world the National Centre for Estimation of Quality of Education of the RK MOES has conducted a preparatory work to ensure participation of Kazakhstan in the international research of quality of mathematical and natural-scientific education of the 4-th grade pupils of the secondary general schools. In the current year 150 schools of the country will be surveyed on the basis of the international tools.

At present due to transition to the 12-year education and introduction of education with focus on certain specific subjects/profiles there is a need in development of the new procedures that could be supportive in terms of external estimation of the conducted reforms in the context of improvement of quality of education and for estimation of efficient use of resources.

In his Message to people of Kazakhstan «New Kazakhstan in the New World» the President of the Republic of Kazakhstan N. Nazarbaev has set up a global task for the Ministry of Education and Science of the RK and the whole system of education about the need to provide qualitative services of education at the level of the world standards.

The Prime-Minister of the RK K. Masimov has also defined the given issue as a priority in the Strategic Plan of the Government in terms of promotion of Kazakhstan's accession to the community of the top competitive states of the world.

In the nearest years all activity of the Ministry of Education and Science will be directed in view of implementation of the set up task and of taking necessary decisions at all levels of management for achievement of the higher quality of education while the analytical National Report will promote reconsideration of the role and place of the system of education in the socio-economic development of the state.

Minister of Education and Science
of the Republic of Kazakhstan



Z. Tuimebayev

INTRODUCTION

At present, the quality of educational services granted to consumers becomes a defining factor for estimation of activity of the educational system of any country. Therefore, the accepted State Program on development of education in the Republic of Kazakhstan for 2005-2010 defines as of priority significance the achievement of high quality of domestic education and building up of the national system for its assessment. The issue of improvement of quality of educational services is highlighted by the President of the Republic of Kazakhstan N. A. Nazarbaev in his Message to the country «New Kazakhstan in the New World» in February 28, 2007.

New organizational and economic methods of management of the educational system, strengthening of independence of educational bodies and organizations, changes in the mechanisms for their financing, development of the state-public institutions inevitably bring to the need to revise the principles of interaction of the public community, the state and the personality with the system of education.

The world experience shows the dialogue between the entities of the educational system can be more objective and constructive only if the state educational policy is expressed in the outcomes and the results of its implementation presented in concrete figures and indicators; through achievement of the scheduled priorities and planned outcomes.

For achievement of such an effective interaction of the public community and the system of education it is necessary to prepare, publish and distribute on regular basis diverse information about the status, tendencies and outcomes of activity both of some separately taken organizations of education and of the whole educational system country-wide.

As of today such information is either not available at all or inaccessible, or presented in the form clear only to professionals.

The National Report on the status and development of education in the Republic of Kazakhstan is also intended to fill-in this gap. According to the State Program on Development of Education for 2005-2010 the National Report is an annual informational - analytical review of the status of education and tendencies in its development in the inter-regional and international comparative aspects.

The National Report is the document which on the basis of the state statistical data analysis and the educational monitoring defines implementation of the general strategy, main directions, priorities and principles of the state policy, enforcement of legislation in the field of education, efficiency and effectiveness of the scheduled plans and actions.

Given that the National Report developed in view of *estimation of the quality of education according to the standard world practice* was for the first time developed in the RK only in 2006 it was thought expedient that the Report of 2007 should be made similar to the previous one and reflect an integral status of education and its development for 2000-2006.

The complete version of the report includes seven sections, the introduction, conclusion and appendix with statistical tables. The report contains 216 pages of analytical text material, 158 figures and 206 tables.

At preparation of the report proposals and offers of the Departments and Committees of the RK MOES were taken into consideration, diverse literature and official statistical sources, the reports of international organizations and structural divisions of the RK MOES, of its subordinate organizations, reports and statements of speeches of the Minister of Education and Science of the RK were used.

The report is intended for the bodies of the legislative and executive authority, the staff of the educational facilities to provide them with reliable information enabling them to make the appropriate administrative decisions. The report is addressed also to parents of pupils, various social groups of the population, mass-media to inform them widely about the status, development and outcomes of functioning of the educational system of the country.

Chapter 1. The system of education as a leading factor of the socio-economic development of Kazakhstan. The state educational policy

The main task of the educational system of the RK at the present stage - to achieve high quality of education, its conformity to the actual and long-term needs of the personality, society and the state.

The educational system should ensure equal access of the population to good education irrespective of the material prosperity of a family, place of residence, nationality and state of health. Achievement of this purpose is directly linked with the social-economic and demographic conditions that have developed in the country.

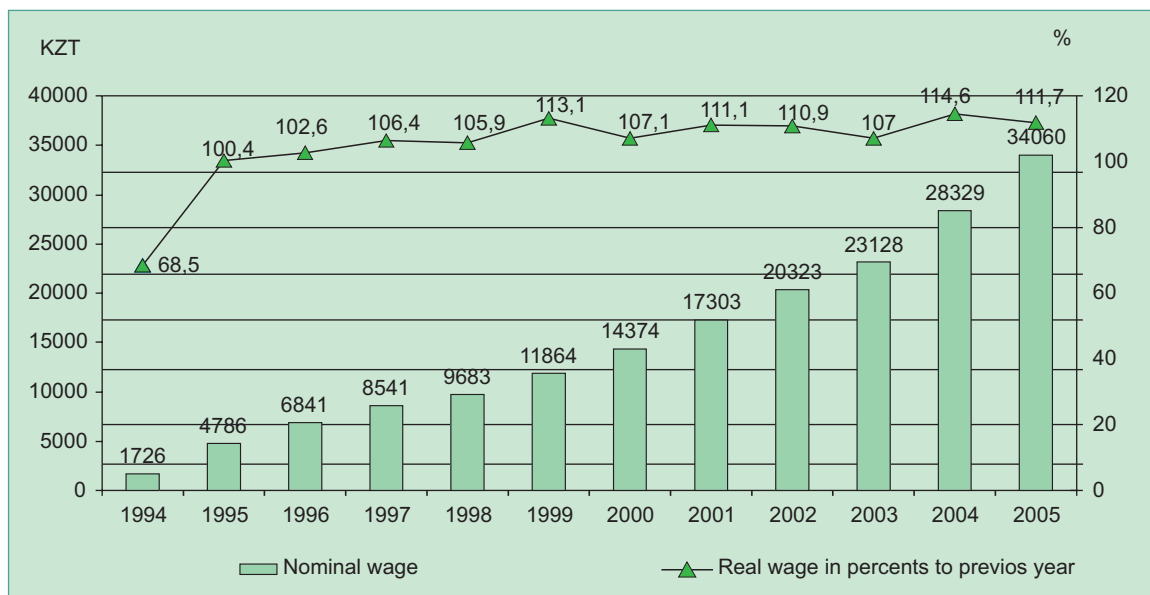
The dynamics of the social-economic development, changes in the number and age structure of the population, specifics in its migration and settling in regions have a serious impact on the state and development of the whole educational system. In its turn, education defines development the human potential in the country, the state of the quality of labor forces and is a leading factor of social-economic development of the country.

Income in money values. The average monthly nominal money incomes per capita in the Republic made in 2006 according to the Agency on statistics of the RK: in the II quarter of 2006 - 17 950 KZT and have increased in comparison with the II quarter of 2005 for 23.4% at growth of consumer costs of the goods and services for this period for 8,9%. In real terms, the money incomes of the population in comparison with the corresponding quarter of the past year have increased for 13.3%.

In spite of the fact that practically in all regions of the Republic a stable tendency of growth in the incomes of the population is observed and their real increase there is still a significant regional differentiation observed.

Wages. The average monthly nominal wages per one worker have made in December 2006 53 558 KZT in the RK (fig. 1.1).

Fig. 1.1. Wages of workers



Increase of the nominal wages in December versus the corresponding month of the previous year is noted in all kinds of economic activities.

From the regional point of view, an essential differentiation is observed in terms of size of wages: from 93555 KZT in Atyrau region up to 31389 KZT in Zhambilskaya region.

The international statistics uses the following indicator for estimation of the relative size of the wage of teachers: the ratio of the teacher's wage to the gross national product per capita. The given indicator levels the national differences in the systems of payment, forms of taxation and etc. and allows conducting quite correct comparisons. In the States of Economic Cooperation and Development this value made in 2000 1.37 while in poor countries - 2.56. In 2003, in Russia, the ratio of the wages in the sphere of education and per capita GDP has constituted 0.64 (according to the estimation) while in Kazakhstan - 0.56. Table 1.1 is illustrative; it helps to get a general understanding about the level of salaries and wages of the workers engaged in the sphere of education in Kazakhstan.

Table 1.1 .Ratio of the average wages by braches of the economy and GDP- per capita - basis

	2000	2001	2002	2003	2004	2005
By all kinds of economic activities	0.99	0.95	0.96	0.90	0.87	0.83
Including:						
Health	0.50	0.45	0.51	0.47	0.47	0.44
education	0.58	0.54	0.61	0.56	0.55	0.50
agriculture	0.39	0.38	0.39	0.37	0.37	0.83
Industry	1.42	1.31	1.24	1.15	1.09	1.02
building	1.44	1.47	1.53	1.34	1.19	1.17
finance	2.48	2.29	2.38	2.14	1.98	1.94

The demographic situation in Kazakhstan for 2006. According to the current data, the number of the country population as of October 1, 2006 has constituted 15 346.5 thousand people; including the urban population - 8 799.7 thousand (57.3%); the rural population - 6 546.8 thousand persons (or 42.7%). In comparison with the beginning of the year it has increased for 127.2 thousand persons.

The total factor of the natural increase per 1000 inhabitants has made 8.7 persons (8.1 in 2005) and that testifies of strengthening of positive tendencies in demographic processes.

Labor market and unemployment. 7.4 million people were engaged in the economy of the Republic in 2006. In comparison with the year 2005 their number has increased for 142.7 thousand persons or 2%. In the structure of the employed population the hired workers have made 64.5% (or 4.8 million persons), self-employed - 35.5% (2.6 million persons). The number of hired workers last year versus 2005 has increased for 136.2 thousand persons (on 2.9%). The basic share the people working on hiring basis in the state and non-state organizations - 81.7% (3.9 million persons), with the natural persons - 11.7% (0.6 million), in peasantries (farmer's facilities) - 6.6% (0.3 million persons).

The rate of unemployment has made 7.8% in 2006 versus the economically active population in comparison with 8.1% in 2005.

According to the data of the Agency on statistics of the RK, the city-dwellers constitute 62.8% of the total number of the unemployed, inhabitants of the rural areas - 37.2%.

In the structure of the unemployed population for the accounting period: 25.4% - young people at the age of 15-24 years; 19% - at the age of 25-29 years; 21.9% - at the age of 30-39 years; 10.5% - at the age of 40-44 years.

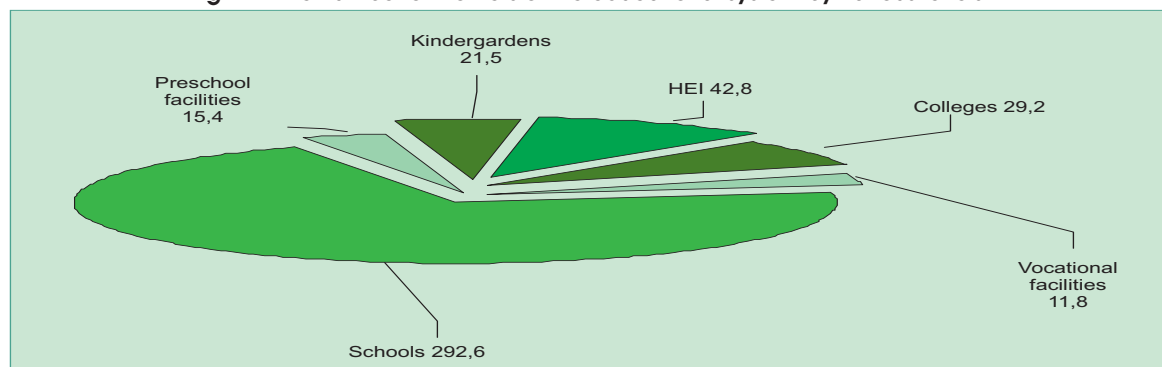
114.3 thousand of the unemployed had higher education (12.9% of their total number), the secondary vocational (special) - 151.1 thousand (25.3%), the secondary general - 226.9 thousand (37.0%), the initial vocational - 73.1 thousand persons (12.3%).

The basic indicators of the educational system. Indicators of the network and the scale of organizations of education under the developed conditions of the social-economic and demographic state of the RK in 2006 in comparison with the last years are shown in table 1.2.

Table 1.2. The basic indicators of the network and scale of organizations of education

	1991/92	1995/96	2000/2001	2005	2006
Daytime schools of general education	8575	8732	8309	8157	8055
Number of pupils, in thousands	3147,4	3059,8	3247,4	2824,6	2715,9
Facilities of the initial vocational education	471	404	282	307	312
Number of pupils, in thousands	225,6	154,3	86,1	104,2	106,1
Colleges	244	262	293	415	442
Number of pupils, in thousands	238,3	200,4	168,2	397,6	452,2
Higher educational facilities	71	112	170	181	176
Number of students, in thousands	260,0	272,7	440,7	775,8	768,4

The system of education covers 4 million 473 thousand of pupils and students and 432 thousand of workers. Fig. 1.2 illustrates distribution of workers by the educational levels.

Fig. 1.2. The number of workers of the educational system by various levels

The major characteristic of the social well-being of the country population is **Human Potential Development Index (HPDI)**. HPDI reflects a complex three-dimensional picture of human development on the basis of the following main directions: life span, educational level and incomes. Each of these base indicators quantitatively represents one of the main directions of the human development: longevity, education and standard of living.

Kazakhstan occupied in 2006 the 79-th place among 173 countries of the world by human potential development index. That means that our country refers to the states with an average level of human potential development. Norway rates number one according to this rating by the index of human potential development as it did the last year; it is followed by Sweden and Canada. The USA - ranks 6, Japan - 9, China ranks number 96. The place of Kazakhstan among countries of the former USSR is shown in table 1.3.

Table 1.3. Rating of the CIS countries and the Baltic States by the level of HPDI

Country	Ranking position
Estonia	40
Lithuania	41
Latvia	45
The Russian Federation	65
Byelorussia	67
Ukraine	77
Kazakhstan	79
Armenia	80
Georgia	97
Azerbaijan	99
Turkmenistan	105
Kyrgyzstan	110
Uzbekistan	113
Moldova	114
Tajikistan	122

Competitiveness. The main condition for strengthening the political and economic role of Kazakhstan in the global community is to ensure growth of competitiveness of the country and as a whole to increase the welfare of its population.

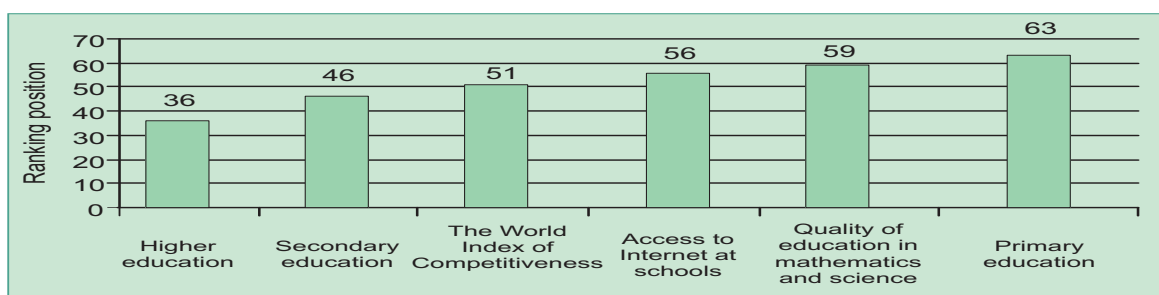
The accepted Strategy of accession of Kazakhstan to the number of the 50 most competitive countries of the world is the Program Document which has defined a direction for development of the Republic for the nearest decade and in the long-term prospect.

Estimation of competitiveness of the countries is conducted based on the technique developed by the World Economic Forum, on the basis of indicators of the aggregate index of competitiveness (Growth Competitiveness Index). The GCI is calculated on the basis of aggregating of three indexes, they also can be named as the primary factors for sustainable competitive economic growth: **technology, public institutions and macroeconomic environment**. Due to the index of macroeconomic environment Kazakhstan in 2005 was rated 51 in the aggregate rating while by the index of public institutions and technological indicator our country had more modest ranking positions - 76 and 77.

For estimation of the rating of competitiveness 239 criteria were analyzed in 2005, at that, under modern conditions the focus is made not so much on material resources and services but rather on the intellectual potential. In this connection a major aspect for achievement of the country competitiveness will be in investment in the human capital through provision of the modern and effective system of education, increase of intellectual level of labor forces.

Education is included in the factor „Labor forces“. A fragment of rating of Kazakhstan in 2005 is presented below in compliance with the educational components or constituents of the World Index of Competitiveness (fig. 1.3). In terms of the primary education our country ranks number **63** (the world statistics includes here the preschool preparation of children which covers **72%** of children and the preschool education, the scope of coverage of it is low - **23.2%**). Due to a wide access to higher education, Kazakhstan by this indicator ranks number **36**, by the secondary education - number **46**. In 2005, Kazakhstan ranked 51 by the world index of competitiveness.

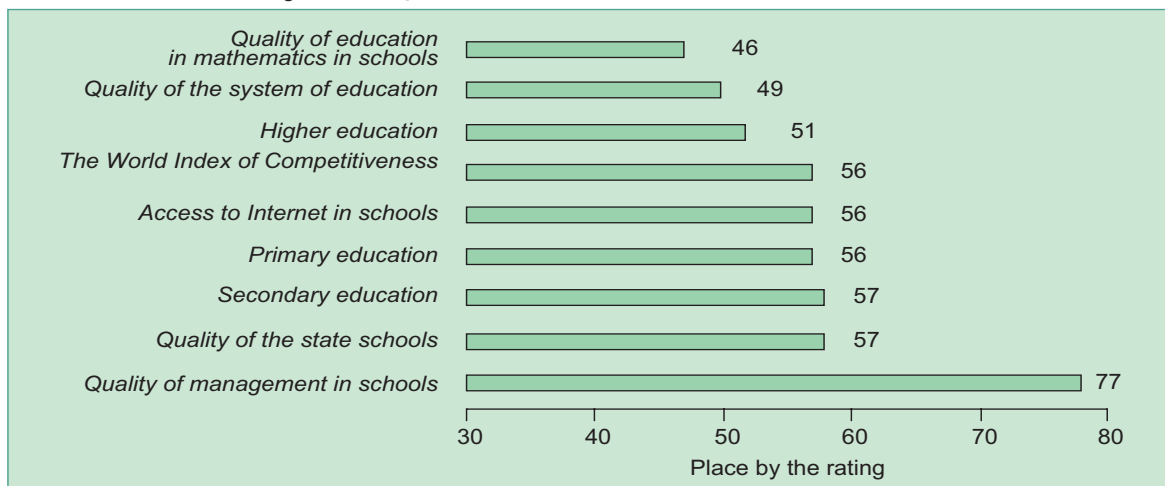
Fig. 1.3. Competitiveness of the Kazakhstani education, 2005.



By the educational components/constituents of the World Index of Competitiveness Kazakhstan takes quite a high place and given improvement of indicators of the preschool education and access to the network of Internet at schools can significantly go upwards in the world rating.

According to the World Report on competitiveness for 2006, Kazakhstan occupies the 56-th place by the World Index of Competitiveness saving at that the leading position among the CIS countries. On fig. 1.4 the level of competitiveness of the Kazakhstani education is shown with new educational constituents of the indicated index accepted in the World Report on competitiveness for 2006.

Fig. 1.4. Competitiveness of the Kazakhstani education, 2006.

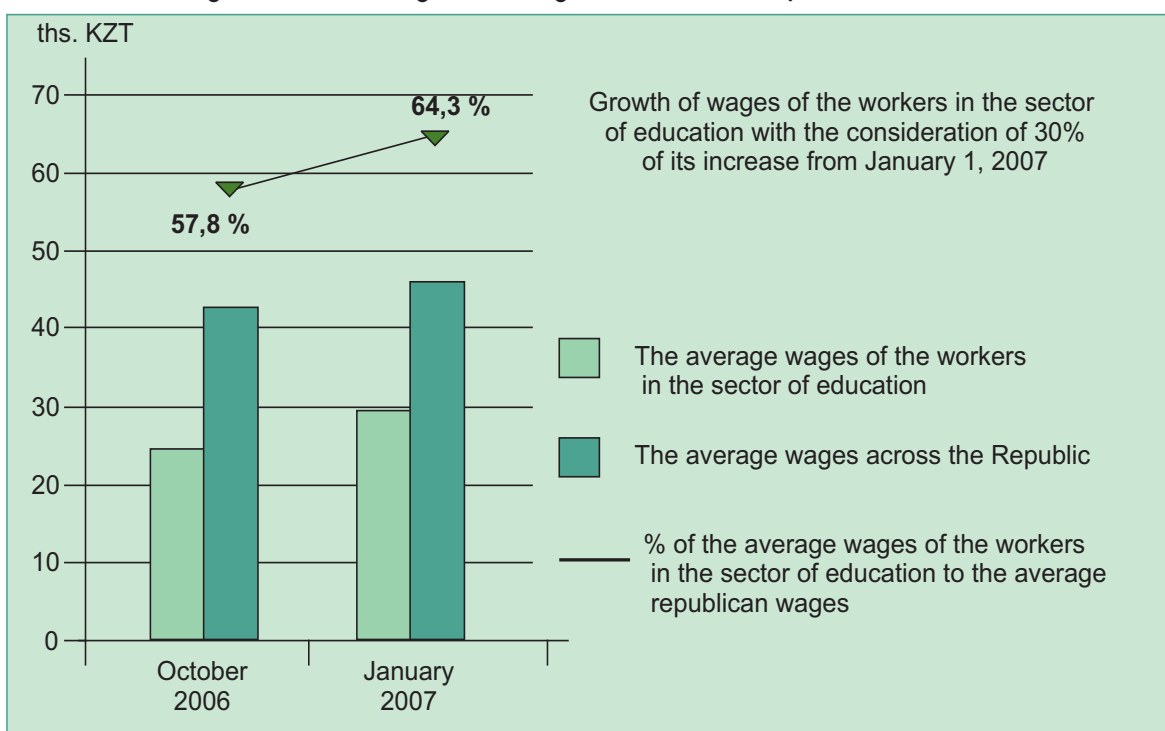


Educational policy of the state and its implementation

According to the State program of development of education in the Republic of Kazakhstan for 2005-2010 and also the Message of the Head of the state to the people of Kazakhstan of March 1, 2006, a complex of measures are being implemented aimed at further development of the educational system to ensure its accessibility and improve the quality of services granted by it.

Costs for the sector of education have increased more than 1.5 times in 2006 in comparison with 2004. In the critical 1993 they made 249 million dollars but in 2006 more than two and a half billion dollars were invested in education. The Republican budget of 2007 has foreseen the double increase of costs for education in comparison with 2005. Their share in the gross national product of the country will make about 4% which is similar to the share on education in such countries as Germany, Slovakia and Spain. By January 1, 2007, the growth of wages of workers in the sphere of education has been increased for 30% (fig. 1.5).

Fig. 1.5. Indicators of growth of wages of workers in the sphere of education



New low-cost models of preschool education are being developed: mini-centers, groups of short-term staying for children. 724 preschool mini-centers are opened in the regions.

New generation textbooks are developed, alternative textbooks are introduced, the system for expertise of the teaching literature functions. Children from needy families, children - orphans and children without parental custody are provided with educational literature at the expense of the state.

In 2006, at the expense of the state budget 37 new schools were commissioned, capital repair of 792 schools was conducted. Insignificantly, but the number of schools under emergency conditions and many shifts are being reduced. The program of supply of schools with the multimedia cabinets to study the Kazakh, Russian and foreign languages will be implemented.

Gradual transition to the 12-year secondary general education is ongoing. Information technologies are actively used in the process of teaching and learning for creation of the modern model of the secondary education and transition to international standards.

Independent external control of educational achievements of pupils in the form of the uniform national testing of the school graduates (UNT-ENT) and the intermediate state control of students of higher educational establishment and pupils of the 4 and 9 classes (ISC) is implemented. The system of independent estimation of quality of professional readiness, assignment and confirmation of qualification is introduced.

The Constitution of the Republic of Kazakhstan grants equal access to higher education on a competitive basis to its citizens. The best graduates of schools are taught in the higher educational facilities of the country at the expense of the state budget under educational grants. Transition to the model of the cadre training with the higher educational degrees like bachelor's degree through baccalaureate facilities and master's degrees through postgraduate facilities (magistracy) is being implemented. A new Classifier of specialty areas is developed and introduced for baccalaureate and postgraduate facilities (magistracy) that contains integrated specialty areas. The state obligatory standards are improved based on the use of the competency approach. New educational programs of the postgraduate (magistracy) and Ph. D training are introduced for some humanitarian and technical specialties in a number of the higher educational institutions.

The Concept is adopted for improvement of the system for preparation and attestation of the scientific and research-pedagogical staff to 2010, providing for creation of the national model for preparation of scientists of a new format through programs in Ph. D training for the priority directions of science.

The credit system is introduced in 40 higher educational facilities to pay for education. The world famous foreign scientists - teachers work in the Kazakh National University after Al-Farabi and the Eurasian National University after L. Gumilev. Every year 200 best teachers of the higher educational establishments are awarded on a competitive basis with the grant «The Best Teacher of Higher Education Institution» with payment of the grant per year for conducting scientific researches, including study tours and trainings in foreign higher educational institutions and schools. On the basis of the uniform criteria and indicators the database is created and updated about 253 best teachers of the higher educational institutions and schools. The data base is now actively used in the information - educational sphere.

According to Presidential Program „Bolashak” (Our Future) 1756 people got the stipends in 2005 to study in the elite universities of 35 countries of the world: in Harvard, Cambridge, Oxford and others.

The system of quality management is introduced in 42 higher educational establishments and schools that allowed ensure improvement of the quality of educational process.

The work is ongoing to further implement the state policy in the sphere of protection of rights and legitimate interests of children. The forms and methods of coordination of the interbranch approach are improved for the activity of various departments to achieve the main purposes of social support and protection of children, including the children who have appeared in a difficult life situation.

At the same time, dynamism of socio-economic development of the country requires constant improvement of the educational system.

In his Message to the people of the RK of March 1, 2006, President Nazarbaev N.A. indicated that «we need a modern system of education that meets the requirements and the needs of the economic and public modernization. The reform of education is one of the major tools allowing ensure real competitiveness of Kazakhstan».

However, the effective use of the Kazakhstani system of education as a factor to speed-up the socio-economic development of the country, to ensure its accession to the international market of educational services occurs inconsistently and it is not always accompanied by timely development of the necessary legal and organizational-economic mechanisms. The reform in the sphere of education is hindered due to insufficient theoretical study of the strategic goals for development of the educational system in Kazakhstan, of the roles to be played by each of the subjects participating in the socio-economic development and in forming the intellectual potential of country, all these factors retard the implementation of the educational reform, do not allow to use effectively the available resources and to attract additional resources in the sphere of education. The budgetary opportunity limits and a low potential of non-budgetary sources in combination with incomplete use of the market elements of managing considerably hinder formation of new economic conditions for effective development of the educational system. All this complicates realization of the rights of citizens to receive the qualitative education, aggravates clashes of interests of the people, society and the state in the process of creation, use and accumulation of knowledge, translation of economy of the state to the economy of knowledge.

Constant modernization of education is one of the major tools allowing ensure further social-economic development of Kazakhstan, its real competitiveness in the world and improvement of the life quality of the country population at large.

In his message the President of the Republic of Kazakhstan N. A. Nazarbaev «New Kazakhstan in the New World» of February 28, 2007 highlighted a thesis about a need to essentially improve the life quality of the country population. The RK President has set up a specific target to the educational system of Kazakhstan: to improve the quality of educational services: «The key factor of success of the educational reform is in achievement of such a level when any citizen of our country after having received his or her education and qualification can be in demand and a claimed expert in any country of the world. We should achieve the goal of providing qualitative services of education at the country-wide level in line with the world standards».

Training of personnel in the system of higher education. By the beginning of 2006/2007 176 higher educational establishments operated in the Republic of Kazakhstan, of them 53 state educational facilities. The total number of students - 768.4 thousand people, of them 25.2% receive the higher professional education, 73.8% - the higher base education (for bachelor's degree) and 1.0% - the higher scientific and pedagogical education (through the undergraduate or master's facilities). In comparison with the last academic year the number of bachelors has increased 1.3 times. At the same time the number of undergraduates/masters has decreased by 7.6%, the number of the students receiving the higher professional education by 39.6%. Such fluctuation in the number of students is related to changes in the structure of the students' enrolment to the higher educational facilities.

Of the total number of students - 50.4% study in the daytime educational facilities, 49.3% - in the by-correspondence facilities and 0.3% - get the evening form of education. At that, 50.8% of the total number of students attends the state higher educational institutions.

The number of students and undergraduates/masters receiving education at the expense of the state educational grants totals to 129.9 thousand persons (16.9%); training on a paid basis - 638.6 thousand persons (83.1%).

About 42.8 thousand teachers were engaged in the higher educational institutions and facilities of the Republic by early 2006/2007. Of them, 7.0% have a scientific degree of the doctor of sciences; 30.6% - candidates of sciences; 6.8% have an academic status of professor; 17.2% - are associate professors.

More than 29 thousand people have been awarded general educational grants. The results of enrollment in students have shown that the most popular higher educational institutions in high demand were the Kazakh National Technical University after K. Satpaev (2668 grants), the Kazakh National University after Al-Farabi (2014 grants), the Southern-Kazakhstan State University after M. Auezov (1773 grants). Then, by the rating of popularity: the Eurasian National University after L. Gumilev (1321 grants) and the Kazakh National Medical University after S. Asfendiarov (1309 grants).

Unfortunately, **the modern structure for the cadre training does not yet meet the demand in the market of labor forces.** In many regions overproduction of lawyers, economists and managers is observed while there is a huge shortage of specialists for industry, construction, transport, housing and communal services and social sphere. Training of personnel is not sufficiently planned even for such spheres that are under direct state regulation as the public service and the budgetary branches.

The issue of the personnel training structure becomes critical due to the lack of systematic and mutual relations between the real production sector and education. The educational system today interacts only with a small number of the operating enterprises, mainly industrial. That means that the overwhelming majority of employers at present and especially in SME practically do not participate in the process of forecasting the demand in the cadre and their preparation. Vocational education needs the volumes of work under placed orders. And hence the real sector of the country economy must play an active role in building up of the vocational education.

Chapter 2. Scale and accessibility of education

Preschool education and training

There is a positive tendency of growth observed in the network of preschool and before-school facilities of education. Thus, in 2005 in comparison with 2000 the number of permanent preschool organizations in the country has increased for 90 facilities and the number of pupils has increased for 52.2 thousand. In 2006 the number of preschool organizations with consideration of the organizations operating within less than 10 months has made (by data of the RK MOES) 2115 facilities. At the same time, the factor of scope of children covered by the system still remains low - only 27.6%. And this factor creates sort of a basis for strong differentiation of opportunities for many of children to receive qualitative education at the subsequent educational levels.

The general level of coverage of children with preschool education with consideration of children involved in preschool preparation in the daytime secondary general schools has a strong tendency to differentiate from region to region. This is caused by the following reasons:

- Degree of urbanization of regions: in cities there are more opportunities to receive preschool-education and training than in the rural areas;
 - Level of well-being of a region (GRP per capita), i.e. the richer is a region, the higher is the level of involvement of children in preschool education.

Thus, the rates of increase in the number of preschool establishments in regions, especially in rural areas do not satisfy the needs of the population.

The secondary general education

8055 daytime secondary general schools acted as of September 1, 2006 in the Republic of Kazakhstan; of them 98.4% are state facilities.

46.6% of secondary general schools (without special correctional organizations) with the Kazakh language of training and 2115 (26.3%) schools with the Kazakh and other languages of training (the so-called mixed schools) function in the country. In comparison with 2001 the number of children trained in the state language has increased for 4.9%. Schools with the Russian, Uzbek, Uigur, German, Tadjik, Ukrainian and other native languages are functioning too in the RK.

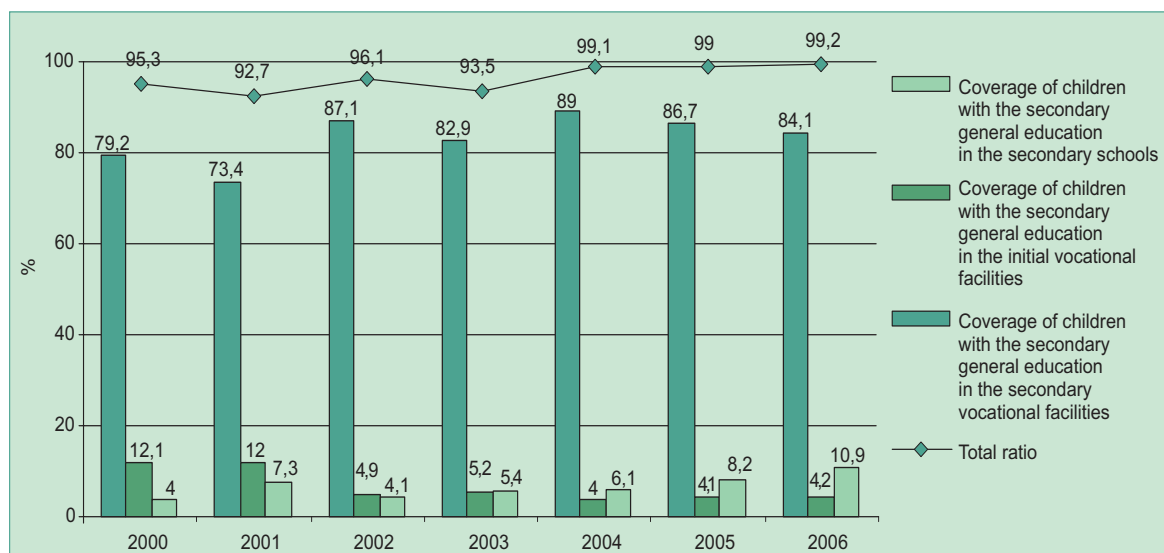
Reduction of the share of the population of school age owing to demographic and migratory processes has resulted not only in decrease of the total number of schools but also in increase of the number of schools with small number of schoolchildren (by 3.3% in comparison with 2001).

Specific share of *primary schools* in the total number of secondary general schools has made 14.1% in 2006; *the basic* - 15.0%, *secondary* - 68.2%, specialized correctional facilities and complexes like «school - kindergarten» - 2.7%.

The coverage ratio (except for the pupils of the correctional facilities) by the *initial step of the secondary general education* has constituted 99.5% against 99.3% in 2005году; *by the basic step of the secondary general education* - 99.8% against 97.6% in 2004.

During the last years pupils prefer to get secondary general education through the system of the secondary vocational education (in 2006, this share in comparison with 2000 has increased more than 2.5 times). At the same time the coverage of pupils *by the senior step of the secondary general education* (except for the pupils of the correctional facilities) has decreased in the RK from 86.7% in 2005 to 84.1% in 2006. The general ratio of coverage by the secondary general education has increased for 3.9% in comparison with 2000 (fig. 2.1).

Fig. 2.1. Structure of the coverage ratio by the secondary general education, in percentage



Specialized correctional organizations and facilities

100 correctional organizations and facilities operated in the RK in 2006 that covered 15948 children with the limited opportunities in development; of them, 12 organizations covered 1577 children in rural areas.

Despite of increase in the number of revealed children (from 120 665 in 2004 up to 131 465 in 2006), the scope of coverage by the specialized education does not increase. So, in 2004, of the total revealed children only 25.3% children were involved in specialized education; in 2006 - 23.3%.

Part of children of this category receives special correctional education in special class-rooms of some secondary general schools which makes a significant alternative to opening of new correctional organizations and facilities. In 2006, the number of such class-rooms in secondary general schools in comparison with 2004 has increased for 219 facilities and made 766, and scope of children has increased for 996 and has made 6 883 children. Training in special class-rooms of secondary general schools enables children with limited opportunities to live and to be brought up in a family environment. At the same time not all teachers have the appropriate specialized education in the area of defectology; and, the secondary general schools are not equipped with necessary specialized equipment and means of training.

The network of psychological-medical-pedagogical consultations, of speech therapy (logopaedics) facilities, rehabilitation centers and the cabinets of psychological-pedagogical correction has considerably expanded. At the same time, not in all regions the number of such facilities can meet the real demand.

All the necessary support is rendered to children and adolescents in need of special conditions for their education. Thus, 11 daytime secondary general schools for children with deviational behavior functioned in the RK in 2004 for 1051 pupils.

Additional education

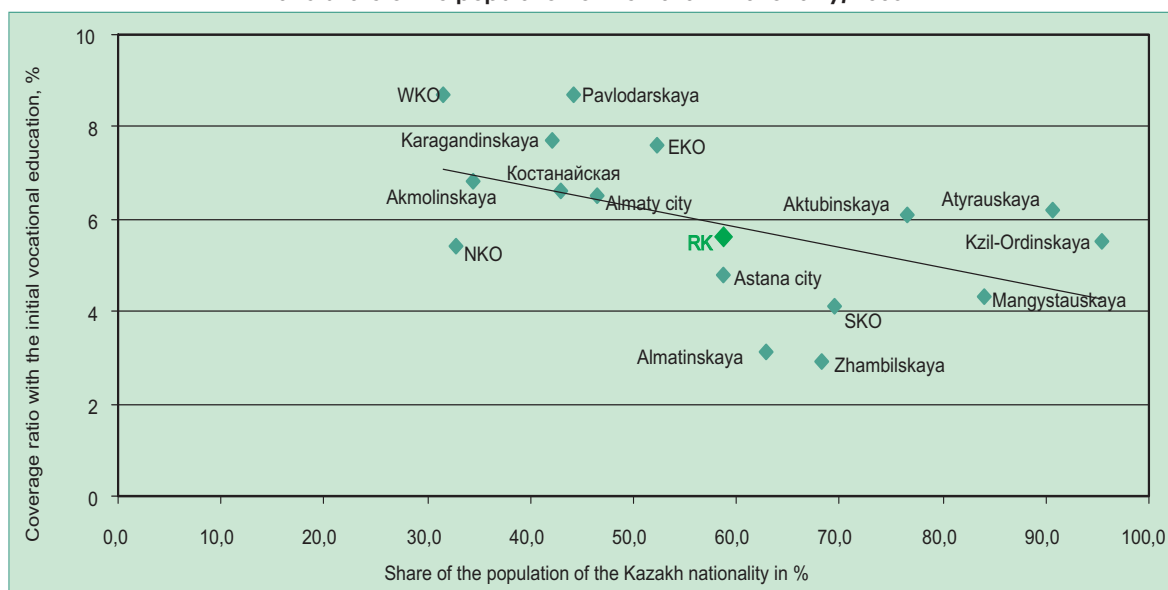
Within the past years due to various reasons the number of out-of-school organizations and facilities has considerably reduced in the Republic which basically granted extensive services of additional education. In the result of this, in 2005, only 11.7% of the total number of pupils of the secondary schools were covered by the system of additional education (in the rural areas this indicator has made 4.4% of the total number of schoolchildren of the rural secondary schools).

Initial vocational education

As of October 1, 2006, 312 educational institutions of initial vocational education functioned in the RK with the total number of 106.1 thousand pupils covered by them. In comparison with the previous year the number of educational institutions has increased for 5 facilities, the number of pupils - for 1.9 thousand people or for 1.8%.

Geographical location of educational institutions and facilities of the initial vocational education in the Republic has essential inter-regional differences: from 0.9 up to 3.1 organizations for 10 thousand population of the typical age group (14-19 years old) while the average Republican indicator is 1.7. The coverage of the population by the initial vocational education also essentially varies by regions: from 2.9% up to 8.7%, at that, the greatest indicators in terms of coverage are demonstrated by the regions with high levels of the average money incomes per capita. The analysis of interconnection between the scope of the initial vocational educational facilities and a share of the population of the Kazakh nationality has revealed a low level of interest on the part of the youths of the Kazakh nationality (fig. 2.2) to the initial vocational education.

Fig. 2.2. Coverage factor by the initial vocational education and share of the population of the Kazakh nationality, 2006



Secondary vocational education

By the beginning of 2006/07 in comparison with the previous year there was an increase in the RK in the number of educational institutions of the secondary vocational education for 6.5% and the number of students for 13.7%.

The growth in the number of pupils has taken place in all regions of the Republic, basically at the cost of expansion of the network of the non-state colleges. In comparison with 2000, the number of non-state colleges has increased in the Republic in 2006 for 152 and totaled to 269; at that, the number of students in them has increased almost 5 times and has totaled to 227.7 thousand people (for comparison: 173 colleges in the Republic are the state facilities with the total number of pupils of 223.9 people).

Two major factors are revealed that impact on the scope of coverage of the population with the secondary vocational education: the degree of urbanization, i.e. *the higher is the share of rural population in the region the lower is the coverage by this educational level*, and the monthly average regional nominal money income per capita, i.e. *the higher are incomes, the higher is the coverage ratio*.

The developed situation allows speaking not only about the growing demand in this educational level, but also about its direct dependence on solvency of the population.

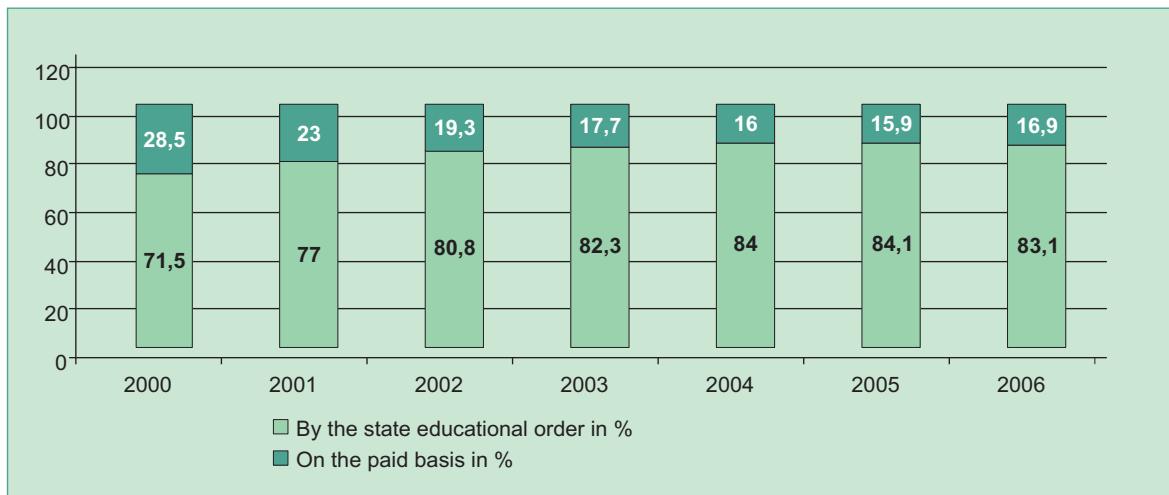
Higher Vocational Education

By the beginning of 2006/2007 176 higher educational establishments functioned in the Republic of Kazakhstan. The work aimed at optimization of the network of the higher educational system conducted by the RK MOES has allowed reduce the number of the higher educational institutions for 5 facilities through amalgamation of the educational facilities with a small number of students. Thus, the total number of students has constituted 768.4 thousand students of which 25.2% receive the higher special/professional education, 73.8% - the higher base education (bachelor's degree) and 1.0% - the higher scientific and pedagogical education (master's degree). In comparison with the last academic year, the number of bachelors has increased 1.3 times; the number of the students receiving the higher special/professional education has decreased for 39.6%; master's degree - for 7.6%. Such change in the number of students is related to the change in the rules and structure of enrolment to the higher educational institutions.

Coverage by higher vocational education in the RK in comparison with 2000 has grown for 49% in 2006 and has made 31.9% from the number of the population of the typical age of education. At that, the growth of prestige of the metropolitan higher educational facilities is noted among the population.

The number of students and masters that have received their education at the expense of the state educational order and grants has made only 16.9% of the total number of students and of the students educated on a paid basis - 83.1% (fig. 2.3).

Fig. 2.3. Structure of the coverage factor by the higher vocational education, in percentage



The increase in the total number of students noted in all regions of the Republic in comparison with 2000 occurs at the expense of the paid form that limits access to this educational level for the young people from low income families.

Changes in the rules of enrolment to the higher educational facilities introduced in 2005 and a very low share of the volume of the state order for preparation of the masters of sciences have resulted in low growth rates of the number of people with the master's degree across the country.

The number of pupils and students from CIS countries and other states that are educated in the secondary vocational and higher educational establishments of the RK has doubled versus 2000 and that can testify both to the growth of prestige of our educational institutions, and about of lower cost of the secondary and higher vocational education in Kazakhstan in comparison with other countries.

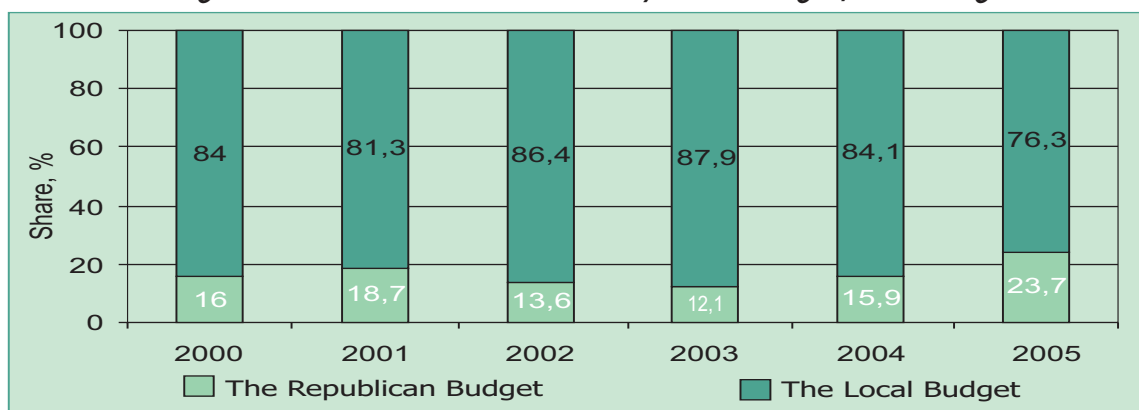
Chapter 3. Resources of the system of education

3.1. Financial resources

The basic financing of activity of the educational system carried out at the expense of the funds of the state budget considerably grows every year on: by 2005 it has increased three times in comparison with 2000 (from 84.7 billion KZT up to 256.9 billion KZT, accordingly). The increase in the ratio of the state expenditures on education is noted in the gross national product of country. At the same time, the level of the public expenditures ratio achieved as of today on education in the gross national product of the country of 3.4% is insufficient. To ensure high sustainability of the educational system according to the international standards the recommended level of the state funding on education should make 6-7% of the gross national product.

Financing of the state organizations of education in Kazakhstan is carried out from the Republican and local budgets (fig. 3.1). The basic share of financing (more than 80% of the total costs) for the system of education falls on the local budget.

Fig. 3.1. Distribution of costs on education by levels of budgets, in Percentage



Since 2003, the Republican budget of the Ministry of Education and Science of the Republic of Kazakhstan for the first time started to foresee special budget programs for allocation of the target transfers to the local executive bodies on education. At that, the annual increase is observed in allocation of the funds, the number of financed programs increases.

At distribution of target current transfers in 2005 the largest sum (2023.3 million KZT) was allocated for creation of the language laboratories and multimedia cabinets in the state facilities of the secondary education.

The state budget cost structure by educational levels

Within the last six years the total volume of the allocated funds has increased more than three times.

Since 2004 the growth of the relative share of costs for *preschool education and training* is observed that has replaced the tendency of reduction of funding for the given educational level.

The largest part of the funds is allocated by the state for *the secondary general education* because this level has the greatest number of pupils; at the same time, a reduction of a relative share of the funds allocated for this level is observed within the last years.

The initial vocational education maintains its share of financing in the system of system of education with inconsiderable changes.

Every year on, the share of financing by the state for *the secondary and higher vocational education* in the total educational system is reduced due to rapid development of the paid form for education in educational institutions of vocational education.

Other (miscellaneous) costs increase every year on in the system of education, including costs of development and provision of textbooks, informational facilities, methodological support to the organizations of education, conducting out-of-school activities, improvement of professional skills and retraining of the pedagogical staff, construction of educational facilities and etc. In 2005 in comparison with 2000, their relative share has grown twice, and in terms of money value - more than twelve times.

The structure of costs of local budgets by educational levels is considerably differentiated from region to region. So, at the level of *preschool education and training* the share of costs in the regional system of educations makes from 1.3% up to 10.5% of the total costs of education from the local budget. In 2005, the reduction of a share of costs of local budgets is observed on *the secondary general, initial and secondary vocational education*.

The total volume of costs of *retraining and improvement of professional skills* grows in the structure of costs of the state budget. Thus, the share of costs of retraining and improvement of professional skills at the expense of local budgets was reduced from 2000 to 2004 more than twice. In 2005 under the target transfers from the Republican budget the funds were allocated for retraining and improvement of professional skills of pedagogical workers in the regional (city) institutes of improvement of professional skills of the pedagogical

staff for the total sum of 431 million KZT that has allowed improve the situation in comparison with the previous years.

Costs of local budgets for wages of teachers

A large part of the budgetary funds allocated at the local level on education is spent for wages of teachers (on the average in the Republic - 60%). In terms of its dynamics by years, there is a positive tendency which is being strengthened of reduction of the share of wages in the total costs. This share of costs essentially varies depending on region. In the local budgets of education for initial, base and secondary schools and schools - kindergartens the share of wages of workers makes in the average by the Republic 80.9%, and in regions this value varies from 64.8% up to 91.9%. Accordingly, for development of regional system of educations, expansion of the network and availability of educational institutions less than a quarter of the budget of education is spent in the Republic.

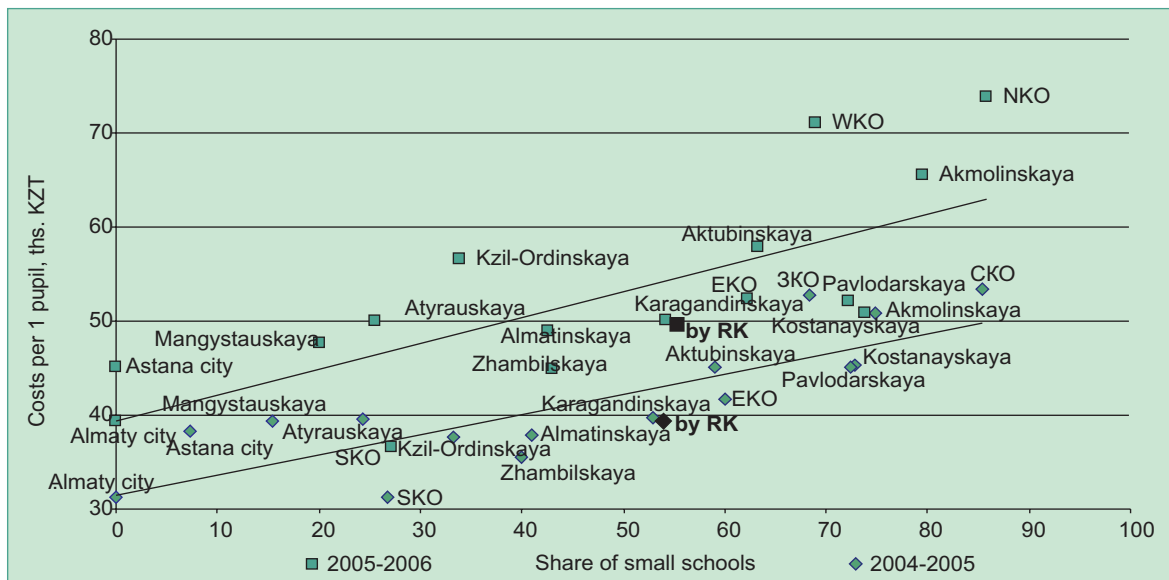
Costs per one student/pupil by educational levels

The total budget costs per each student/pupil by all educational levels stably increase while a serious disproportion is observed in their levels at the regional levels.

The volume of costs per one pupil in high school by regions significantly depends on the share of small schools (fig. 3.2).

Given that there is a strong negative tendency of increase in the country of the number of small schools the issue of their financing becomes especially significant and needs to be solved immediately.

Fig. 3.2. Costs per 1 pupil of the secondary general schools and a share of small schools



Costs of local budgets for purchase and delivery of textbooks and refurbishment of buildings of educational organizations

For purchase and delivery of textbooks for replenishing the library funds of the educational institutions of the secondary general education the budgetary funds are allocated since 2001 at the local level. A positive tendency is planned for the following period to increase the costs for these purposes. At the same time there is a serious disproportion in the volume of costs per each pupil by regions.

In 2000 and 2001 no funds were allocated for capital repair of buildings of educational facilities at the local level. The local budgets of 2002 have stipulated allocation of significant funds for these purposes (more than 10 billion KZT). In 2003, more than 13 billion KZT were assigned. But in 2004 the volume of the allocated funds for these purposes was reduced and made only 76 million KZT. In 2005, more than 6 billion KZT were spent from the local budgets for capital repairs.

3.2. Human resources

Educational and professional level of teachers

The educational level of pedagogical workers *of preschool organizations of education* and teachers of secondary general schools tends to improve within the last years: the share of the pedagogical staff with the higher educational background increases and reduces of HR with the secondary vocational education.

It is an impermissible fact that 3663 (or 1.3%) of teachers in the RK in 2006 had only the secondary general educational background.

One of indicators of the teacher's professional level is his or her *qualification category*.

The share of teachers *of the secondary general schools* with the higher, first and second categories tends to increase in 2003-2006 but slightly. Thus, in urban schools a decrease was marked in the share of teachers with the high and first category and while in the rural schools - with the high and second category.

42.5% of teachers didn't have any categories in Mangistau region in 2006. This renders a negative impact on the quality of educational achievements of pupils and is manifested in the UNT low results of graduates of schools in this region.

Distribution of the pedagogical cadre in the secondary education by age and experience

A dynamics is observed in the preschool facilities of increase in the share of the pedagogical cadre with experience up to 5 years, a slight decrease in the number of the personnel with experience up to 15 years and over 15 years of experience. The dynamics of teachers' distribution by experience in the preschool educational organizations testifies of inflow of young specialists.

In the secondary general schools the share of teachers in 2006 with work experience to 8 years has made 31%, from 9 to 20 years - 40%, over 20 years - 29%. In comparison with 2003, the increase is observed in the share of teachers with experience to 8 years, from 9 to 20 years and a significant increase of teachers with experience over 20 years speaks of „aging“ of the pedagogical staff.

The issue of aging of the pedagogical staff is acute for many countries of the world. So, the share of teachers at the age of 60 years old and above in the countries of the States of Economic Cooperation and Development totals to 3.1% (in Kazakhstan - 1%), to 50 years old - 75% of school teachers (70% of teachers in Kazakhstan - people up to 45 years old).

At the same time it is necessary to note that the teachers' age up to 30 years old is the most optimal for self-education and professional growth which is especially important under conditions of preparation to transition to 12-year school education.

Qualitative structure of teachers in the initial and secondary vocational education

A negative tendency was observed in the initial and secondary vocational education from 2000 to 2006 of decrease in the share of teachers and masters of the highest and first categories. This can result in reduction of quality of the given steps of vocational education.

It is remarkable that the share of teachers with a scientific degree increases in the secondary vocational education: in 2004, the share of candidates of sciences has made 2.2% or 530 persons; the share of doctors of sciences has made 0.3% or 67 persons.

Distribution of the pedagogical staff in the initial and secondary vocational education by age and experience

A small but positive tendency of growth in the share of teachers of the age groups from 30 to 45 years old and from 45 to 60 years old is observed in the initial vocational education within the period from 2003 to 2006 and decrease in the number of teachers above 60 years old.

In the secondary vocational education an increase in the share of teachers with experience up to 10 years and decrease in the number of teachers with experience over 25 years is observed in 2006 in comparison with 2003 that facilitates improvement of the age structure of the pedagogical staff.

For the same period the share of teachers at the age from 30 to 45 years is insignificantly reducing, at the age from 45 to 60 years - increases. This fact specifies of a tendency of „aging“ of the teachers' staff.

There is not any essential difference observed between the RK regions in the share of teachers by experience and age.

Wages of teachers

For the last five years a precise tendency is observed of increase in the average monthly wages in the educational system. At the same time the correlation of the average wages in the sector of education to the average salary in the national economy has grown insignificantly: from 59% in 2000 up to 59.7% in 2005.

The wages of teachers in Kazakhstan are determined based on the work experience and the qualification category. At that, neither the number of pupils in the class-room nor the pupil/teacher ratio nor the real results of the teacher's work do not make any impact on wages.

A need in the pedagogical staff and their preparation

By the beginning of 2006 the state secondary general schools stated about an *additional need in the pedagogical staff with the higher educational background (3967 people) and with the secondary vocational education (124 people)*.

Urban and rural schools feel acute need in teachers of mathematics, physics, the English language, information science and physical training.

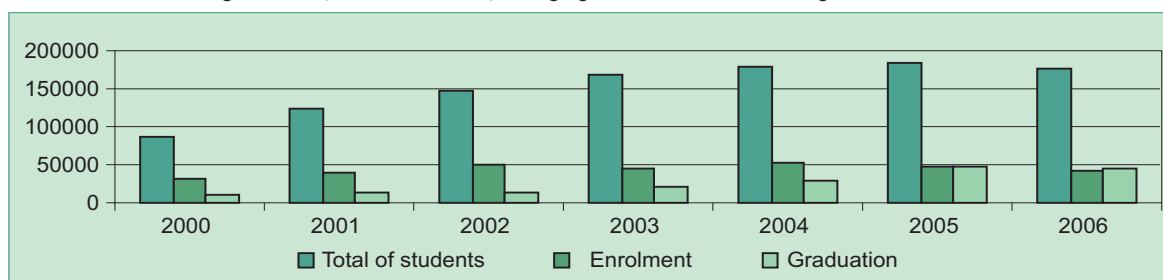
The share of vacancies in the manning table of pedagogical workers in *the initial vocational facilities of education* since 2000 tends to decrease due to decrease of retirement of the staff (dismissal). The share of vacancies in the manning table of the industrial training masters is slightly increasing although the cadre retirement practically does not change by years.

In the secondary vocational education in comparison with the previous year retirement of the staff has increased for 1.4% in 2005.

As a whole, a distinct tendency is maintained in the Republic from 2000 to 2006 of increase in the volumes of the pedagogical cadre preparation (fig. 3.3). At the same time it is necessary to note that the enrolment for the pedagogical specialties basically grows at the expense of the paid form of training.

The annually existing additional need of schools in the pedagogical cadre while there is a considerable increase in graduation of students with the higher pedagogical education is linked to absence of mechanisms for stimulation of students to work in the educational sector and to bind teachers to their work places. *The extensive growth in the volume of teachers' preparation does not solve the issue of*

Fig. 3.3. Preparation of the pedagogical cadre with the higher education



providing the schools with teachers.

Starting from 2000 there is a tendency observed in the higher educational institutions of reduction in the share of candidates of sciences, professors, associate professors and a slight change in the share of doctors of sciences. So, the share of candidates of sciences in 2005 in comparison with 2000 has decreased from 32% to 29.4%; the share of professors and associate professors for 1.6% and 4.2%, accordingly.

Productivity of preparation of the scientific and pedagogical staff through postgraduate study and Ph.D. studies has a clear tendency to annually decrease during the last five years. Introduction of new master's and doctor's (Ph. D) programs on the basis of 8 higher educational facilities of the RK entails reduction of volumes of preparation of students. This can have a negative impact on the tendencies observed in the qualitative and quantitative indicators of the cadre structure of the higher educational institutions. That is why there is a need to develop a special program on provision with the scientific and pedagogical cadre to the RK higher educational facilities.

Improvement of professional skills and retraining of the cadre

Improvement of professional skills and retraining of the workers of the educational sector is implemented once in five years and is a compulsory condition for increase of a pedagogical worker's category.

Within 2001-2004 a tendency was observed to increase the planned and actual share of the teachers that have increased their qualification on a budget basis.

When comparing the indicators on improvement of professional skills of workers of the educational sector of 2006 with 2005 it is necessary to note that the state order and its fulfillment has decreased for 20 756 people. Given the transfer rates there was a decrease of general indicators from 101 795 people in 2005 up to 96 076 people in 2006. The given regress speaks of the unjustified decrease of the budget funding for the regional institutes for professional development (further training).

Under conditions of the educational services market development each teacher should have the right and a possibility to build own strategy of his or her professional growth. Therefore, it is needed to develop a mechanism for receiving by each teacher once in five years of the nominal educational grant (a cheque) financially ensured by the state so that a teacher could decide to what organization of improvement of professional skills (advanced training) he or she could pay the received funds for effective increase of the given teacher's professional level.

3.3. Material and technical resources of the state organizations of education

Technical state of buildings of the educational facilities

From 2001 to 2006 based on the RK MOES data 651 facilities are opened of preschool education, including: 108 kindergartens and 543 preschool mini-centers on the basis of the educational facilities. At the same time, the material and technical state of the base of the existing *preschool organizations* still does not meet the modern requirements: in 2006, 78.1% of their total number was accommodated in standard buildings; 21.9% in the fitted buildings. Within the period from 2001 to 2005 only 682 new seats in preschool organizations were introduced in the Republic. Of them, only 262 in the rural areas.

By regions of the country the number of *typical schools*, school buildings in emergency state and also of those that need capital repair not only considerably varies by regions but also directly depends on allocation of funds from local budgets.

The share of *buildings of schools* that need capital repair has made 32.8% in the Republic in 2006; the share of buildings in emergency state - 4.5%. The share of the schools located in fitted buildings has not changed in the Republic essentially for 2000-2006; and in 2006 it has made 42.1% of their total number.

251 new schools were built from 2001 to 2005, including 48 schools in the rural area. In 2005, 66 more schools were opened in the Republic. At the same time, a significant shortage of seats at schools is still felt and there is still a three-shift study mode at schools.

The situation can aggravate in the nearest future because transition to 12-year school education from 2008 foresees organization of profile training for the senior step of the secondary general school. It will require input of a considerable number of new educational facilities - profile schools, profile schools - boarding facilities, boarding schools, complete equipping with the educational equipment of the cabinets of physics, chemistry, biology, a significant reconstruction and capital repair of the existing buildings.

Measures are taken at present to suspend closing of *facilities and organizations of additional education* and in some regions to restore them and open new facilities. At the same time, the number of buildings in emergency state does not decrease; the number of buildings that need capital repair has not significantly reduced; in 2006, 35.8% of organizations were accommodated in standard buildings.

Provision of students with hostels

Every year the percentage of students and pupils of the educational organizations and facilities of *the secondary vocational education provided with hostels* reduces. So, if the given indicator constituted 74.8% in 2000, then in 2006 - only 54% that testifies to strengthening of this negative tendency. The regional provision of students with hostels is not uniform: from 100% in Zhamilskaya region up to 6.6% in Atyrauskaya region.

The majority of students have no necessary conditions for living and this fact makes an impact on quality of their education and on opportunity to finish their education because the majority of families cannot cover the rent costs of apartments. At the same time 34% of the available places in hostels of colleges are used not according to their primary assignment.

The analysis of provision of hostels to the students of *the higher educational establishments* shows that from 2000 to 2006 there was a decrease in the given indicator from 87% in 2000 to 75.5% in 2006.

Teaching cabinets and laboratories

In 2006, provision of schools with the necessary cabinets considerably varies depending on regions. The highest indicator of availability of such cabinets in schools for lessons in the basics of information sciences and in computer facilities makes 91.6% of the total number of schools. At that, the given indicator tends to increase from every year on. The percentage of provision of schools cabinets for lessons in the Kazakh language and literature makes 64% which is quite high. Provision of schools with the cabinets for lessons in foreign languages has constituted 47.4% in 2006.

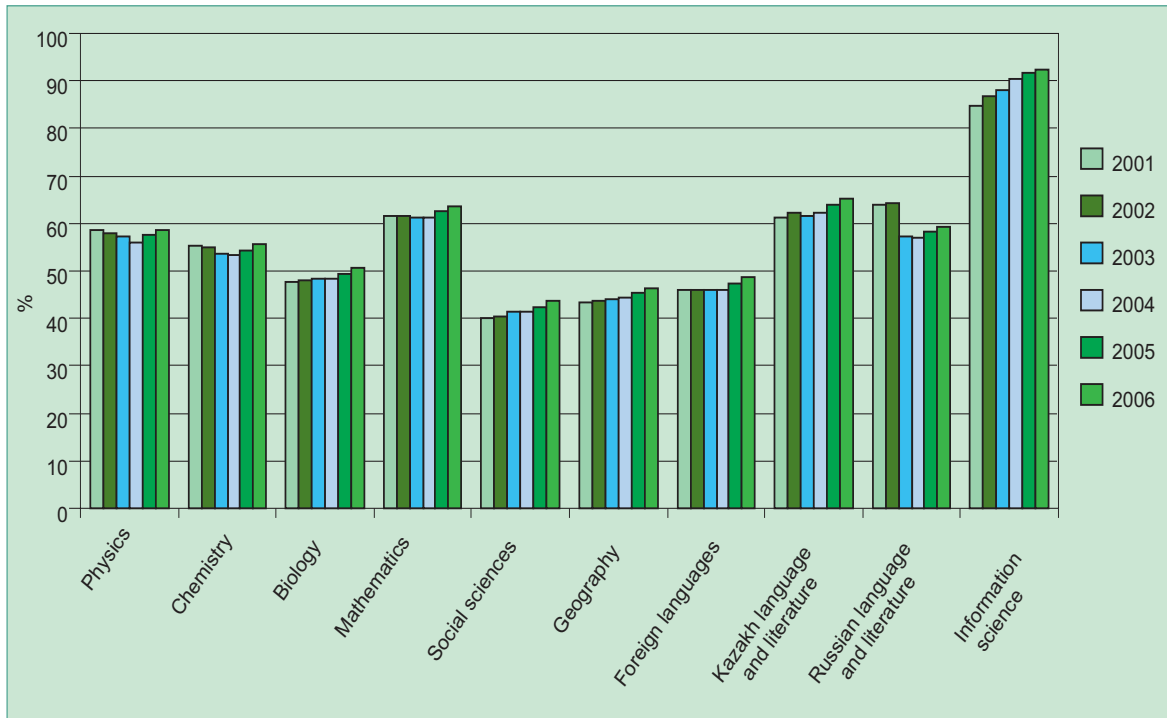
Provision of schools with teaching cabinets in mathematics, physics and chemistry has not improved since 2001 (fig. 3.4).

The number of schools with sports halls and libraries has increased in comparison with 2001: in 2006 their number has totaled to 66.2% and 86%, accordingly. Only 1.5% of the secondary general schools have swimming pools.

Organization of hot meals

The share of the pupils covered by hot meals at schools has increased for 25% from 2000 to 2005. The budgetary and non-budgetary funds are attracted to provide *free hot meals* to pupils from needy families and the families with many children dependent children and for children - orphans under trusteeship (guardianship) of citizens. For the period from 2001 to 2005, provision of free hot meals for such children has increased. In many regions of the Republic free meals are organized at the expense of the sponsorship of legal entities and farmer's facilities. The coverage of students with hot meals tends to grow in the initial vocational facilities of education: from 2000 to 2005 - for 17%. Thus, the share of pupils in the initial vocational facilities

Fig. 3.4. Provision with educational cabinets of the secondary general schools



of education covered with hot meals differs from region to region: if say in Astana, in Southern-Kazakhstan, Western-Kazakhstan, Atyrau regions it makes 100%, then, in Aktubinskaya region - 11.3% and in Almaty - 3.4%.

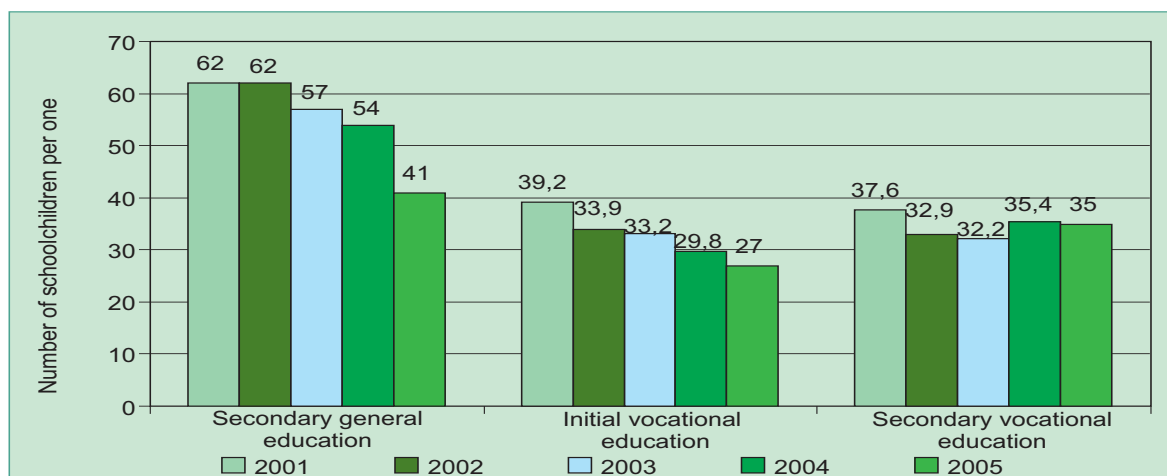
Informatization of education

According to the State program on informatization of the secondary system of education approved by the order of the RK President as of September 22, 1997 - 3645, all secondary general schools of the country were provided with computers since 2000 on a stage by stage basis. Equipment with the state-of-the-art computer class-rooms is conducted at the expense of the local budgets, through target transfers and sponsorships; unfortunately, replacement of the out-of-date computers is not always effectively conducted.

From 2001 to 2005, there is a tendency of reduction of the number of schoolchildren per 1 computer reflected in the corresponding indicator for *secondary general schools*: from 62 pupils to 41. The given figure speaks of a positive tendency in this area.

The dynamics of provision with computers of educational facilities of the *primary and secondary vocational education* also tends to grow from 2001 to 2005 (fig. 3.5).

Fig. 3.5. Number of pupils per 1 computer by levels of education



According to the RK Law «About social and medical-pedagogical correctional support to children with limited opportunities», the introduction is ongoing in the Republic of programs in computer engineering, individual programs of rehabilitation for each child and modern information technologies for training of children with limited opportunities. The given measures facilitate social rehabilitation and support to children - invalids and provides for their right to get qualitative education.

Provision of textbooks

58 million school textbooks were developed and issued from 2000 to 2005 under 832 titles, 2397 - teaching-methodical complexes, 321 - electronic textbooks. At present pupils of 1-10 grades of the secondary general schools are taught by the textbooks of new generation in the Kazakh, Russian, Uigur and Uzbek languages.

In 2001, by the order of the RK MOES electronic textbooks in 7 subjects were developed, and in 2006 - electronic textbooks and electronic multimedia training programs in 33 subjects. All electronic educational publications are developed in the Kazakh, Russian languages and are used in the teaching process of schools.

Since 2002, annually the Republican budget allocates the necessary funds for development, approbation and publication of original textbooks and teaching-methodical complete sets in the Kazakh and Russian languages for mentally retarded children, children with hearing and speech disorders.

The Republican establishments, the Kazakh diaspora of the CIS countries are also supplied with the textbooks and teaching-methodical complexes. Pupils of boarding facilities, children - orphans, children without custody of parents, children with limited opportunities, invalids, invalids since childhood and children of families with many children, needy families and children who by their state of health for a long time are trained under the programs of the secondary general education in medical facilities are provided with textbooks free of charge.

A positive tendency is observed in provision with textbooks of school libraries (except for the teaching-methodical literature) both in the urban and in the rural areas. The school libraries provided 20.5 textbooks per one schoolchild in 2005.

The indicator of pupils' provision with textbooks essentially depends on level of allocation of the local budgetary funds, the number of population and its solvency. In 2006, the contingency of pupils across the Republic which have been provided with textbooks free of charge to use on a returnable basis through school libraries constituted 67.5% of the total number of schoolchildren. Other pupils purchase textbooks through retail trade but owing to the high cost of the given sort of literature it is not always affordable for families with the average and low income generation opportunities to buy textbooks for their children. It is necessary to note that in many regions of the RK there are still classes in schools where only 30-40% of the total number of pupils in class are provided with textbooks. The given fact negatively impacts an opportunity of a child to get good education.

For implementation of the Constitutional right of children for free secondary general education, creation of conditions for children to get qualitative education it is necessary to solve the issue of total provision with textbooks of schoolchildren free of charge in all schools of the Republic at the expense of the state budget.

Since 2003 multimedia teaching programs for educational institutions *of the primary and secondary vocational education* started to be developed for the first time.

According to the data of the initial vocational educational facilities the number of textbooks and teaching-methodical literature per indicated quota of schoolchildren taught in the initial vocational facilities has decreased for 20%; and in the secondary vocational educational facilities almost for 50% from 2000 to 2006. The main reasons of decrease are the old funds, the issue of development of the textbooks in the state language and most important - a sudden increase in the number of pupils.

A positive tendency is observed in provision with textbooks and scientific literature of students of the higher educational establishments.

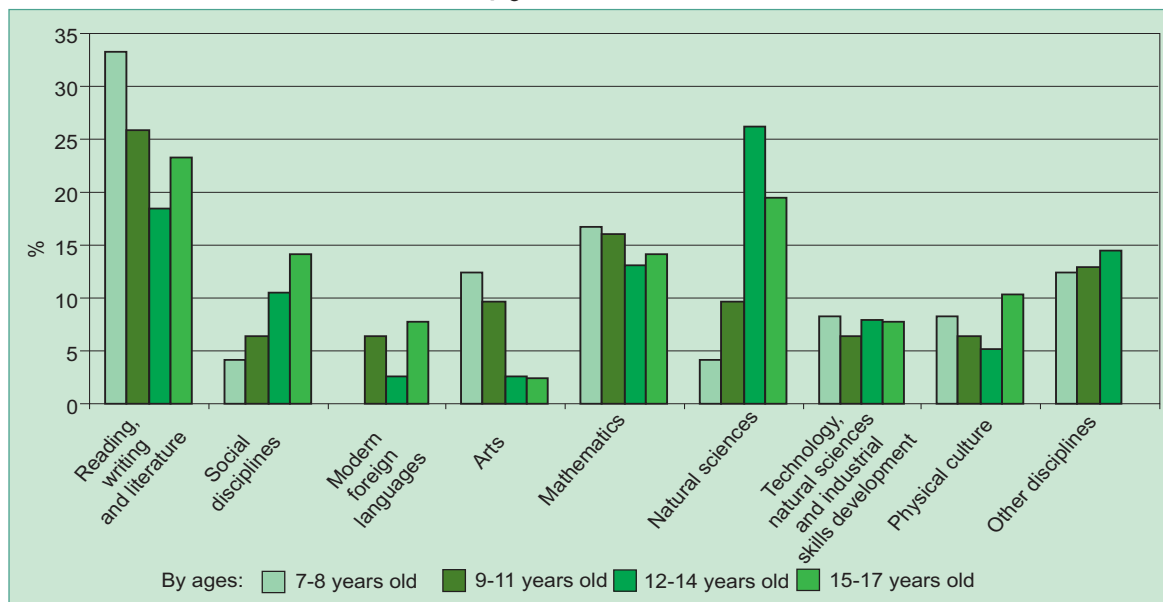
Starting from 2005, for the first time the Republican budget started to allocate funds on an annual basis for development, purchase, translation, publication of textbooks for higher educational institutions, including the disciplines in new educational programs - for master's degree and Ph. D. degree, on translation and development of textbooks in the state language.

Chapter 4. Quality of organization of the process of education

Structure of curricula

One of characteristics of organization of teaching and educational process is the structure of curriculums or distribution of the number of hours allocated for study of subjects obligatory for all pupils (fig. 4.1).

Fig. 4.1. Structure of the curriculums by areas of education in the state secondary general schools of Kazakhstan for 2003.



In comparison with the international indicators the structure of the curriculums allocated less time for the Kazakhstani pupils to study foreign languages, social disciplines and for physical training. The increased number of hours is designated for reading and writing skills development, literature, natural sciences, technologies and industrial skills.

The academic load (class hours)

In Kazakhstan, the annual academic (class-room) hours' load on children at the age of 7-8 years makes 816 hours, of 9-11 years old and 12-14 years old - 918 hours. And for children at the age of 15 years old and older the annual class-room hours' load makes 1326 hours. This is *the highest load in comparison with all countries of the world*.

A weekly class-room load on schoolchildren due to transition to 12-year education is maintained at the same level.

Ratio of the number of schoolchildren per number of the pedagogical cadre

The ratio of 9.0 children per one teacher is stated at the level of *preschool education* in the average in the RK while *in the primary education* - 16.7 pupils per one teacher.

The ratio of pupils and teachers in *the basic and secondary general education* facilities is considerably reducing in comparison with the primary education and makes 10.5 pupils per one teacher.

In *vocational educational facilities* the ratio of pupils and teachers makes for the initial vocational education 10.2 students per teacher; in the secondary vocation - 14.4; for the higher vocational education - 11.

The presented data allows making a conclusion that there is surplus of the pedagogical staff in preschool, general secondary, initial vocational and secondary vocational facilities of education that entails a rise in the cost of education and inefficient use of the budgetary funds. In the higher educational facilities, a shortage of the pedagogical cadre is observed on the contrary.

Completeness of classes (groups)

The comparative analysis of the data by years allows drawing a conclusion that there is a negative tendency of growth in the shortage of places in the preschool facilities in the Republic not only in the urban areas but also in the rural areas.

Completeness of classes with pupils in schools of the secondary general education tends to decrease in the Republic both in the urban and rural areas. This tendency is related to dynamics of the number of school children which tends to decrease in all regions of the Republic in the last years due to a demographic situation.

School shifts (sessions)

The share of pupils attending *the second shift* is still large. In the average it makes 35.5% in the Republic and varies by regions from 22% up to 44.5%.

The share of the pupils attending classes in the *third shift* is minor and makes 0.8%. This indicator varies from region to region from 0.1% up to 3.3%.

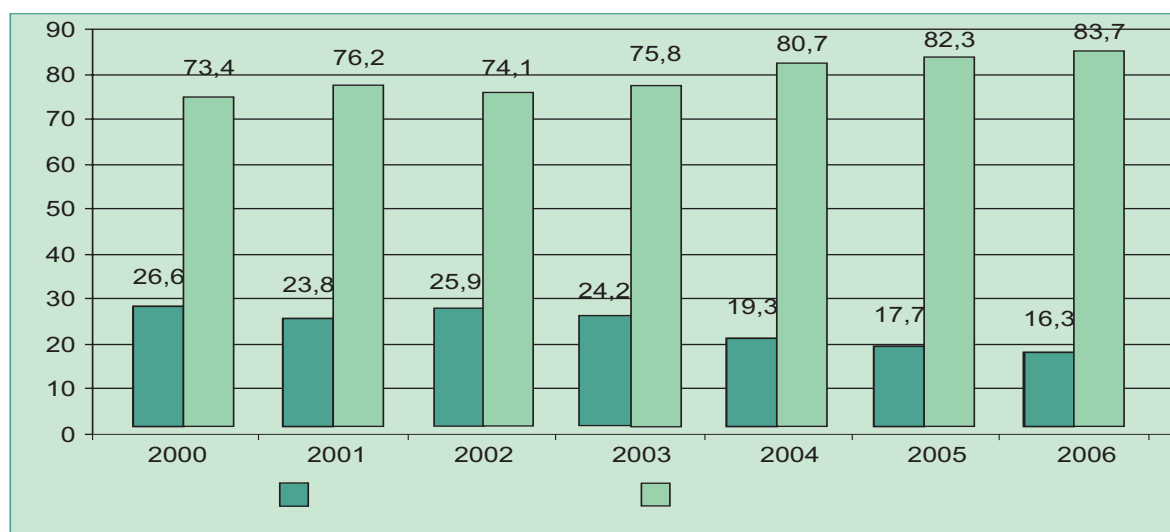
Forms of the teaching process organization and the language of teaching

The main share of children (99.6%) in the *initial vocational facilities* are covered by the daytime form of training, in the *secondary vocational facilities* the share of pupils of *the daytime form* of education increases, while *the by-correspondence form* of education tends to decrease from every year on.

In the *secondary vocational facilities* pupils receive education based on the state order and on paid terms.

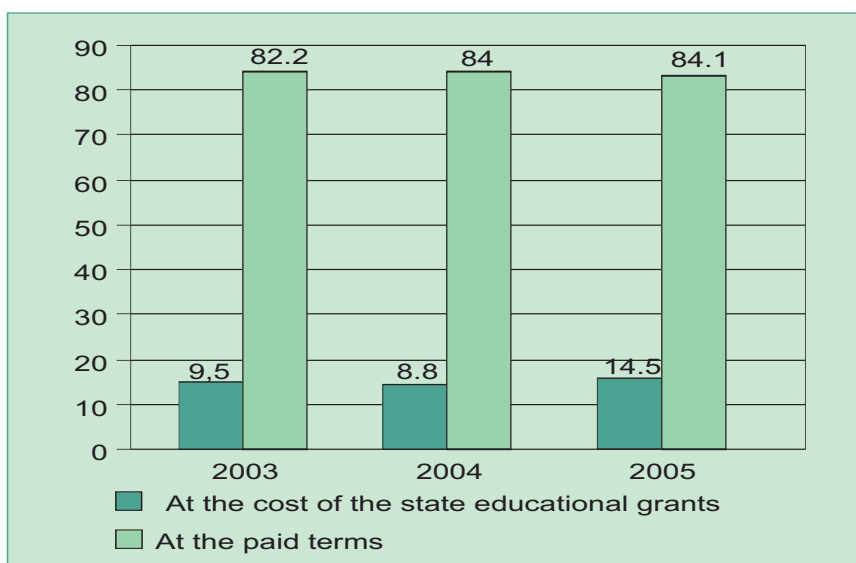
Comparison of the share of students of the secondary vocational educational institutions who are trained based on the state order and paid terms shows a growth in the number of students trained on a paid basis and reduction of the share of students who study under the state order (fig. 4.2).

Fig. 4.2. A share of students of the secondary vocational education facilities to the total number of students trained under the state order and on paid basis, in percentage.



In *higher educational establishments* students are trained under the state educational orders and on paid basis too. The share of students trained under the state order tends to increase but it is still very low. This limits equal access to higher education due to insolvency of the population. At the same time the share of students

Fig. 4.3. Share of students of the higher vocational education to the total number trained under the state order and on paid basis, in percentage



trained on paid basis (fig. 4.3) is increasing.

One of the quality indicators of the teaching process organization is *possibility to choose the teaching language for students and pupils*.

Of the total number of secondary general schools in the Republic, 46.2% are schools with teaching in the Kazakh language, 26.1% in the Russian, 26.1% in the Kazakh and Russian languages and 1.6% in other languages.

Every year the share of the pupils trained in the state language in *the secondary and higher vocational educational facilities* increases.

Organization of teaching based on educational programs of increased level

From year to year the network of educational facilities for gifted children expands in the RK. So, if in 2004, 65 educational facilities for gifted children operated with the total coverage of 20605 pupils, then, in 2005 their number has increased up to 84 with coverage of 26963 pupils. The network of schools granting an opportunity to profoundly study various subjects expands.

Work in the area of the youths' bringing up

The Comprehensive program of bringing up in the educational organizations and facilities, the Program of the youth policy for 2005-2007, the State program of patriotic education of the RK citizens 2006-2008, the Concept of moral - sexual education, the Strategic program on counteraction HIV/AIDS are developed in the country. More than 200 children's and youth organizations function in the RK.

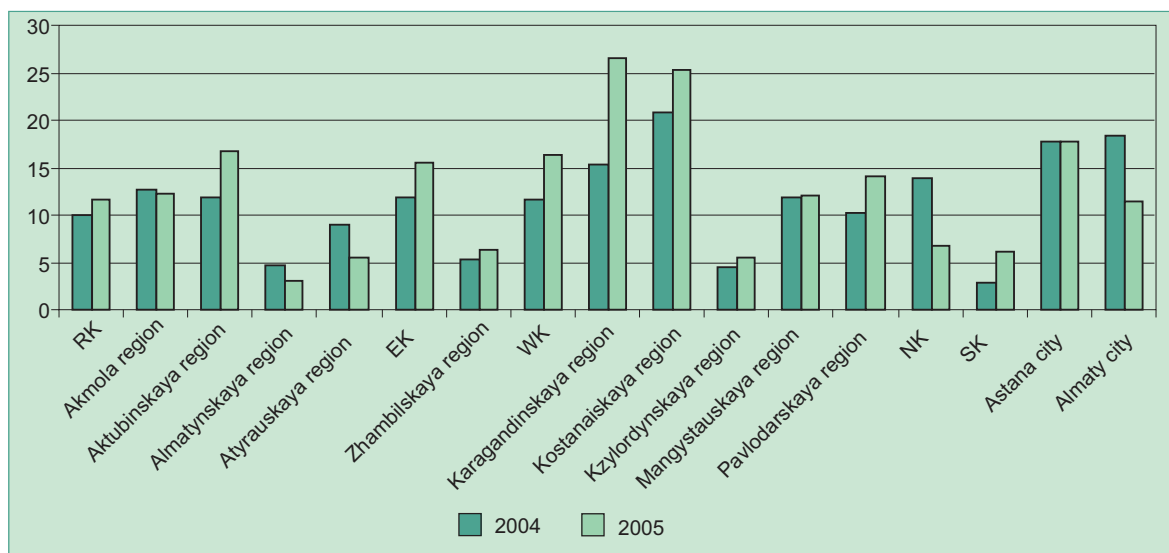
The national initiative «Zhasyl El» serves as an effective mechanism of patriotic and labor education of the young generation which is aimed at bringing up the younger generation of citizens of the Republic to be responsible for the future prosperity of Kazakhstan.

For prevention of offences, use of harmful substances, organization of spare time of minors 541 out-of-school organizations, 649 domestic clubs and 21953 sports sections function in the Republic.

System of organization of additional education

There is a growing tendency within the last years to involve pupils in the additional education. This testifies to the fact that additional education is in good demand. The share of pupils covered by additional education in 2005 versus 2004 has increased for 1.5% and versus 2002 for 3% (fig. 4.4).

Fig. 4.4. A share of pupils receiving additional education to the total number of schoolchildren of secondary general schools (without pupils of the specialized correctional facilities and organizations), in percentage



Structure of specialists' training

The analysis of the specialists' training in *the initial vocational education* in the Republic allows making the following conclusions:

- In the graduation structure an increased specific weight of such specialty areas and trades is observed as the sphere of services, agriculture and forestry, technology of machine building and operation of the transport, construction and municipal services;
- Insufficient specific weight of specialists' preparation is observed in the initial vocational education in the sphere of electric power industry, chemical engineering, mining, metallurgy, geology and exploration of mineral resources.
- The structure of specialists' preparation in the *secondary vocational education* in Kazakhstan shows the following:
 - The structure of the specialists' training shows an increase in the specific weight of humanitarian arts;
 - Insufficient specific weight of prepared specialists of technical specialty areas;
 - There is shortage of mid-level specialists for the sphere of services (service), technology of commodities production and food products.

The structure of specialists' preparation of *the higher professional education* testifies to the fact that in the last years a surplus is observed of specialists in the sphere of education, economy and humanitarian disciplines. The share of the prepared specialists with the higher educational background in such spheres as electronics, electro-mechanics, instrumentation technologies, transport construction, services, and technology of commodities production is small.

Chapter 5. Results of functioning of the system of education

Quality of educational achievements of pupils and students

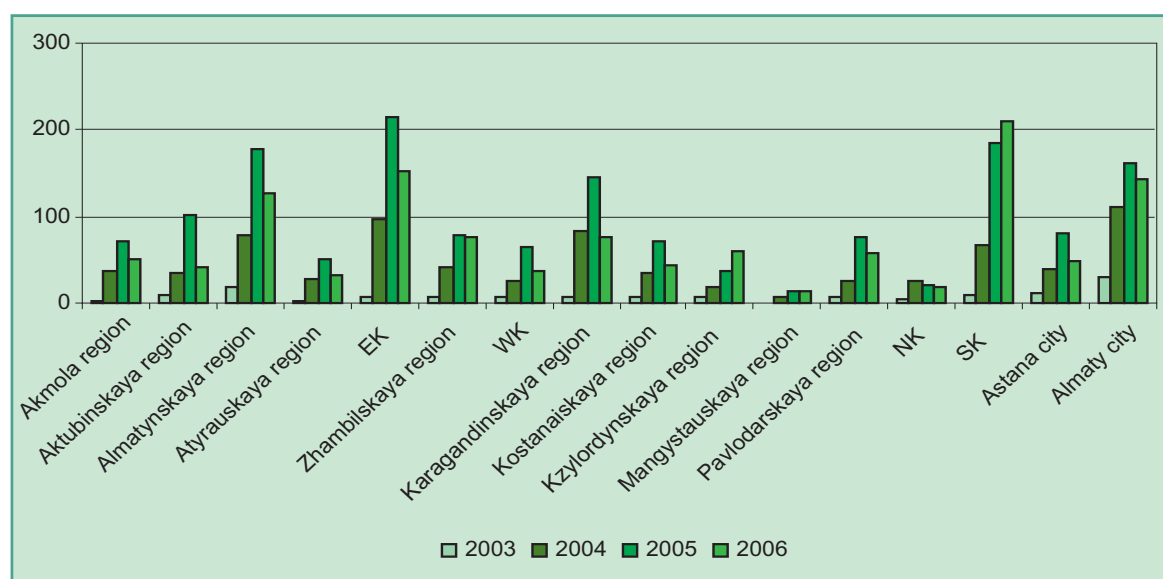
For the period from 2003 to 2005 there is an increase observed in the share of graduates who are leaving school with „Alтын Belgi” (Golden attestation) and with certificates of distinction. And this is one of performance indicators of educational achievements of pupils.

Increase of the number of schoolchildren awarded with „Alтын Belgi” can speak of quality improvement in education which is more related to introduction of changes in Regulations about this award in 2004 and cancellation of rigid requirements to applicants. In 2006, there is a decrease in the number of school graduates with Alтын Belgi relating to introduction of changes in the rating scale of the uniform national test (fig. 5.1).

The number of owners of the award Alтын Belgi per 10000 graduates increases in the average in the RK from 6.19 in 2003 up to 70.63 in 2005, i.e. more than 10 times and decreases to 62.59 in 2006.

There is a decrease observed in the share of graduates who have received the certificate with distinction: many pupils with distinctions have not confirmed their knowledge at UNT. This fact testifies to the

Fig. 5.1. Number of school graduates with Alтын Belgi, in persons



underestimated level of requirements to „the candidates” in best pupils with certificates of distinction that finished school. In 2005, only 67.2% of graduates have confirmed their right to receive the mark «Alтын Belgi» and certificates with distinction.

The evidence of competitiveness of the RK educational system is achievements of the Kazakhstan schoolchildren in the International Olympiads and scientific competitions. The number of awards won by our pupils at the intellectual events of international level is related to the growth of the number of educational facilities for gifted children from every year on.

The results of teaching under programs of *vocational education* are characterized by educational results of graduates.

The share of students of the final year in IVEF which have received the categories *lower than the established ones* has increased to 2005. In 2006, a reduction of the given indicator is observed both in some regions and country-wide. Each tenth graduate of IVEF in Akmola region and each eighth student in Astana city received categories below the established categories. The share of pupils in IVEF who have received categories *higher than the established and diplomas with distinctions* has not changed much in the RK within the last three years.

The share of graduates *who do not comply with the qualification requirements and not received their diplomas* has doubled. These indicators testify to decrease in the quality of education in the initial vocational education facilities.

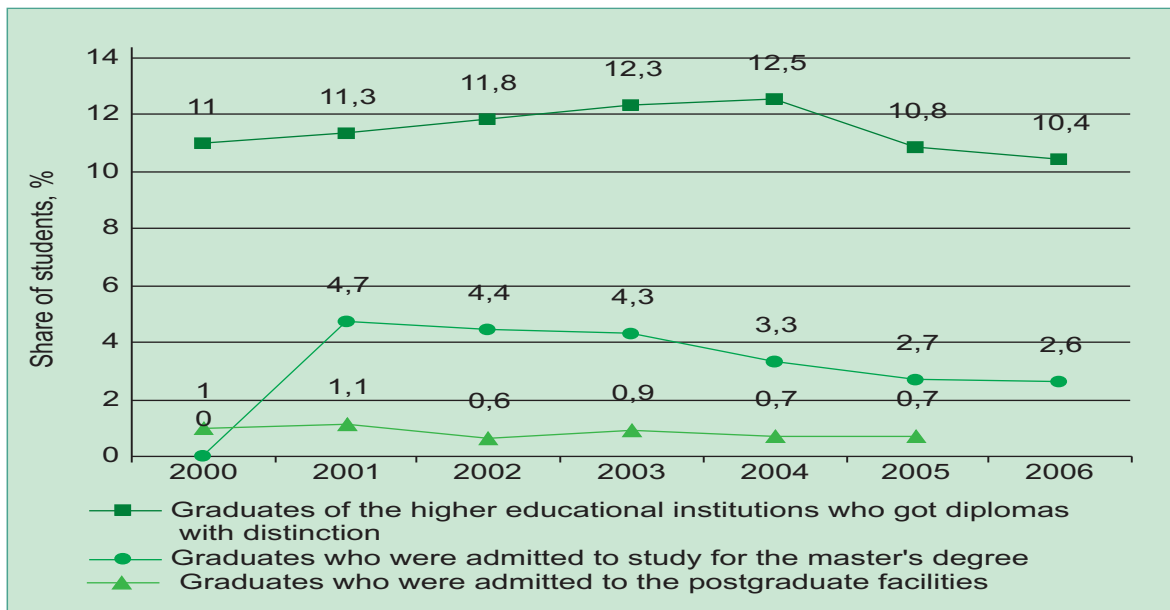
The share of graduates of the *secondary vocational educational facilities* who received diplomas with distinction tends to decrease both in the Republic and in all regions.

Among *graduates of higher educational institutions* in 2006 each tenth graduate received diplomas with distinctions. This indicator tended to increase up to 2004. However, in 2006 it decreased on the average in the Republic (for 2.1%) and in some regions. The share of graduates who graduated from the higher educational facilities with distinction is still high in cities Astana (17.3%) and Almaty (11.8%). At that, the share of graduates who continue education to get their master's degrees and postgraduate study is reducing and that will result in shortage of scientific and pedagogical cadre (fig. 5.2).

The efficiency indicator of the postgraduate education is measured by the number of post-graduate and Ph.D. students who defend their dissertations according to the schedule. The significance of this indicator is decreasing in its dynamics by years that testify to a low efficiency of the existing system of preparation of

the scientific cadre and to reduced responsibility of scientific supervisors and organizations of education and science for results of training of their post-graduate and Ph.D. students.

Fig. 5.2. Results of training under programs of the higher vocational and postgraduate education



Uniform National Test

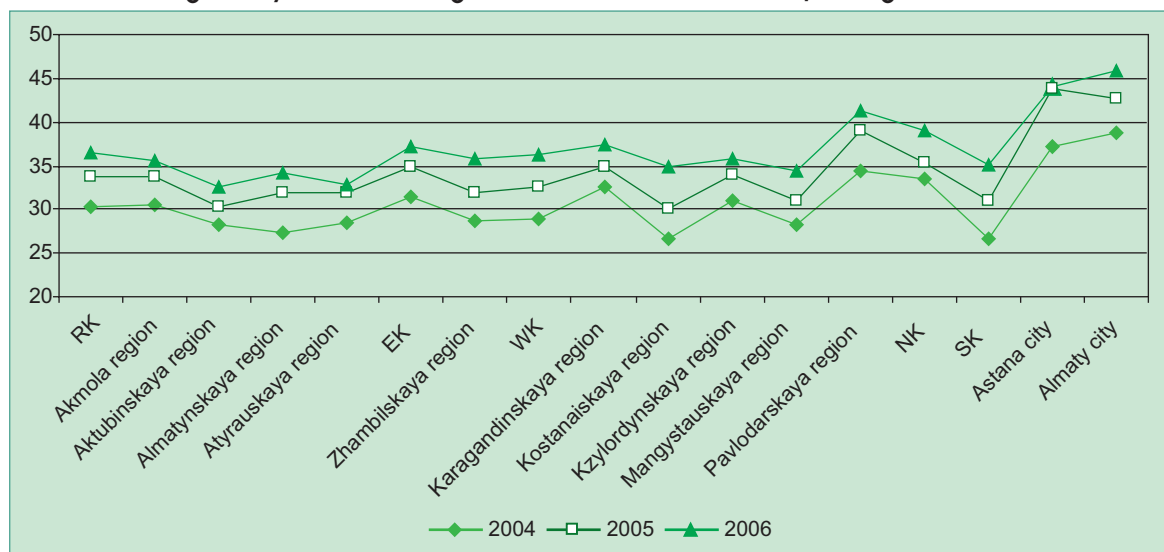
For estimation of quality of pupils' knowledge an independent external control in form of the uniform national test (UNT-EHT) and the intermediate state control (ISC-ПГК) are used.

The analysis of UNT-EHT results for 2006 shows that the mean score across the Republic has constituted 63.2 scores, in urban schools - 66.2, in rural - 60.2. Pupils of schools in Astana (71.7), Almaty (70.9) have shown the highest results; urban schools of Pavlodar region (71.10) and rural schools of Kzyl-Orda regions (63.10) and the North-Kazakhstan (61.9) regions inclusively.

The lowest results have been demonstrated by schoolchildren of urban schools of Atyrau (59.6) and Mangystau (60.8) regions, rural schools in Aktubinsk (55.3) and Kostanai (55.9) regions.

Results of UNT (EHT) testify to a high level of knowledge of graduates in the subjects of the humanitarian cycle: English, Kazakh, Russian and German languages - and a low level of knowledge in subjects of natural - mathematical cycle, especially in mathematics, physics and the world history (fig. 5.3).

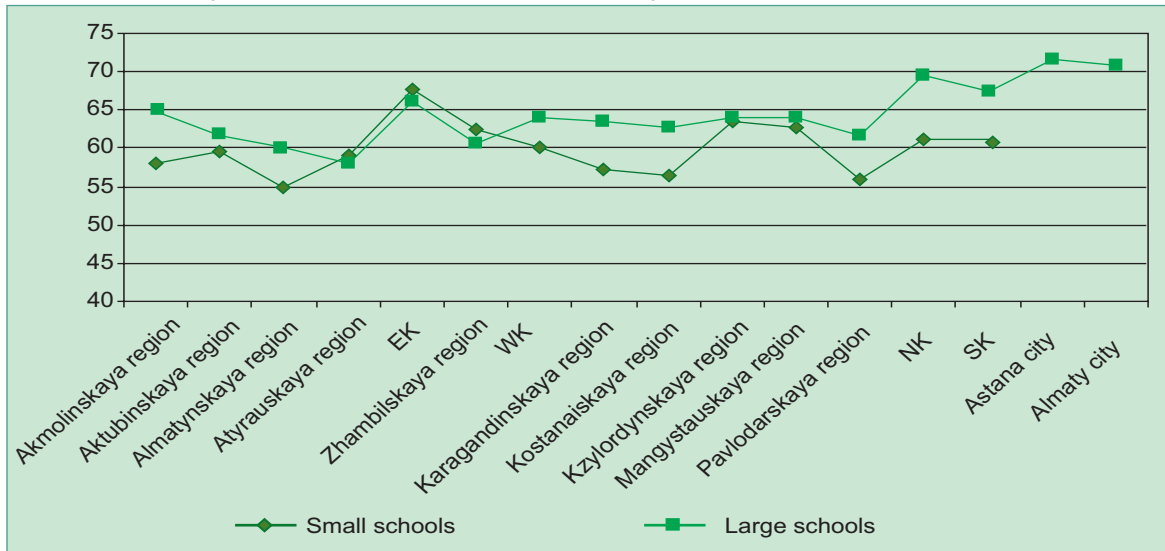
Fig. 5.3. Dynamics of changes of UNT results in mathematics, % of right answers



In some regions of the country low UNT results are explained by a large number of small schools and comparison of these two indicators speaks of correlation between them (fig. 5.4).

The comparative analysis of the UNT (EHT) results of graduates of lyceums, grammar schools with the UNT results of graduates of secondary general schools allows making conclusion that the general educational programs providing for profound and profile-oriented education of pupils in the educational facilities of the new

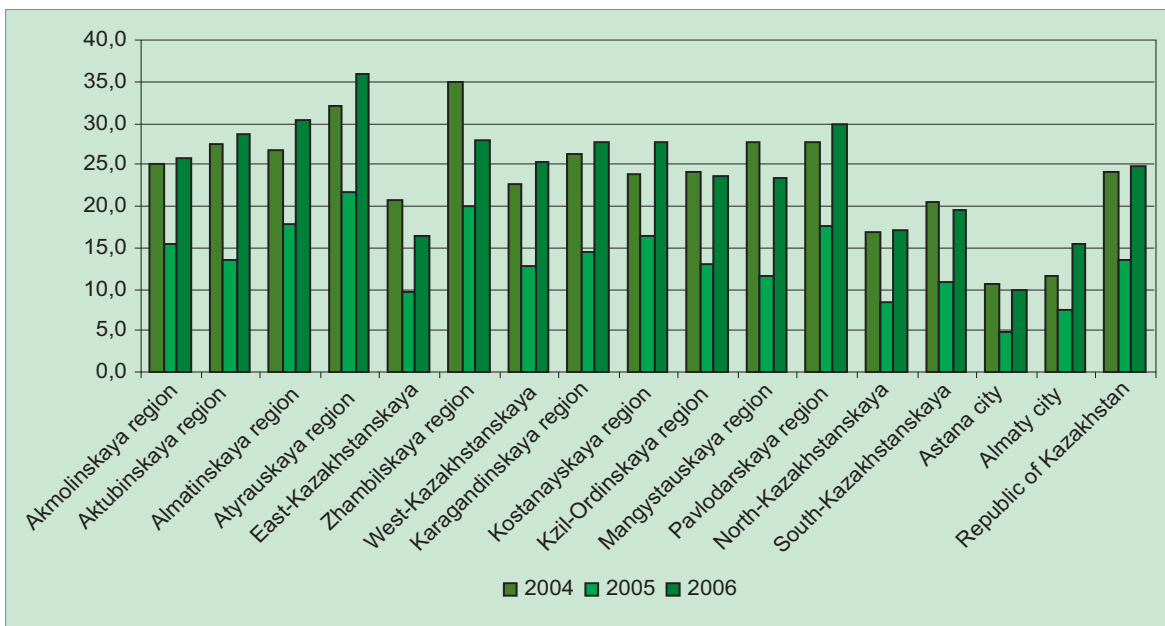
Fig. 5.4. UNT results of pupils of small and big schools in 2006, a mean score



type are learnt by graduates much better; the quality of education in lyceums and grammar schools complies with the status of these educational facilities and organizations.

The share of graduates who have not collected the threshold score level for receiving their certificates and continuation of education in the secondary vocational education and higher vocational education facilities continues to remain high. At that, decrease in the share of such graduates is observed in 2005; in 2006 - increase relating to increase of the threshold level for 10 scores (fig. 5.5).

Fig. 5.5. A share of graduates who have not collected the threshold level at UNT



On the average the value of this indicator in 2006 has made 25% in the Republic that testifies to a low level of knowledge of the fourth part of schools graduates.

The results of ISC of pupils of the 4 and 9-th grades are higher in urban schools in comparison with rural schools, in classes with teaching in the Russian language in comparison with classes with the Kazakh language of teaching.

Rating of higher educational facilities and establishments

In 2006, an estimation of quality of higher education was conducted by ranking the higher educational institutions based on the technique developed by the NAC of the RK MOES.

The total quality indicators of performance of higher educational facilities were defined by three independent constituents of the quality of education that reflect success of students, achievements of the teachers' staff, the academic resources of the higher educational facility.

The results of the final ranking have shown the following:

- Of 38 multiprofile higher education facilities the following ones are ranked as the best: the Kazakh National University after Al-Farabi, the Eurasian National University after L. Gumilev, the Karaganda State

University after E. A. Buketov and the Southern-Kazakhstan State University after M. Aueзов; the Shimkent University, University „Bolashak“, the Kazakhstan multiprofile Institute „Parasat“ are characterized as the educational facilities with the worse indicators;

- Of 30 *-technical colleges* the best ones are the Kazakh National Technical University after K. I. Satpaev, the Karaganda State Technical University, the Almaty Institute of Energy and Communications, Atyrau Oil and Gas, the Kazakh State Agrotechnical University after S. Seifulin; the bottom line in the rating is taken by the Agrotechnical Institute - Humanitarian-Technical Institute;

- Of 25 *-humanitarian-economic higher educational facilities* the best ones are the Kazakhstan Institute of Management, Economy and Forecasting (КИМЭП), **the Kazakhstan Humanitarian-Legal University**, the Kazakh University of International Relations and the World Languages and the Karaganda Economic University of Kazpotrebsojuz; the least number of scores in the rating has been collected by the Kostanai Humanitarian Institute „Zerde“;

- Of 10 *-pedagogical higher educational facilities* the first three places in the rating are taken by the Kazakh National Pedagogical University after Abay, the Kazakh State Women’s Pedagogical Institute, the Pavlodar State Pedagogical Institute; on the last place Shimkent Social - Pedagogical University;

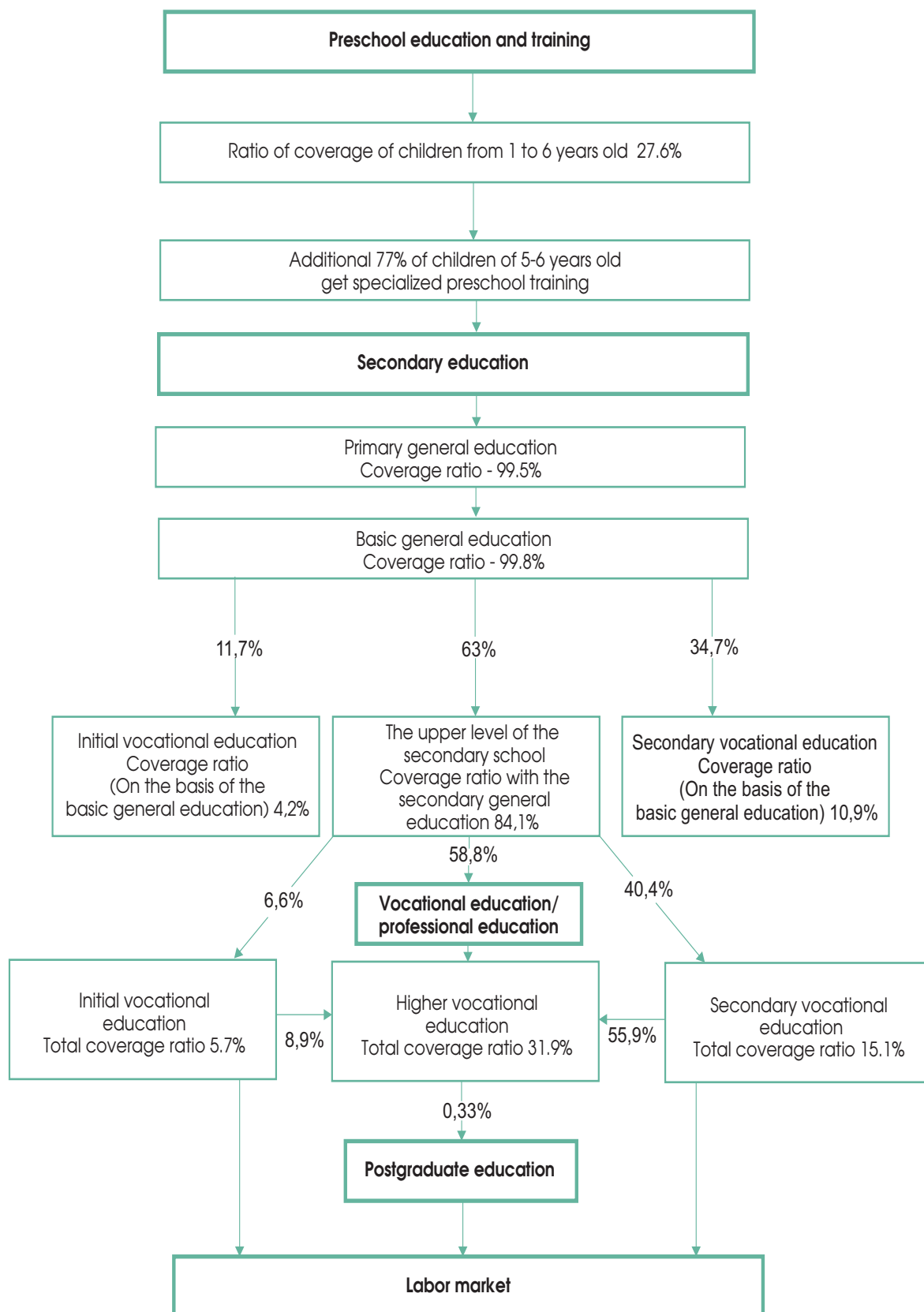
- Of 6 *-medical higher educational facilities* the leading position is taken by the Kazakh National Medical University after Asfendiyarov, the last line in the rating - the Southern- Kazakhstan State Medical Academy;

- Three *-higher education facilities of arts* rank as follows: the Kazakh National Academy of Music, the Kazakh National Academy of Arts after T. K. Zhurgenov, and the Kazakh National Conservatory after Kurmangazy.

Repeated education

The factor of repeated education of pupils in the secondary educational facilities has decreased more than twice for the last seven years in the Republic but at the same time it remains high in some regions. It has caused „fallout“ of the given category of pupils from the education process due to moral and psychological discomfort of the pupils remaining in the same form for the second year, complete loss of motivation to any educational or labor activity. In the final end, many of such adolescents get in bad environment, become homeless children and commit various offences.

Flow of the contingent of pupils by educational levels



Graduates of the previous years * are taken into account

When pupils pass from the primary school to the next step of the basic general education there is no loss of pupils' contingent.

Passing of pupils to the secondary general education level has been stable for a number of years and it covers the total contingent of pupils although when choosing the methods for receiving such education the priorities shift towards vocational/professional education. The secondary vocational education is more preferable.

Continuation of education becomes more and more prestigious after receiving the certificate of the secondary general education. And the priorities shift towards getting the higher education at the cost of the initial and secondary vocational/professional education.

Losses in the System of Education

Dropping out of pupils from the system of the secondary general education is insignificant. Much higher is the level of losses in the system of the initial vocational education. The losses are much higher in the system of the secondary vocational education.

In system of the higher education the factor of dropping out tends to increase up to 2004 and decreased in 2005. In 2006, the growth of the given indicator is observed again.

The structure of the drop-outs shows that 25.2% of them in 2006 are sent down due to poor progress; 36.3% have dropped out due to unknown reasons; 21.3% - for infringement of the school discipline. The share of the dropouts due to unknown reasons has increased for 9%. Among them, most likely, are the students taught on a paid basis and who do not have any possibilities to pay further for education. This factor results in unjustifiable costs in the system of education, incurs material losses to pupils' families, incur moral and psychological traumas of students.

Graduation of pupils from educational facilities

The relative number of graduates (the relation of the number of graduates who have received certificates about the secondary education to the population of the typical age) tends to decrease by years and this is related to increase in the number of pupils who continue education after the basic school in the initial and secondary vocational education facilities.

A positive tendency is observed of increase of the share of graduates who received diplomas of the secondary and higher vocational education in the total number of the population of typical age who have also finished the same educational level.

Analysis of structure of specialists' preparation in the secondary vocational education and higher vocational education facilities shows that more specialists are prepared in economic and humanitarian specialty areas and for work in the educational system.

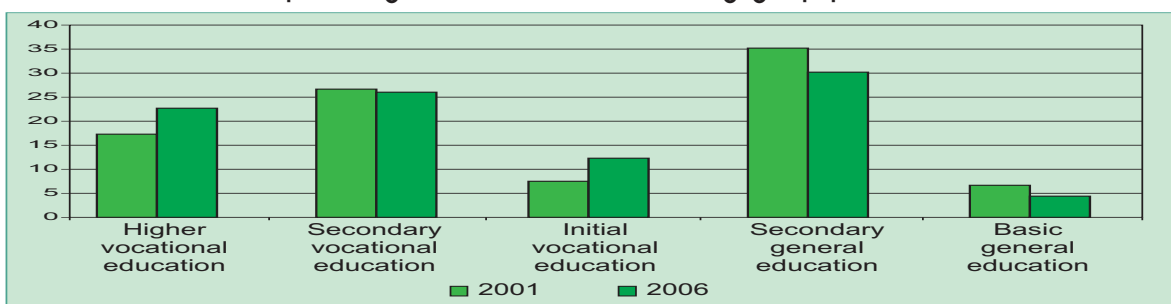
In the structure of the specialists' preparation with the higher specialized educational background there are no specialists prepared in such areas as „Polygraphy“ and „Geodesy“. An insignificant number of specialists (0.1% of the total number of graduates) are prepared in such specialty areas as „Air and marine engineering“, „Biotechnology“, „Technical physics“, „Materials science“, „Instrument-making (industry)“, „Electronic technology“. And the given fact translates in shortage of the professionally prepared HR in the corresponding branches of the country economic activities.

Employment of graduates

People with the secondary general and secondary vocational education make the largest share among the economically active population. In terms of dynamics and by years, an increase is observed in the population with the higher and unfinished higher educational background; the share of people with the secondary vocational, secondary general, basic general and primary education decreases. The share of the population with the initial vocational education increased to 2003, and then again a decrease is observed.

Analysis of dynamics of the structure of the engaged population by the educational level to the total number of the engaged population for the last five years has shown (fig. 5.6) that the demand in specialists with initial vocational education, higher education and secondary vocational education has significantly increased. The share of people with the secondary and basic general education has decreased in the structure of the engaged population.

Fig. 5.6. Structure of the engaged population by educational level in the RK in 2006 in percentage to the total number of the engaged population



Chapter 6. Regional comparison of the RK System of Education

Under conditions of modernization of education in Kazakhstan, the implementation of the State Educational Policy at the regional level starts to play a key role that takes into account specific regional needs, conditions and resources. At that, in development of human resources estimation of efficiency of activity of the regional system of educations is of critical importance.

Efforts to rank the state of the system of education in the regions of the RK were undertaken earlier but only by some indicators, for example, by the UNT results. Such comparison is incomplete and unrepresentative due to the fact that many factors render a serious impact on the status of the system of education and results of its activity. Therefore, a *complex estimation of the status of the system of education* in the regions is needed. The NCQEA (НҚОҚО) has made an effort for the first time to give a ranking of the regional system of education based on the *indicators of quality of education*. For this purpose the list of quality assessment indicators was developed that includes 42 indicators for the following educational levels: *preschool education, the secondary general education, initial vocational education, secondary vocational education*. The most significant indicators of the status of the system of education were determined for each educational level which takes into account: availability of educational levels, conditions and resources of functioning of the system of education, results of activity (таб.6.1).

Table 6.1. The indexes and indicators of the educational system status and their average weighted value factors

№	Indicator and index name	The average weighted value factor
Indicator List for the preschool education and training		
1.	Coverage ratio with preschool education and training, in %	4.3
2.	Costs per one child at the level of the preschool education and training, in thousand KZT	4.3
3.	Ratio of children and teachers at the level of the preschool education and training	4.2
4.	Cost ratio per child to the per capita GRP in the educational facilities at the level of the preschool education and training	4.2
5.	Share of costs for the preschool education and training in the total costs (the funds allocated from the local budgets) for education	4.4
Indicators List for the secondary general education level		
1.	Coverage ratio with the secondary general education including secondary schools, the IVEF and the secondary vocational educational facilities, in %	4.9
2.	Costs per one pupil at the level of the secondary general education, thousand KZT	4.5
3.	Cost ratio per one pupil in the secondary general educational facilities to the per capita GRP	4.1
4.	Number of pupils of the secondary general schools per one computer	4.0
5.	Share of teachers of the secondary general education with the higher vocational education, in %	4.4
6.	Share of teachers of the secondary general education with the highest category, in %	4.2
7.	Share of teachers of the secondary general schools at the age under 30, %	3.8
8.	Ratio of teachers and pupils at the initial step of the secondary general education	4.2
9.	Ratio of teachers and pupils at the basic and senior steps of the secondary general education	4.0
10.	Share of pupils studying in schools with advanced study of various subjects, %	4.0
11.	The average test marks in mathematics of the UNT participants who finished the secondary schools of general education	3.5
12.	Share of pupils in the secondary schools of general education provided with hot meals, %	4.2
13.	Coverage of pupils of the secondary schools with additional education (additional disciplines)	4.0
14.	Share of school-leavers who have finished school with the award „Altyn Belgi” in the secondary schools of general education per 1000 school-leavers	3.5
15.	Share of school-leavers who have got the certificates with distinction in the secondary schools of general education per 1000 school-leavers	3.8
Indicator List for the Initial Vocational education		
1.	Coverage ratio with the IVE, %	4.0
2.	Costs per one student at the level of the IVE, thousand KZT	4.4
3.	Ratio of costs per one pupil in the IVE facilities and to the per capita GRP	4.1

4.	Share of costs of the local budget for the IVE, %	4.4
5.	Number of pupils in the IVE facilities per one PC	4.2
6.	Share of pupils provided with hot meals in the IVE facilities, %	4.3
7.	Share of foremen in the industrial training of the highest category in the IVE facilities, %	4.3
8.	Share of teachers in the IVE facilities under 30 years old, %	3.7
9.	Ratio of students and teachers at the IVE level	4.2
10.	Share of graduates of the IVE facilities who got the category lower the established categories for the specialty areas, %	4.1
11.	Share of graduates who got the diplomas with distinction in the IVE facilities to the total number of graduates, in %	3.9
12.	Ratio of graduates of the IVE facilities, %	4.0
13.	Ratio of graduates with certificates of the secondary general education in the IVE facilities, %	4.1
Indicator List for the secondary vocational education (SVE)		
1.	Coverage ratio with the SVE, %	4.2
2.	Number of students in the SVE facilities per one PC	4.1
3.	Share of teachers with the highest category in the SVE facilities, %	4.2
4.	Share of teachers with the highest category in the SVE facilities under 30 years old, %	3.7
5.	Costs per one pupil at the SVE level, th. KZT	4.5
6.	Ratio of costs per one student in SVE facilities to the per capita GRP	4.3
7.	Ratio of teachers and students in SVE facilities	4.2
8.	Ratio of graduation in SVE facilities, %	4.1
9.	Share of graduates who got diplomas with distinction in the SVE facilities, %	3.9

The national centre of estimation of quality of education has developed the methodology for calculation of the rating score of the regional indicators by educational levels.

According to this methodology of calculations the ratings are developed of the regional educational systems by levels of education. The final rating of the region as a whole by all levels of education is calculated as the sum of rating scores of all levels (table 6.2).

Table 6. 2. The Final Rating of the Status of Education by the RK Regions, 2005

№	Region	Total rating scores
1	Pavlodarskaya	1786,0
2	West-Kazakhstanskaya	1754,9
3	Astana city	1744,3
4	Almaty	1717,2
5	Karaganda	1627,9
6	Atyrau	1578,7
7	Kostanai	1522,1
8	East-Kazakhstanskaya	1472,9
9	Aktubinskaya	1456,4
10	Akmolinskaya	1455,4
11	North-Kazakhstanskaya	1395,5
12	Zhambilskaya	1257,5
13	Mangistauskaya	1243,0
14	Almatinskaya	1231,1
15	Kzil-Ordinskaya	1186,4
16	South-Kazakhstanskaya	1153,1

The basic priorities and principles of the state policy in the field of education directed for further development of the educational system are equal in all regions; while the results of activity of the regional educational systems considerably differ from each other. On the basis of the final rating the regions can conditionally be divided into three groups: with the rating score above 1600; with a rating score above 1300; with the rating score less than 1300.

The complex estimation of the status of the regional systems of education allows defining the rating of the regions in terms of efficiency of the conducted educational policy and serves as the mechanism of effect on

the status of education of the region. On the basis of the comparative analysis of indicators and indices of a specific region it is possible to conduct the comparative analysis with other regions.

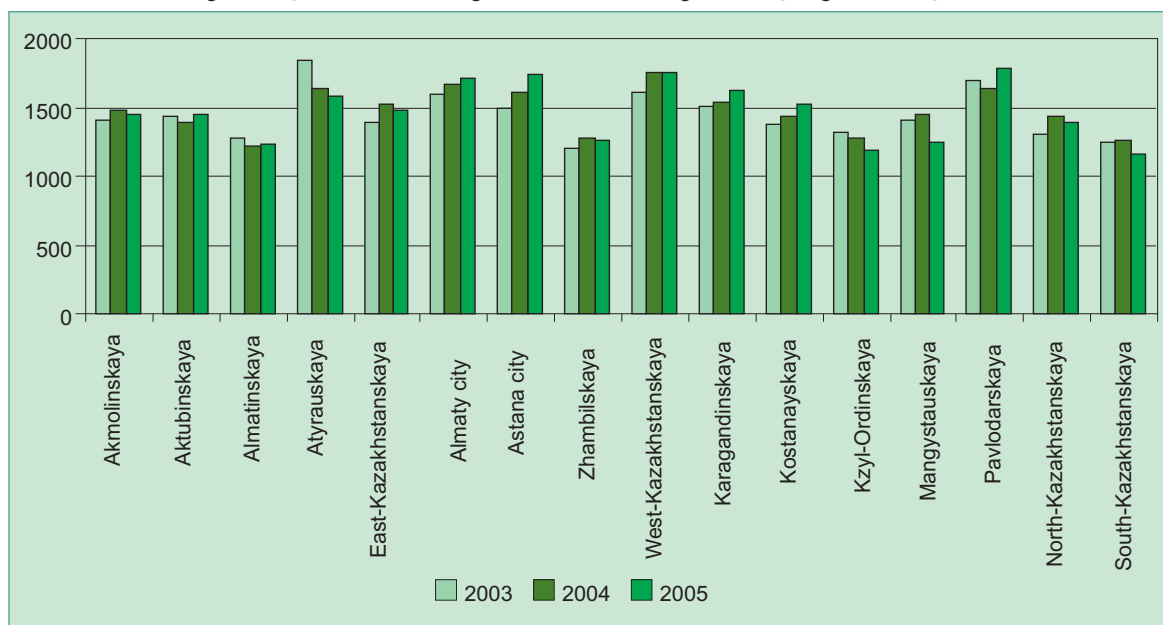
While comparing the values of the total rating scores of the regions with the share of population with incomes lower than the minimum of subsistence, it is possible to draw the following conclusion: *the level of poverty of the population renders a significant impact on the status of the regional systems of education.*

Some dependence is observed of the status of the regional systems of education on the population: *in the regions with the big number of the population - low results of activity of educational systems.*

The analysis of the rating of regions depending on the geographical position and climatic conditions also allows making the following conclusion: *the analyzed characteristic of the regions does not essentially influence the total rating scores. More significant factors are the level of organization of teaching and educational process, efficiency of methods of the educational system management as a whole.*

The outcomes of the activities of the regional educational systems were summarized for 2003-2005 with consideration of indicators for the previous years using the above-stated methodology. The regional indicators in dynamics, by years, allow compare the results of activity of the regional educational systems with the previous years and to reveal what tendencies occur in concrete areas in the sphere of education. As a whole, in terms of dynamics and by years, the final rating scores for all educational levels have been structured as follows (fig. 6.1).

Fig. 6.1. Dynamics of changes in the total rating score by regions and years



The comparative analysis of the rating scores by years shows that in some regions such as, for example, Astana, a tendency is observed of improvement in the results of educational activity. In other regions, on the contrary, the results of educational activity are getting worse. A similar tendency is observed in Atyrau, Kzylorda, Mangystau and South-Kazakhstan regions.

Chapter 7. The system of education of the Republic of Kazakhstan in the context of international comparisons

International comparisons play important role in estimation of the state of the system of education of each specific country. Given their conditionality, international comparisons allow to reveal universal tendencies in development of the sphere of education and to define the degree of compliance to such world tendencies of the structure and content of the educational systems of some countries.

Participation of Kazakhstan in international researches on statistics of education allows conducting correct comparisons based on a wide range of indicators with almost 50 countries of the world, including the countries-members of the Organization of Economic Cooperation and Development (OECD) for which there is comparable information. These countries are divided by the World Bank conditionally into three groups according to the level of per capita gross national product by the purchasing-power parity in 2003:

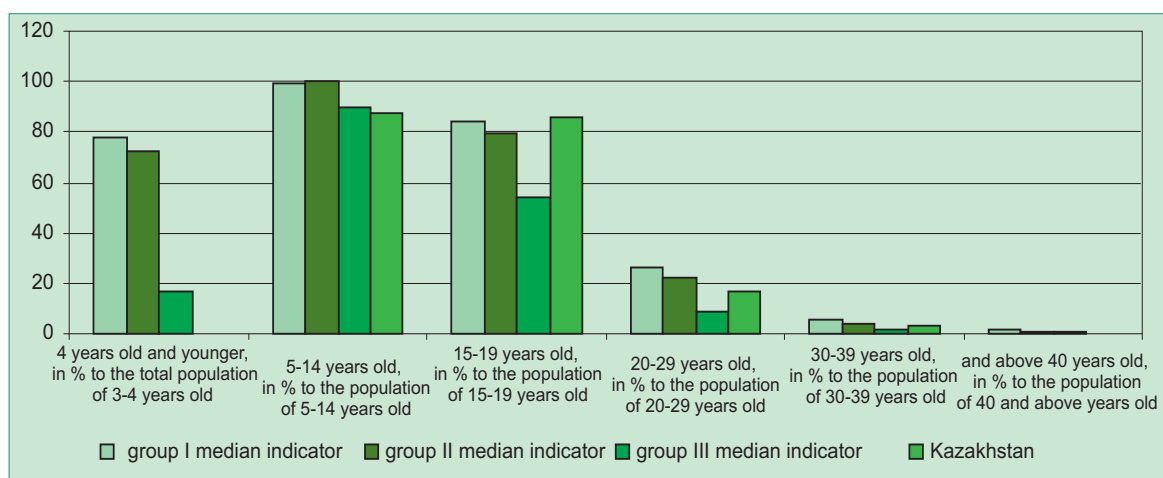
- I group - countries with a high level of income (over 26 thousand dollars per capita) - 19 countries;
- II group - countries with the average level of income (10-26 thousand dollars per capita) - 11 countries;
- III group - countries with a low level of income (less than 10 thousand dollars) - 20 countries.

Kazakhstan with its per capita Gross National Product at par consumer capability in 6772 thousand dollars refers to the countries of the III group.

Coverage of the population with education

The given indicator first of all characterizes education of the total population at the age of 4-40 years old and older. The share of coverage of the population with education in all countries is maximum for the age group of 5-14 years, and then starts to diminish, at that, the degree of coverage by education of all age groups is maximum in the countries with a high level of income and gradually decreases in the groups of countries with lower incomes. The coverage with education in Kazakhstan of the age group of 20-29 years old approximately corresponds to III group, as for age of 15-19 years group it closer to indicators of group II but with the age group of 5-14 year olds the coverage with education is much lower than in all three groups which is related to insufficient coverage with education of 5-7-old children (fig. 7.1).

Fig. 7.1. Coverage of the population by education in the countries of the world, 2003.



The median indicator of the age for beginning of compulsory education is equal for all groups of the world countries - at 6 years old.

The upper age limit until reaching of which children are obliged to go to school, as a whole, corresponds to the level of the economic development of countries: in group I - 16 years, in group II - 15 years, in group III - 14 years. This age is equal in Kazakhstan to 17 years due to the late starting of the compulsory education.

The average expected duration of education for children in the age of 5 years in Kazakhstan in 2003 made 13.9 years which is higher compared to the median indicator for group III of the world countries (13.0 years) but is lower than the median indicator for the world countries of group II (16.9 years).

The average expected duration of education in Kazakhstan by the by-correspondence form of education makes 3.9 years - one of the highest indicators in the analyzed list of the world countries (after Australia and Great Britain).

The data on the coverage with education of youth at the age of 15-20 years gives a precise understanding about the age structure of the educational system in RK. 9.3% of the population (by the age of 20 years old this indicator is practically equal to null) continues to receive the initial vocational education of 17 years old in Kazakhstan. Kazakhstan is ahead of other developed countries by the share of students receiving the secondary and higher vocational education at the age of 16 years. Relative closeness of indicators is observed only with the age groups of students above twenty years old. Thus, duration of education in the

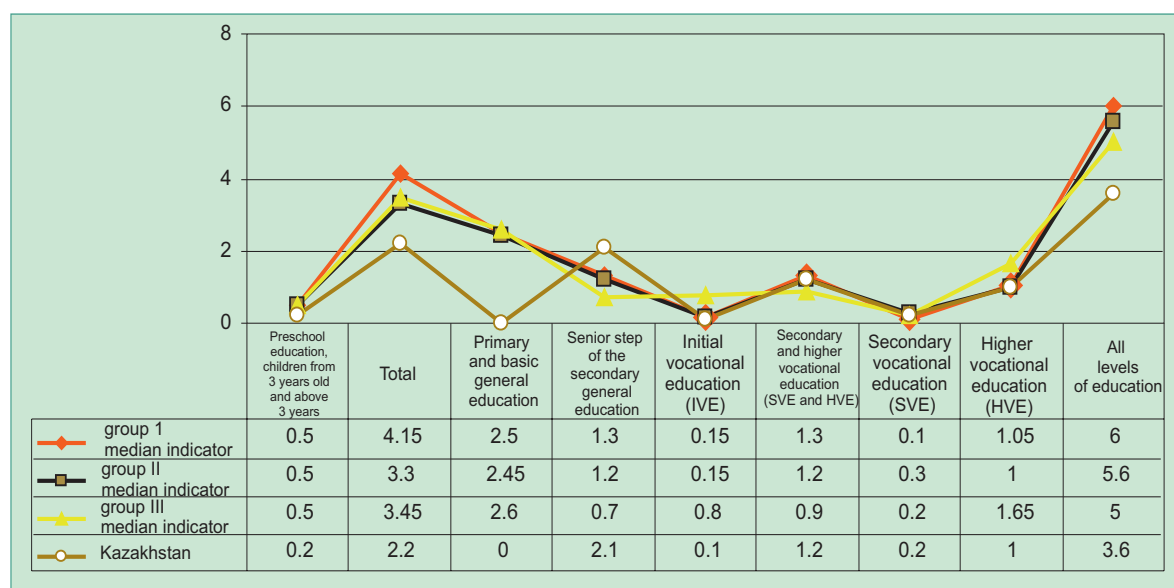
initial vocational education of the RK is not long enough according to the modern estimates that makes young people move to the levels of the secondary and higher vocational education.

The structure of programs of the basic general education in RK also differs from the tendencies developed in the world. More than half of the young people that finish the basic general education facilities in the developed countries receive vocational or vocational-technical preparation. In Kazakhstan, 75.6% of pupils continue education at the next step of the secondary general education. This indicator is close to the indicators of group III countries; that is our basic general education does not imply receiving of professional skills that could allow a graduate to be in demand in the labor market but it is oriented basically on continuation of education.

Every year the number of foreign students trained at the level of vocational education is growing in the RK. At that, if the indicator by the SVE is above the average indicator of group II, then the indicator on the higher vocational education is lower in comparison with the indicators of all groups of the world countries.

In context of international comparisons a low level of financing for education (fig. 7.2) is observed in Kazakhstan. The relation of costs for education to the GNP in RK constitutes 3.6% for 2003, a lower level of costs is observed only in two countries from the list under the analyses - Uruguay (2.8%) and in Indonesia (1.9%).

Fig. 7.2. Costs for education in percentage to gross national product by educational levels, 2003



In Kazakhstan, the indicator of costs for education per one student/pupil to the gross national product per capita constitutes 10% from the gross national product in preschool education, at the basic and senior steps of the secondary general education, IVE and SVE on the basis of the basic school; 6% from the gross national product in IVE; 12.7% from the gross national product in the secondary and higher vocational education that is much lower than in the overwhelming majority of the considered countries. A lower relative level of costs per one pupil in preschool education is registered only in Philippines (1% from the gross national product). A little more complex picture develops in the sphere of vocational education. At the level of the basic and senior steps of the secondary general education, IVE and SVE on the basis of the basic school and IVE, the comparative figures of financing per one pupil as a whole decrease from more rich countries to the poorer countries; at that, the degree of difference by different groups of the world countries is rather insignificant.

Contrary to the widely spread erroneous assumptions, in the richest countries the state funds a significant part of educational costs, and in the poorest countries it is a burden of the population. In a number of countries with high and an average level of incomes there are models of development of education with active attraction of the funds of the population. However, in overwhelming majority of the countries of groups I and II the basic financing for education is ensured by the state.

According to the data for 2003, 699.5 US dollars purchasing-power parity was allocated in the RK for the preschool education per one pupil that corresponds to the median indicator for III group of the world countries. Costs per one pupil of the basic and senior steps of the secondary general education, IVE and SVE, on the basis of the basic school constituted only 656.7 US dollars of the purchasing-power parity, while the median indicator for II group of the world countries - 4878 dollars, for III group - 904 dollars.

Educational process

The duration of the academic year in the RK is relatively small in comparison with other world countries: 34 academic weeks and 204 academic days, thus, the annual class-room load for children at the age of 7 to 14 years old exceeds the median indicators in all three groups of the world countries. For children of 15 years old the annual class-room load (1326 hours) is also highest versus the world countries.

More time in comparison with the countries of the world in average is allocated in Kazakhstan to study writing, reading, literature and mathematics for schoolchildren of 9-11 years old; less time is given to study social disciplines, foreign languages, technologies, physical culture and sports.

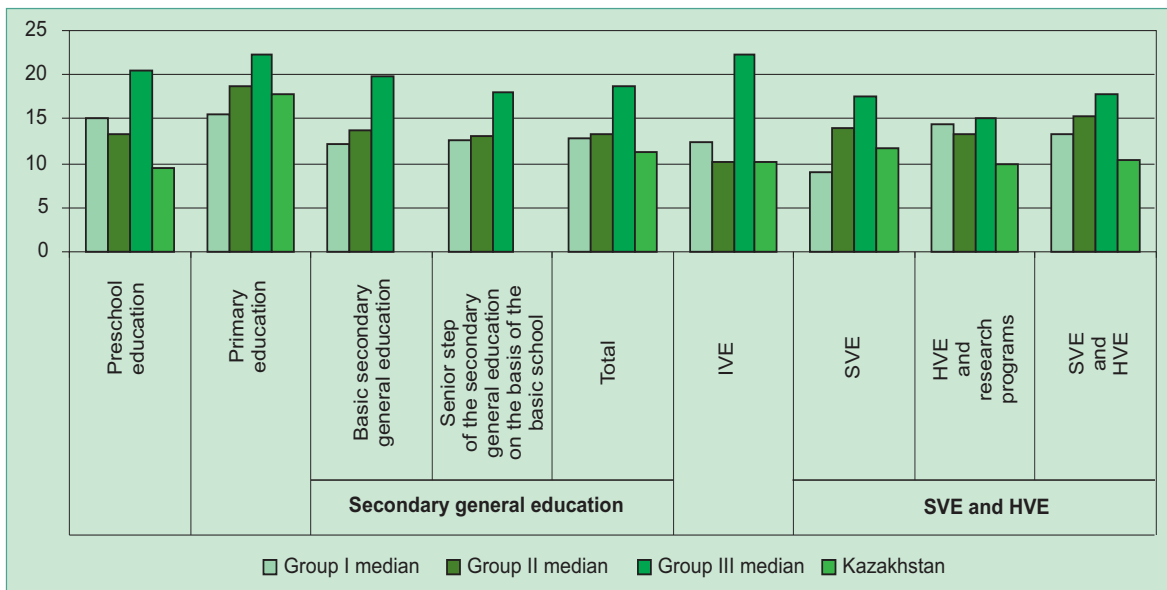
As for the age group of 12-14 year olds: more hours are still allocated to study reading, writing and literature and less hours are given to study foreign languages, subjects of the cycle on aesthetics, physical culture and sports.

The average number of pupils in the class-room in Kazakhstan is much lower not only in comparison with the countries with low level of income but also with the countries with the average and high level of incomes.

The given circumstance is related to low density of the population in the RK and that preconditions availability of plenty of small schools (52% of the total number of secondary general schools).

One more indicator of the quality of organization of the teaching and educational process is *number of pupils per one teacher* (fig. 7.3).

Fig. 7.3. Ratio of pupils and teachers in educational organizations in the countries of the world, 2003



Structure of preparation of specialists

Comparison of the data *on the structure of preparation of specialists and their graduation* in the system of the vocational education in Kazakhstan with the median indicators by groups of the countries of the world shows

- Increased- specific weight of preparation of specialists in such educational areas as education and humanitarian disciplines;
- Insufficient-specific weight of preparation of specialists in the sphere of natural sciences and computer engineering, agricultural, industrial and building branches of economy;
- Obviously low-specific weight of specialist with the secondary vocational education in such areas as the sphere of services (service), agriculture and arts.

Main conclusions and recommendations

Network of organizations of education and accessibility of education

1. At the level of preschool education and training the network of education facilities and organizations is poorly developed. And this preconditions a low coverage ratio of children (by data of the RK MOES - 27.6%) and makes the basis for serious difference in terms of opportunities for many children to get qualitative education at the next educational levels. The tempo of increase in the number of preschool establishments in regions, especially in the rural areas, does not meet the demand and needs of the population.

2. The network of secondary general schools is well enough developed but to lower the indicator of several shifts of classes and transition to 12-year education it is necessary to increase the number of pupils' places not only through input of new schools but also through construction of additional premises to the existing buildings.

3. Coverage with the initial, basic and secondary general education in 2006 in the Republic accordingly makes 99.5%; 99.8% and 99.2% and has quite a positive tendency to increase rapidly; low significances of this indicator in some regions of the country are directly linked to the level of poverty of their population.

4. The lowest availability of all steps of the secondary general education to children with limited opportunities in development limits their constitutional rights for education.

5. Regional development of the network of IVE and SVE is insufficient and it requires increasing the number of such facilities and organizations. At the same time it is necessary to raise the prestige of the initial vocational education, especially among the Kazakh youth.

6. The network of higher educational institutions is well developed in the country that provides for the high coverage ratio (31.9%) with this educational level. At the same time the allocated volume of the state financing by way of educational grants for preparation of specialist with the higher vocational education is very low and makes only 16.9% of the total number of students and students studying for the master's degree. It limits access to this educational level for the rural youth, children from families with low income.

Resources of the system of education

1. There is a strong tendency in the country to increase funds for the sphere of education but at the same time in 2005 the share of the state expenditures for education to the GNP was maintained at the low level and made only 3.4%.

2. In spite of the fact that the share on wages of workers of education still remains very high in the local budget there is a tendency observed that it is reducing from every year on. This is a positive tendency which affects development of the system of education, improvement of the material base of schools and more effectively organize the educational process.

3. The volume of funding for construction of new facilities of education has increased at the expense of allocation to regions of target transfers from the Republican budget, but their distribution is conducted irrationally.

4. Maintenance of small schools is a very expensive item of costs for the state. Given the poor quality of education of the pupils/students who are taught in such facilities it is needed to accept new cardinal and immediate measures to effectively solve these issues.

5. Every year the share of the state involvement in the sphere of services to train and prepare specialists with secondary and higher vocational education is reduced. At that, the share of costs of the population to get higher education to the GNP per capita is one of the highest in the world.

6. Quantitative and qualitative indexes of structure of the pedagogical staff in preschool and secondary education tend to gradually improve; the share of young specialists grows. The qualitative indexes of the pedagogical staff tend to decrease in the initial vocational education; there is a distinct tendency in reduction of the share of teachers and masters in industrial training of the highest and first categories.

7. The quantitative structure of the pedagogical staff on the average in the vocational education has an expressed tendency to increase considerably, at the same time qualitative indexes are reducing from every year on.

8. There is a tendency of sharp increase in the volumes of preparation of the pedagogical staff, at the same time the demand of schools in teachers is not met even to a small extent every year.

9. A positive tendency is maintained to increase the average wages in the system of education but its sizes and „ averaging-out „ that doesn't take into account neither the volume of academic load nor deficiency of specialists, nor additional kinds of work of teachers, do not stimulate them to work creatively and efficiently.

10. State of the material and technical base of the available preschool facilities and organizations does not meet modern needs and requirements, the technical state of buildings does not improve, the number of fitted buildings increases, a large number of them are not well-equipped (there is no hot water and sewage disposal).

11. At allocation of budgetary funds actual needs of schools are not taken into consideration for maintenance and development of the teaching and material base. The number of schools in need of capital refurbishment and in emergency state does not decrease.

12. Situation with provision of students with hostels is getting worse, at the same time almost the quarter of places in the functioning hostels is not engaged for residing.

13. Equipment with computers, equipment of educational cabinets, laboratories, workshops in educational facilities do not meet modern requirements and this is reflected in quality of knowledge of pupils, teaching of subjects and as a whole on fulfillment of the requirements of the State obligatory standards for all levels of education.

14. A good dynamics is marked in organization of hot meals for pupils in the Republic but it essentially varies from region to region. Provision of free hot meals to pupils from needy families and families with many dependent children, to children - orphans under trusteeship (guardianship) of citizens tends to grow but it is still far from meeting the real needs.

15. The provision of school libraries with textbooks and teaching-methodical literature is satisfactory in terms of their number but at the same time a serious shortage of literature in the Kazakh language is marked. In IVE and SVE facilities the quantity of textbooks, of the teaching-methodical literature per one student fast decreases due to increase in the number of students, aging of the funds and insufficient provision with textbooks in the Kazakh language.

Quality of organization of teaching and educational process

1. The structure of curriculums for the secondary general schools does not allocate enough time to study foreign languages, social disciplines and for physical training.
2. Class-room load of schoolchildren both weekly and annual is extremely high and this results in aggravation of their health and brings to excessive psychological loads.
3. The ratio of students and teachers in preschool, general secondary, initial and secondary vocational education is one of the lowest in the countries of the world that entails a rise in price of the system of education and inefficient use of budgetary funds. Reconstruction of the developed network of educational institutions of the indicated levels is needed, more effective organization of teaching and educational process, development of new technologies of teaching. In the higher educational facilities a high value of the ratio of the number of students to teachers is observed in comparison with the normative values that results in overloading of the pedagogical staff with class-room lessons which limits their scientific work.
4. The share of students of the by-correspondence form of education continues to remain unfairly high in the secondary and higher vocational education facilities.
5. The demand in educational programs of advanced level and additional education annually increases, but the network of organizations does not satisfy this demand.

Results of functioning of the system of education

1. The number of graduates awarded with Altyn Belgi is increasing but the share of graduates who have received certificates with distinction is reducing.
2. The number of winners of international Olympiads and scientific competitions of schoolchildren has essentially increased due to growth of the number of educational facilities for gifted children.
3. A decrease is observed in the share of IVE facilities graduates who have received categories *lower than the established ones* but at that the share of graduates who did not pass through the qualification requirements and have not received diplomas has considerably increased.
4. Each tenth graduate of higher educational establishments receives a diploma with distinction but the share of graduates who continue education for the master's degree and the postgraduate study is reducing every year and that will result in the near future in shortage of the scientific-pedagogical staff in the higher educational institutions and in the research institutes.
5. The share of post-graduate students and persons working for doctor's degree is decreasing that defend their dissertations in time.
6. The results of UNT testify about quite high level of knowledge of graduates in subjects of the humanitarian cycle: English, Kazakh, Russian and German languages, of a low level of knowledge in mathematics, physics and also the world history.
7. The comparative analysis of the UNT results of graduates of lyceums, grammar schools with the UNT results of graduates of secondary general schools shows that the programs providing profound, profile training of pupils in educational institutions of a new type are better learnt by graduates - on quite a high level.
8. The fourth part of the graduates annually participating in UNT has scores below the threshold level established by the RK MOES for receiving the certificate and continuation of education in the SVE and HVE facilities that testifies about a poor quality of the secondary education.
9. The ISC results of pupils of 4 and 9 grades are higher in urban schools in comparison with rural, in classes with the Russian language of teaching in comparison with classes with the Kazakh language of teaching.
10. Transition of pupils after finishing the basic school to the level of secondary school of general education covers the total contingent of pupils although when choosing methods for its receiving the priorities are shifted towards vocational education. SVE becomes more preferable.
11. For graduates of secondary general schools it is more prestigious to get the HVE but it makes the initial and secondary vocational education less attractive.
12. SVE and HVE facilities prepare specialist mostly in economics, humanitarian specialty areas and for the system of education but that results in shortage of professionally prepared staff in other areas, especially in technical and technological branches of the economy.
13. A positive tendency is observed of reduction of losses in the contingent of pupils in the initial, secondary and higher vocational facilities of education.

System of education of the RK in regional comparison

1. The complex estimation of regions allows defining their rating based on the efficiency of the conducted educational policy, serves as the mechanism for a more effective impact on the state of the regional education by acceptance of the corresponding administrative decisions.
2. Although the main priorities and principles of the state policy in the field of education directed for further development of the system of education are identical in all regions, the results of activity of the regional educational systems considerably differ.
3. The general rating score does not directly depend on GRP per capita; but a direct dependence is marked on the poverty level.
4. The results of activity of educational systems are low in the regions with big population and it is aggravated by a high share of their rural population.

5. The higher is the share of pupils studying in the second shift the lower is the total rating score of the region.

6. In terms of the dynamics by years Astana has a stable improvement of the rating. Atyrau, Kzylorda, Mangystau and the Southern-Kazakhstan regions annually reduce their integrated indicator.

The RK system of education in the context of international comparisons

1. The secondary general education in the RK does not give any professional skills allowing students get access to the labor market and as a whole is oriented to continuation of education.

2. A low indicator of expected duration of the secondary general education is caused by the fact that children start to study 1.5-2 years later than in the majority of foreign countries (typical age to begin education in the world - 5-6 years old).

3. The volume of financing of the RK system of education by the state and private sources annually increases and has made 3.4% in 2005 to the GNP but does not achieve yet the level of 5-6% to the GNP recommended by UNESCO for maintenance of its sustainable development.

4. Essential decrease of class-room load on schoolchildren is needed according to the average indices of the countries of the world. And must be taken into account for development of GOSO (The State Educational Standards of the 12-year education).

5. Completeness of classes in schools of the RK is much lower than in other countries and this factor influences the efficiency of the resource utilization.

6. The share of students of the by-correspondence form of education is very high. By this indicator the RK is ahead of almost all countries of the world.