

# National Observatory of Kazakhstan

## Vocational education and training in Kazakhstan 2002

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# Vocational Education and Training in Kazakhstan

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# Introduction

## *Brief outline of the state of vocational education and training*

Kazakhstan, in conformity with its law *On education*, continues to develop its system for continuing education, of which vocational education and training (VET) is a key feature. While changes in economic and social conditions within the country have affected the system negatively, there have been some positive contributions, too. On the negative side, the consequences most frequently quoted by practitioners and analysts are:

- a reduction in the network of VET teaching institutions and student cohorts;
- the failure of national legislation and institutional frameworks to keep up with the social and economic transformation ongoing within the country; lack of clear government policy on VET development;
- shortfalls in government and private funding;
- the general public's low purchasing capacity, preventing the widespread introduction of VET on a fee-paying basis;
- vocational training does not satisfy the requirements of the economy or the needs of the labour market;
- weak social support for VET staff; migration of most highly qualified teachers and trainers to other organisations;
- finding job placements for graduates from VET establishments is becoming increasingly difficult.

The positive aspects of the changes in progress include:

- the start of diversification in the VET system, focusing on the labour market; teaching institutions are encouraged to find a niche in the market for educational services;
- gradual transition to multi-channel funding;
- broadening use of self-management and self-financing principles;
- emergence and development of the non-state sector in vocational education and training.

Between 1998 and 2001 the Ministry of Education and Science drew up more than twenty regulatory documents aimed at providing a solution to the more acute problems in vocational education and training in the course of ongoing reforms within it. These solutions included the development of various factors to assist vocational education and training in adapting to the conditions of a market economy. In conformity with the law *On education* adopted in 1999, the following key points are considered to be the most critical and of the highest priority in the short term for the education system:

- expansion of the policy of autonomy and independence of educational organisations, democratisation and decentralisation of education management;

- training of qualified workers for a competitive edge on the labour market; retraining and qualification upgrading;
- retraining of the unemployed and workers leaving employment;
- promotion of diverse and multifunctional educational organisations to bring about their effective development.

Despite the overall progressive spirit of the majority of these newly adopted documents, their general tenor in fact hampers their implementation in practice. The managers of VET organisations are therefore convinced that the issue of the adoption of special legislation on vocational education and training, the Concept outlining reform in initial and secondary vocational education and the National Vocational Education and Staff Development Programme remain still topical.

Kazakhstan has entered a period of economic stabilisation and surge which requires thousands of highly qualified workers and specialists with a knowledge of modern equipment and technology. Understanding the need to give real priority to the development of vocational education and training is gradually acquiring a more active profile at all levels of management in this area.

## *Authors' foreword*

This report was compiled by specialists from the National Observatory of Kazakhstan with the support of the European Training Foundation (ETF) in May-September 2000. Amendments and additions were made in June-August, 2001. The main aim of the report is to describe the actual situation and present new trends in the development of vocational education and training in Kazakhstan in relation to socio-economic developments in the country in the period 1997-2001.

In compiling the report, the authors made use of the following references:

- the legislation and regulatory documents of the Republic of Kazakhstan
- government documents (edicts, decrees, government programmes)
- published material on the state of the economy, the labour market and vocational education

Statistics for the research were taken from information available from the Statistics Agency of the Republic of Kazakhstan, as published in statistical collections, bulletins and reports. Also used were data from current records and several key indicator tables. The conclusions outlined by the Statistics Agency of the Republic of Kazakhstan, based on a survey of the state of business activity in industrial, construction and agricultural companies and trading organisations, were an important source for assessing the state of the economy and employment and short-term forecast trends.

In several sections of the report, the statistics are not complete. There are several reasons for this. Kazakhstan lacks the broad tapestry of monitoring required to offer a full understanding of the labour market and labour force surveys were only initiated on a country-wide scale in 2001. Proper survey of the self-employed and of the non-registered unemployed population has yet to be undertaken. There is scant information about the market for educational services in continuing education and on-the-job training. There is as yet no monitoring of job placement for school and college graduates. Staff training requirements in the areas of specialisation and qualifications have not been defined. As a response to the lack of material precisely reflecting the above listed processes and facts, the authors of this report have offered individual assessment indicators or quality criteria for these points.



The overview of the actual state of the economy, the labour market and vocational education is accompanied by an evaluation of the short-term and medium-term prognoses for their growth and development.

Brief summaries are given at the end of each chapter while the principal conclusions on the content of information and proposals for solutions to the problems identified are presented in the concluding section of the report.



# Chapter 1.

## Social and economic background

### 1.1 *Economic developments*

The monetary policy introduced in Kazakhstan in 1996-1998 led to the achievement of macroeconomic stabilisation. By the second half of 1998, however, the economic situation was threatened by the worsening situation globally and by domestic financial crisis (recession in manufacturing and investment in the real sector of the economy, deterioration in trade and the balance of payments, and the deepening of the financial crisis).

In December 1999 the Government of Kazakhstan decided to change economic course, expand the real sector of the economy and support domestic manufacturing in 2000-2002 (1). Steps to implement these policy decisions were instrumental in renovating industry and making consumer goods from Kazakhstan more competitive. Local demand began to turn from imported goods to goods of domestic origin.

The first indicators of positive growth in GDP were observed in 1999 as a result of growth in the real economy, with the processing industries showing an increase of 2.2%.

In 2000, GDP and manufacturing were experiencing stable growth, and this trend continued in 2001. The process of regular growth in production at ever faster rates is typical of the extraction industry and is found in all regions of Kazakhstan (cf. Annex 1, 1a).

The National Bank of Kazakhstan has, since April 1999, pursued a policy of a free-floating exchange rate and this has resulted in a robust upward trend in export growth and improvements in the balance of trade and payments.

Both government assessments (5, p. 2) and economic experts' conclusions based on surveys of the current situation (6, pp. 153-167) indicate that Kazakhstan has come through the post-crisis period and that trends for economic growth continue to intensify. There is a noticeable growth in economic activity in the industrial sector, improvement in investment climate, agricultural output, and stabilisation in the financial market.

The Government's Economic Programme envisioned GDP increasing in 2000 by 9.6%, 7% in 2002 and 4.9% in 2002 (7, p. 5). Inflation was also planned to fall to 6.8% in 2001 and to 6.5% in 2002. In fact, in the first half of 2001, the GDP growth rate was 14%, due to an increase in output levels – 13.6% in industry, 4.6% in agriculture and 30.9% in construction. The increase in growth rates in the real sector boosted the growth in services, transport and communications by 11%, and 13.3% in trade. The split in GDP between goods and services in the first half of 2001 was 41.8% to 52.4%. Industry, at 34.2%, was the largest contributor to GDP (38, p. 2).

Overall, the general picture of the Kazakh economy is the traditional one based on raw materials and commodity exports. The strategic industrial sectors are energy, oil and gas production and metallurgy. As part of the policy to enhance competitiveness, the necessary conditions are being created to renovate production assets and introduce competitive substitutes produced in Kazakhstan for imported goods.

To finance rehabilitation in processing industries such as machinery manufacture, light industry and chemicals and to enhance the competitiveness of products produced by these industries, beneficial legislative changes have been made to the tax regime.

As before, agriculture continues to play a major role in Kazakhstan's economy (10% of GDP) (8, p. 8), reflecting the country's traditions, culture and demographic structure. Agrarian structures are being reformed and special zones are being created in the north of the country, to increase grain production, in Central Kazakhstan the emphasis is on small-holding farming and animal husbandry, while in the south cotton, rice, fruit and vegetables are the main crops. Dairy and meat production have long-term development potential but require government regulation and a smoothing of the disparity between prices for agricultural produce and costs of energy, equipment, packaging, and scarce raw materials. Analysts point out that there is not likely to be a noticeable increase in employment and job vacancies, but that, for the agrarian sector to achieve improvements in efficiency, qualification requirements have been raised for employees in this sector, in particular for peasant and smallholder units and in the management structure as a whole.

State interference in the country's economy is gradually diminishing. The government gives support only to those sectors and enterprises which have competitive output.

Small and medium size enterprises (SMEs) have grown up gradually, but stably, in the past few years. Small business represented 8% of the GDP in 1997, by 1998 that proportion was 12.3% and by 1999 it was 13%, while the proportion represented by medium-sized enterprises in the same year (1999) was 24.7% and large enterprises represented 39.2%. At the beginning of 2000, 740,000-755,000 people were employed in SMEs, that is 10.2 - 10.5% of the economically active population of the country (cf. Annex 7).

Recent years have also witnessed growth in investment in the economy, amounting to some 5% of GDP (10, p. 2). The government is introducing measures to improve the investment climate in the real sector of the economy and to encourage customer savings in the banking sector. There was a marked growth in investment in major construction projects (cf. Annex 2).

Foreign investment in Kazakhstan's economy represent about one third of the total volume and shows a trend to growth. The bulk of it is concentrated in the raw materials sector. In 1992-1998 Kazakhstan received 17 loans from the IBRD, amounting to \$1.6 billion (11, p. 1), and \$415 million from the Asian Development Bank in 1994-1999 (12).

Despite an overall trend towards broadening economic rehabilitation in recent years the social situation of Kazakhstan is still one of complexity and tension.

Issues of poverty and unemployment are being addressed through the 2000-2002 Government Programme for Poverty and Unemployment Alleviation (13). The programme is expected to deliver certain results: reduction in the number of unemployed from 2.9 million in 1999 to 1.8 million in 2002, that is, by 38% (13, p. 6).

Growth in the social sectors is held back in Kazakhstan by the low purchasing capacity of the population and inadequate government funding of budget structures (cf. Annex 3).

## 1.2 Demography

The crises phenomena in the social and economic development of Kazakhstan during the years of reform could not but be mirrored in the demographic situation. The trend to massive decline in population numbers intensified and continues to do so (cf. Annex 4). The negative migration figure was, according to the statistics, 261,400 in 1997, 203,000 in 1998, 128,400 in 1999 and 123,200 in 2000. This strong migratory flow is typically made up of younger members of the non-native population, predominantly to the CIS. The largest exodus is from the Kustanay, Akmola, Karaganda and North Kazakhstan regions.

There are also increasing internal migration trends, with rural inhabitants, particularly young people, moving to find work in the town or in other regions with a more developed economic structure.

Up to 2000, Kazakhstan also saw a decline in the natural increase in population numbers (cf. Annex 5).

The tradition for families to have many children is dying out: the proportion of families with three or more children is decreasing due to the increase of those with one or two children. It was 26% in 1998 compared to 27.6% in 1995 (3, p. 20). The downward trend in birth-rates is also noticeable in the population of Kazakh origin.

The mortality rate increased, according to statistics agency data, from 8.2 in 1991 to 10.2 in 1998 and 10.8 in 1999. In 2000, however, it dropped back to 10.01.

Trends for the demographic indices for young people in the 14-17 age group show that there was a peak in the number of young people of this age in 2000-2001 (cf. Annex 6). A drop in these indices is anticipated from 2002 onwards. A peak in the number of 17-year-olds – 293,800 – is expected for 2001. If the number of 18-year-olds is added in, the figure for these young people is 577,100. A significant number of these young people will add to the numbers already in the labour market.

### ***Brief summary:***

Over the last three years, the economy of Kazakhstan has swung through a cycle of crisis, stagnation and back towards revitalisation. The economic growth of the country is still unstable and depends to a great extent on world conditions due to the dependence of the economy on commodities. Nevertheless, priority regions and growth sectors have been identified and are being rehabilitated, steps are being taken to improve the investment climate and boost business growth and entrepreneurship.

Positive changes in Kazakhstan's economic growth have so far not had a major impact on social tension and demographic trends; it will take some time to achieve normalisation.



# Chapter 2.

## Labour market

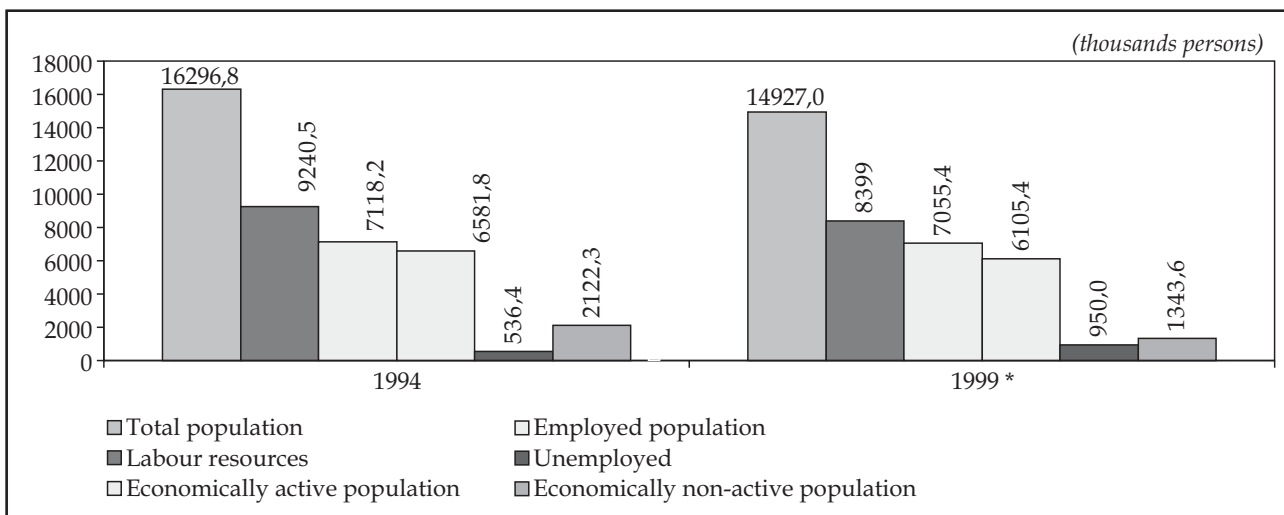
### 2.1 Labour market background

In the 1997-2000 period Kazakhstan's developing labour market displayed trends typical of a transition economy: an increasing mismatch between labour demand and supply, the emergence, on a large scale, of 'hidden' unemployment, a still underdeveloped pattern of market relations in the social and labour sphere, no enabling institution for social partnership, and a shadow labour market. There was a perceptible increase in the mobility of labour resources (for example, hiring and firing) (cf. Annex 8).

In 1999, the labour resources available to the country were, according to the statistics agency, 8.4 million people, or 56.3% of the population. The fall in numbers by 0.8 million compared with the 1994 figure was caused by negative demographic trends. 39.9% of the country's labour resources were concentrated in rural areas.

In available labour resources, there has been over the last five years a noticeable increase in the economic activity of the population. The proportion of the economically non-active population has dropped from 23.0% to 16.0%.

**Figure 1. Labour resources of the Republic of Kazakhstan, 1994 and 1999 (1000 persons)**



The efficiency of the labour market, as defined by the proportion of employed people in the labour resources, was 71.6% - 72.7% in the period 1995-2000. A typical feature of Kazakhstan's labour market continues to be the fall in demand for labour and the problem of job placement. Irregular work and idle production times in many enterprises and organisations are accompanied by a reduction in jobs. On 1 January 2000, 427 enterprises had completely stopped work, 714 had stopped

partially and 355 were working part-time. The total number of workers in these non-functioning enterprises was 500,000.

At the same time, a segment of highly paid managerial labour had emerged in the labour market, in the real sector of the economy and in the credit-finance sphere (paid 2-3 times higher, according to economists, than the average pay level in Kazakhstan).

In 1995-1999, employment dropped from 22.4% to 22.0% in agriculture, from 5.6% to 3.4% in construction and from 17.0% to 14.8% in industry.

In industry, the main fall in employment was registered in the processing sector, due to the poor competitiveness of many types of domestic products on the domestic and international markets, the low level of consumer demand and purchasing power, insufficient protection of the internal market from unscrupulous imports and the flow of people and capital out of the country, etc.

However, each of the depressed sectors of the economy has its own profitable enterprises, able to find their own niche in the market. Examples of this are Rakhat (confectionery), Foodmaster (dairy products), Mister Goodbye (sewn goods) and Bazis (construction) etc. To a certain extent the success of these businesses has been accompanied by meticulous selection of highly qualified staff and proper procedures to ensure up-grading of their skills.

There is a dominance of insufficiently qualified workers and specialists in the labour market; their employment skills are not sufficiently developed for market economy conditions (craftsmanship, key skills and entrepreneurial skills) and their specialities, even though supported by higher education, are not in demand. According to figures from the Ministry of Economics, only 20% of graduates from higher education schools and other colleges in 1999 had found work, though the overall figure for 1996-1998 was 40-50%. By way of comparison it is appropriate to mention that employment for students from the best vocational schools and lyceums is 75-86% immediately after training (according to estimated data).

In 1998-2001 the government's employment policy changed markedly towards active labour market policies, backed by a revision of employment and labour legislation:

- A new act, *On labour in the Republic of Kazakhstan*, adopted on 10 December, 1999, came into force on 1 January, 2000.
- A national law, *On social partnership* came into force on 18 December, 2000; this is an effective instrument for social regulation in the current stage of transitional development in the country.
- A new, third, Law of the Republic of Kazakhstan, *On employment of the population* was adopted in January 2001, with many corrections and additions, including sections regulating employment, unemployment and vocational training for the unemployed.

Employers set up their associations at regional and national levels. A Union (Confederation) of Food Manufacturers was set up, as was a Congress of Entrepreneurs of Kazakhstan, an Entrepreneurs' Forum, and an Association of Entrepreneurs.

Various organisations were then set up and now function to give employers in Kazakhstan legal, normative, professional and information support. Examples are: the Agency of the Republic of Kazakhstan for the Support of Small Businesses, which comes under the Antimonopoly Committee; Departments for Small Businesses, which come under mayor's offices; the Fund for the Development of Small Enterprises; Kazakhstan Business Services (a public foundation); the Centre for the Support and Development of Small Enterprises; the Chamber of Commerce; the Committee for the Support and Development of Entrepreneurship and Small and Medium-sized Businesses, and an array of others.



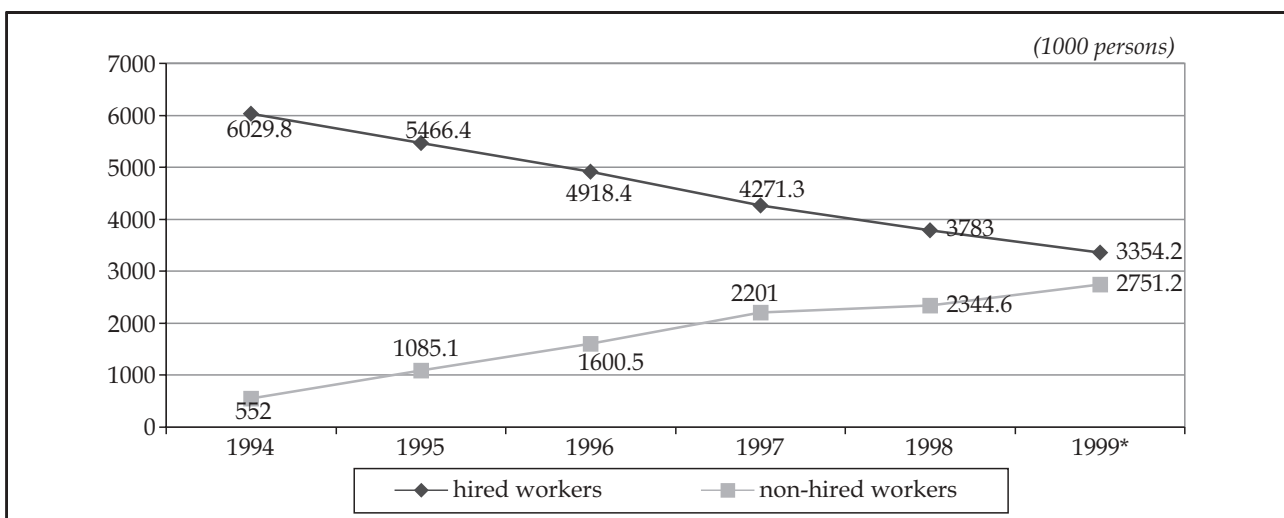
## 2.2 Employment

Along with a drop in employment, the labour market in Kazakhstan also saw a redistribution of the labour force, in particular in the structure of employment status.

The largest number of employed were to be found in such sectors as agriculture, trade and repair of vehicles and household goods, hotel and restaurant businesses. Despite comparatively low wages in these spheres the numbers employed in them tends to increase (cf. Annex 12). On the whole, over the last two years the most stable rates of growth in employment were to be seen, according to the statistics agency, in the extraction industry (where the number of those employed has jumped to 16,000) in transport and communications (growth from 7.9% to 9.4%), trade and services (16.2% to 23%), and in business involving estate property, tax management and other new market sectors.

The same set of figures shows that in 1999 every second employed person in Kazakhstan was self-employed, as compared with 34% in 1997 and 38% in 1998. The largest proportion in this category, and the sectors where this type of employment is particularly noticeable, are in trade (87.7%), agriculture (35.4%), and vehicular transport (52.6%). In industry the proportion of self-employed is 5.8%, in health 13.3% and in education 0.7%.

**Figure 2. Data on employed population of Kazakhstan and employment structure**



The structure of the employed population has also changed due to the increased role of the non-state sector of the economy. In 2000, of 6.1 million people, the proportion of those employed in privately owned enterprises was 77% and 22.9% were employed in state-owned enterprises, as compared with 54.7% and 45.3% respectively in 1995.

Under recent government decrees and programmes the priority aims will be the creation of jobs in light industry, food production, fertilisers, machinery construction and sectors directly affecting growth in agriculture. It is expected that the creation of 400,000 jobs in SMEs will provide additional employment in Kazakhstan in the period 2000-2002.

Overall, government policy on employment in the short term focuses on:

- 1) introduction of active labour market measures, such as:
  - improvements in procedures for job placement for the unemployed (it is planned to make these procedures available to 568,000 people in 2000-2002);

- organisation of social jobs (for 290,000 people);
  - improvement in quality and competitiveness in the work force through training and retraining, with particular emphasis on the labour market needs (99,000 unemployed);
  - improvement of the micro-credit system, support for start-up entrepreneurs (micro-credits granted to businesses employing vulnerable people);
- 2) reorganisation and strengthening of the state employment services;
  - 3) expansion of employment information and analysis systems;
  - 4) organisation of a network of business incubators.

It is hoped to create a total of 400,000 new jobs in 2000-2002. According to government figures, these measures should bring about a reduction in actual unemployment from 13.5% to 9%.

## 2.3 *Unemployment*

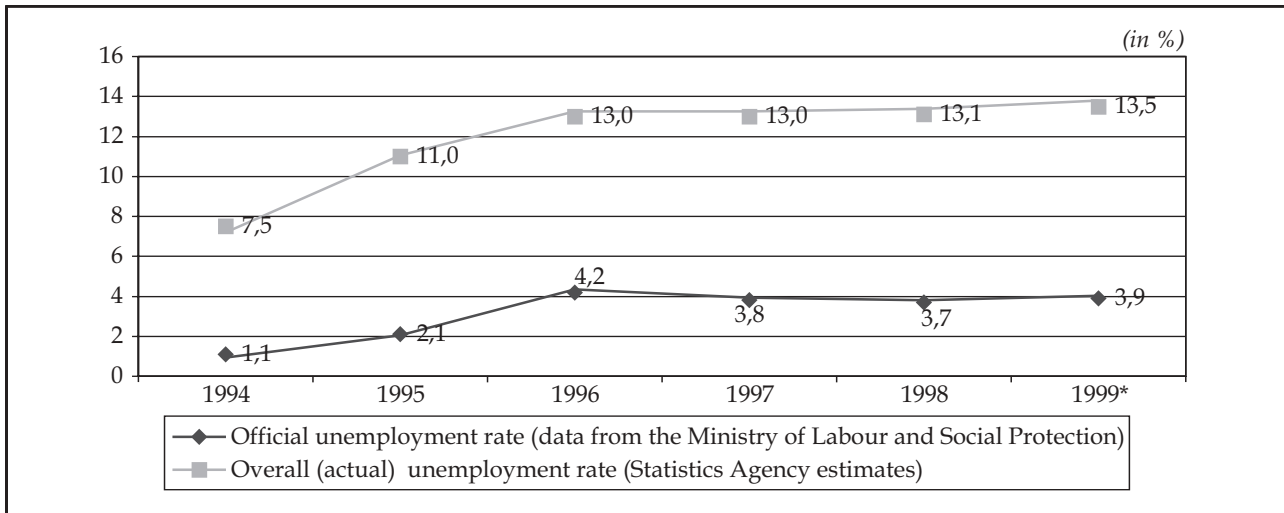
The rate of unemployment is worked out by the statistics agencies and their figures are disclosed in the press.

The total number of unemployed (including people looking for work independently and people in search of work consulting official employment agencies) was 925,000 in 1998, 950,000 in 1999 and 906,400 in 2000. At the end of 2000, the proportion of people officially registered as unemployed was 3.7%, with hidden unemployment estimated at 1.3%. The unemployment rate in 1996-1998 was 13%, in 1999 it was 13.5% and 12.8% in 2000.

World Bank experts' estimates of the actual proportion of unemployed in Kazakhstan at the beginning of 2000 agrees with the figures published by the Statistics Agency – an overall figure of over 13.5% of the economically active population, with over 20% in individual regions (see Annex 10).

With the high level of mobility in the Kazakh labour force there is a relatively low level of official unemployment. The reason for this is the low motivation to be classified as officially unemployed due to financial difficulties. These difficulties are experienced at all budget levels, leading to interruptions in the established system of social support for the unemployed, including organisations offering vocational education and retraining. Under the law On special state benefit in the Republic of Kazakhstan, unemployment benefit was abolished as of 5 April 1999 and replaced with a special state benefit linked to the income of a beneficiary. One result of this was that the percentage of unemployed receiving social assistance moved to 10.2%, as opposed to 54% in 1995 and 61.2% in 1996.

**Figure 3. Unemployment levels in Kazakhstan (%)**



Throughout the Republic, 368,200 people addressed employment offices for help with finding work; 99.7% of these were classified as unemployed, 34.7% (127 700) were placed in work and 3.5% were sent on vocational training courses.

At the end of 1999, the number of people registered as unemployed was 251,400. At the end of 2000 it was 231,400.

The degree of labour market strain can be judged from the number of applicants per vacancy, as shown below:

**Table 1. Number of unemployed per vacancy**

1994	1995	1996	1997	1998	1999	2000
3	8	31	29	29	36	25

The number of vacancies advertised by employers with official employment services was 9,300 at the end of 2000, or 4% of the number of people registered as unemployed. Wages for the majority of vacancies are low and do not meet the minimum required for subsistence for workers and their families. Low remuneration is a serious factor of the decline in employment and the high unemployment rate in Kazakhstan.

In Kazakhstan, as a result of adverse pressures on the labour market the average length of the period of unemployment has increased. In 1998 it was six months, in 1999 7.4 months and by 2000 it was 7.5 months. At the end of 2000 23.5% of those registered as unemployed had spent over 12 months looking for work – that is, every fourth person of the total number. (See Annex 9.)

An analysis conducted by the Ministry of Labour and Social Protection in 1999 showed that around half of the people registered as unemployed did not have the required vocational knowledge or work experience; this is a significant factor that reduces their employability. Further, the number of jobs available does not match the demand for them, either in terms of number or level (speciality, professional level).

The influence of education on unemployment levels is also gender-dependent. While men with higher or secondary level specialist education occupy a 1.4-1.5 times smaller proportion of the number of unemployed than men who have not completed secondary education, women with

higher education or secondary specialist education become unemployed 1.3-1.5 times more often than women without these qualifications. (See Annex 11.)

Since 1998 there has been an trend towards unemployment amongst young people who have completed schooling to 9<sup>th</sup> or 11<sup>th</sup> grade. According to figures from the Ministry of Education and Science, of the total number of 9<sup>th</sup> grade graduates in 2000, 2,286 (1.4% of graduates from 11 grades) had not found work and had not continued their education. In all, of school graduates from the 9<sup>th</sup> and 11<sup>th</sup> grades, 58,192 people (28%) had not found work.

### ***Brief summary:***

The labour market in Kazakhstan is going through a stage of reformation and adaptation to the new conditions of a transition economy. 1997-2000 saw the marked negative trends typical of this scenario. The severe shortage of job vacancies continues, as does the structural imbalance between demand for labour and available labour. This contributes to maintaining a high level of unemployment overall throughout the country and particularly in rural regions. Despite the positive growth curve in manufacturing, construction, transport and other sectors of the economy, there is still a significant scale of hidden unemployment.

The transformation of the economic structure brought about important changes in the sectoral structure of employment throughout the country. Demand for labour shifted from manufacturing sectors to the trade and services sphere, communications and credit and finance services. While there was a marked fall in the demand for specialists, the relative proportion of low-qualified employees showed a tendency to grow. The worsening situation in the labour market has made young people with no vocational qualification or work experience non competitive.

To deal with these problems, Kazakhstan has adopted a large number of measures to set-up and improve employment services, to introduce new ways of managing job placement (recruitment, job fairs) and offices for state support to the unemployed and for mutual support. The scale and range of paid social work sector is being increased, combined with training and job placement.

# Chapter 3.

## VET Governance

### 3.1 *Policy and legislation in vocational education and training (VET)*

Legislation is a key component in the formulation of policy for all education structures in Kazakhstan. Since general secondary and vocational training is still provided mainly by state training institutions, legislation is not only the main instrument for regulation and monitoring in education, it also defines criteria for official recognition of all training institutions and curricula, including those in the private sector.

Article 30 of the constitution, adopted on 30 August 1995 (21), guarantees the country's citizens free secondary education in state training institutions, the right to receive higher education on a competitive basis, the right to receive paid education in private training institutions functioning as state establishments and operating general standards of education approved by the state.

In 1998, the Ministry of Education, Culture and Health, further to the adoption of the government's strategic programme based on the president's address, *Kazakhstan – 2030* (22), defined priority goals for the long-term development of education in the country. The overwhelming majority of provisions in the document reflect the idea of adaptation of the educational system to market economy conditions through a process of reform. The following requirements were given priority status:

- balancing development in education with the labour market requirements and the social needs of society;
- creating a flexible system for education funding and credit, one option being through increasing the role of employers, representing companies and organisations of all types of ownership, and developing personal initiative in obtaining vocational education in a market economy environment;
- creating conditions designed to support and develop a network of non-state general and vocational educational institutions.

These changes in education strategy and policy were backed by legislation, in the Law of the Republic of Kazakhstan *On education*, adopted on 7 June 1999 (18). The methodological basis of the Law established the principle that education in Kazakhstan should be geared to contemporary global trends and achievements without at the same time losing its own experience, accumulated over many years, in developing its own national system of education. Mindful of the international standards recommended by UNESCO, this law established four levels of education in Kazakhstan:

- pre-school education and training,
- secondary education,
- higher education,

■ post-higher education.

In line with the example of dynamically developing countries, Kazakhstan continues to develop a system of continuing education, a key feature of which is vocational education. Under the new model, the structure of secondary education encompasses general, initial and secondary vocational education. The inclusion of vocational education in the structure of secondary education ensures continuity in the technology of education, broadens the long-term activity of vocational educational establishments, and introduces vocational guidance and training at an earlier stage for students, thus improving their employability.

The law also reinforced the policy of withdrawal from the state monopoly of education, replaced the rigorous centralisation of the management of educational services and strict regulation of the activities of educational institutions. The functions and competencies of the management bodies and self-management of training institutions, their rights and duties, are now laid down in legislation.

In conformity with the law, the following aims were identified as priority issues in the process of reforming the education system:

- broadening the autonomy and independence of educational organisations, decentralising the education system management and making it more democratic;
- training for qualified specialists to make them more competitive in the labour market, retraining and improving qualifications;
- retraining and updating the skills of employees released from their jobs and the unemployed;
- encouraging the effective development of diversified and multifunctional educational organisations.

One distinctive feature of the new law was its treatment of the main concepts of a contemporary education system. It provides definitions of terms such as 'education', 'supplementary education', 'qualification', 'occupation', 'speciality', 'college', 'vocational school', 'vocational lyceum', etc. (See Glossary.)

Despite the substantial changes to the law on education, the competencies of the central executive bodies and the education policy put into practice help maintain, as before, a strong state influence over the organisation and content of all educational sub-systems. This operates in parallel with the creation of an environment to gradually promote social mobility by offering elements of autonomy to educational institutions and underpinning their academic responsibilities. However, the existing network of organisations providing secondary education is as yet poorly differentiated. Only 10% of them are educational institutions of the new type and less than 10% are non-state; a system of alternative state educational institutions in initial vocational education is only in the early stages of development (19, p. 31).

The level of access to vocational education for the majority of children and young teenagers, especially for these from vulnerable backgrounds and large families, remains low. Of school graduates who obtained a basic education certificate for the 1999/00 academic year, 6.8% (4, p. 50) continued their studies in vocational schools and colleges. Apart from socio-economic factors, reasons for this are a reduction in the number of VET establishments, their uniform and outdated curricula, the opinion prevalent amongst parents and the school graduates themselves (from general secondary schools) that training in the VET system offers no prospects and lacks prestige. The significant increase in the number and cost of paying facilities has also contributed to the decline in accessibility of vocational education.

These circumstances have led to the adoption by the government of a decree *On measures for the further development of initial and secondary vocational education in the Republic of Kazakhstan* (25) which

provides for the development of regional programmes for initial and secondary vocational education, measures to retain VET institutions, to fund them and to meet the state's requirement for training in vocational schools and colleges.

In 2000, Kazakhstan approved a strategic plan of development to the year 2010; one of its sections, dealing with social policy, identified a strategy for reform in education, with initial and secondary vocational education as one of its main priorities.

The government continued its reforms in vocational education with the adoption, in the spring of 2001, of the decrees *On approval of programmes for the drafting and publishing of textbooks and for methodological support in special subjects for the organisation of initial and secondary vocational education in the Republic of Kazakhstan* and *On approval of a programme for information technology enhancement in educational institutions offering initial and secondary vocational education in the Republic of Kazakhstan*.

The Ministry of Education and Science decided to start, in the 2001/02 academic year, an experiment in 48 schools around the country to train pupils in a programme of 4+6+2 years training cycle. This programme is designed to provide pupils with basic education after completion of ten grades and with vocational education after completion of 12 grades. The programme devisers hope that the introduction of this new system will lead to the gradual merging of secondary general and vocational education.

The resolution of a range of important issues connected with the continuing reforms in the VET system was addressed in the government programme *On education* (19, p. 35), developed in conformity with the Plan of Measures to Implement the Action Programme of the Government of the Republic of Kazakhstan for 2000-2002, which set out the main aims for the development of the education system in the period up to 2005. One of the unresolved issues in the VET system is the lack of a targeted programme to develop and improve the students' work skills and the dearth of research into this problem. It is proposed to create conditions ensuring flexibility, innovation and efficiency of the educational process, the transfer of knowledge and skills for life, with particular focus on the changing needs of the labour market. The aim of the programme in the area of vocational education is to ensure that both students who pass through the initial and secondary vocational education and adults who undergo vocational training and skills upgrading are competitive in the labour market.

One of the main aims in the VET reform process in Kazakhstan is to introduce a system of quality management in education and, directly linked with this, to develop standards for education. Relevant regulatory documents were approved in 1996-2000. These included the 'Compulsory standard of secondary specialist education', the 'Classifier of specialities in secondary specialised education', the 'Compulsory standard of incomplete higher education', the 'State requirements for a compulsory minimum content and level of preparation for graduates in colleges in the humanities and socio-economic subjects' (26, pp. 28-30).

State monitoring of the quality of education is performed by state departments for education carrying out periodic certification and checks. State certification is carried out once every five years in order to establish that an educational institution meets the compulsory state standards and fulfils the qualification requirements laid down in them, before being licensed for educational activity.

## 3.2 *Responsible bodies*

The central state administrative body for education is the Ministry of Education and Science, renamed after a new stage in government restructuring in 1999. As before, its remit covered issues concerning the drafting and implementation of state policy on education development, the drafting and approval of relevant state programmes (goal-oriented and international), regulatory legal instruments, and model provisions for the licensing and certification of educational organisations. It is usually the government itself which initiates drafting directives and it can call on the Ministry of Education and Science, scientists and scholars, foreign experts and other specialists to give direct input into this task.

The Ministry of Education and Science is entrusted with direct management of state educational establishments funded by the republic's budget and with the general methodological guidance of all educational organisations regardless of their official status and type of ownership. The ministry's responsibilities in implementing staffing policies include the hiring and firing of managers of state colleges, planning and monitoring of retraining and qualification up-grading of teaching staff.

In implementing educational policy, the Ministry of Education and Science maintains contacts with other ministries, primarily the Ministry of Finance and the Ministry of Labour and Social Protection. Cooperation is organised through coordinating committees, joint drafting of legislation, programme documents, adoption of joint decisions, running of seminars and practice-based scientific conferences etc.

One of the results of breaking up the pre-reform vocational education infrastructure was the abolition of the State Committee for Vocational and Technical Education and the restructuring of the Republican Methodological Office by combining it with the Institute of Vocational Education. The Republican Training Centre for upgrading qualifications of VET staff was also dissolved and merged with the Republican Institute for Upgrading Qualifications of administrative and academic staff in the education system. The major changes were in the regions. The previous regional vocational education departments and the methodological units were combined with regional administrations of schools; at the same time staff was cut by 50%-90%. Vocational education establishments were thus deprived of centralised vertical management, leading to a weakening in feed-back, normative and information support.

In 1999 the situation began to change. In conformity with the law on education and to strengthen the role of the vocational education system, within the Ministry of Education and Science a Department of Secondary Vocational Education was set up whose main function is to implement state strategy and policy in this area and to monitor the implementation of the government's standards and programmes. One of its new duties is the updating and drawing up, in cooperation with relevant ministries and committees, employers and other social partners, of a list of occupations and specialists for staff development.

The Kazakh Altynsarin Academy of Education has set up an Institute of Vocational Education whose main functions are to provide methodological support for vocational education, design the content, standards and study and evaluate vocational education. Work on the new classifier of specialities in initial and secondary vocational education has been speeded up through the creation of this institute.

Education policy is implemented locally by regional, town and raion education departments whose functions include administration of local vocational education organisations. Since all vocational schools, lyceums and colleges have been transferred to local administration budgets, contacts between them and the management bodies are mostly concerned with issues of funding, and maintaining and changing VET institution networks. These links are not given sufficient support under current legislation and are often the result of individual initiative.



### 3.3 VET financing

In 1998-2000 the legislative and regulatory framework for financing was substantially changed as part of the endeavour to regulate funding sources. (See Annex 16.) Funding for initial and secondary vocational training comes from three sources: the republic's budget, regional (local) budgets, and funds from students or their parents. The educational institutions receive the funds from each of these sources proportionately, as follows:

*Table 2. Sources of funding for vocational education and training*

Educational institutions	Funding sources		
	Republic's Budget	Regional budget	Commercial training
Colleges	9	169	136
Vocational schools		276	30

Kazakhstan's budget arranges its funding directly, through the Ministry of Education and Science. Local budgets arrange their funding through regional administrations (*akimat*), via regional education departments.

Expenditure covers wages and salaries, utilities, grants, catering, acquisition of major equipment, major repairs etc. Standard expenses for educational institutions are incorporated in the estimates for these expenditure headings, in line with current rates. Absolute rates for funded items for educational organisations are regularly indexed to inflation rates and approved annually by the government. Due to the present state of the economy and the deficit in budget allocations these standard rates cannot be met; even more critically, the standard rates, limited as they are, do not cover the needs of the educational institutions in full.

The republic's budget also funds higher education, specialist schools, state secondary vocational education institutions, and institutes for the qualifications upgrading of administrative and academic staff at national level. All other programmes are funded through local budgets, by region.

The 1999 budget made provision for differentiating vocational education institutions into two types, by status:

- 1) state budget institutions (secondary education, vocational schools); an information base has been set up for their funding, with all expenditure headings itemised per pupil,
- 2) government enterprises which hold the state order for staff training. The state budget institutions (secondary schools, boarding schools, sports schools, vocational schools, children's homes) have the right to undertake financial obligations only within set budget limits. Government enterprises not on the list of state establishments fulfil the state order for various educational services, benefiting from the right to engage in extra-budgetary activity.

Funding for initial VET educational institutions (state budget establishments) is based on the indicative plan for social and economic development in a region and local budgets. The 'Education' section is worked out overall with the local education administration, is reviewed by the local finance administration, is discussed in the local council and then approved by the mayor. The general students mobility (intake, training, graduation) is approved in the indicative plan.

Training institutions for secondary vocational education (government enterprises) are financed in line with the indicative plan and state orders awarded through tendering. Government enterprises' expenditure estimates are not approved by the education authorities, only monitored by them.

In 1999, according to the National Statistics Agency data, the share of GDP on state expenditure on education was 4.0%, and the proportion of expenditure on initial and secondary vocational education was 0.13%, as shown in the table below.

**Table 3. Public expenditure on education and on vocational education and training**

Public expenditure on VET	Public expenditure on education	GDP	Public expenditure on VET as % of GDP	Public expenditure on education as % of GDP
2 416	75 740	1 893 478	0.13	4.00

The main source of funding (70%) for the vocational education system remains the local budget. According to the figures for the last three years, income to VET institutions from their own production represents 15%. Payments from the general population for the educational services offered by vocational schools, lyceums and colleges comes to approximately 10%. Income to educational institutions receiving financial support from enterprises for which they trained qualified employees was on average 4.5%. For retraining the unemployed whose studies were paid for by employment services out of the state fund for employment promotion, VET institutions received around 0.5% of the total annual financing (20, p. 17).

Kazakhstan's entry into the world community has served to promote further cooperation with foreign countries, international organisations and foundations in the area of secondary education. There has been a large number of joint projects between the Ministry of Education and UNESCO, the IBRD, Tacis, Tempus, the European Training Foundation, the Asian Development Bank and the Soros-Kazakhstan Foundation. A project has been carried out with Germany to reform the VET system; the total cost of this was around DEM 3 million. For Kazakhstan, this was very important funding and technical support.

### ***Brief summary:***

Legislation is a key component in the formulation of strategy and policy in VET. The positive changes which have occurred in recent years in education and which have been reinforced by the new law of the republic of Kazakhstan On education have not yet been sufficiently developed in subsidiary legislation underpinning the mechanisms to implement the decisions which have been adopted.

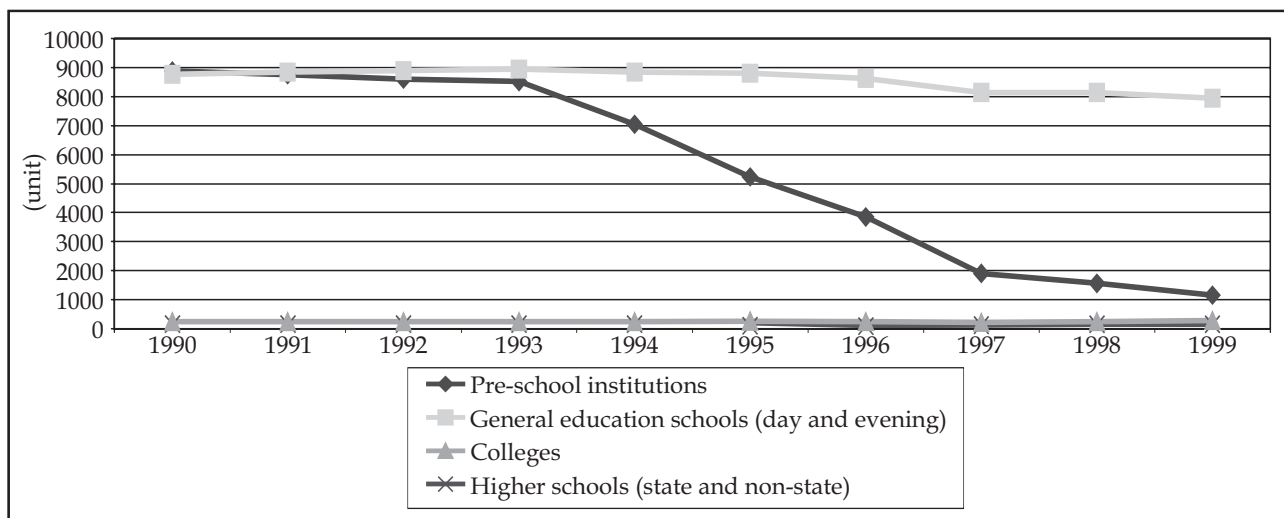
# Chapter 4.

## System of vocational education and training

### 4.1 Initial vocational education

According to the 1999 data from the Statistics Agency, the total number of young people in Kazakhstan aged 14-19 was 1,686,093 (cf. Annex 15). Young people of this age can be students at general education schools, lyceums, gymnasiums, vocational schools, colleges, establishments for informal additional education, and also students in higher educational institutions. (A general outline of the educational system in Kazakhstan is given in Annex 13.)

**Figure 4. Trends in the development of the education system in Kazakhstan**

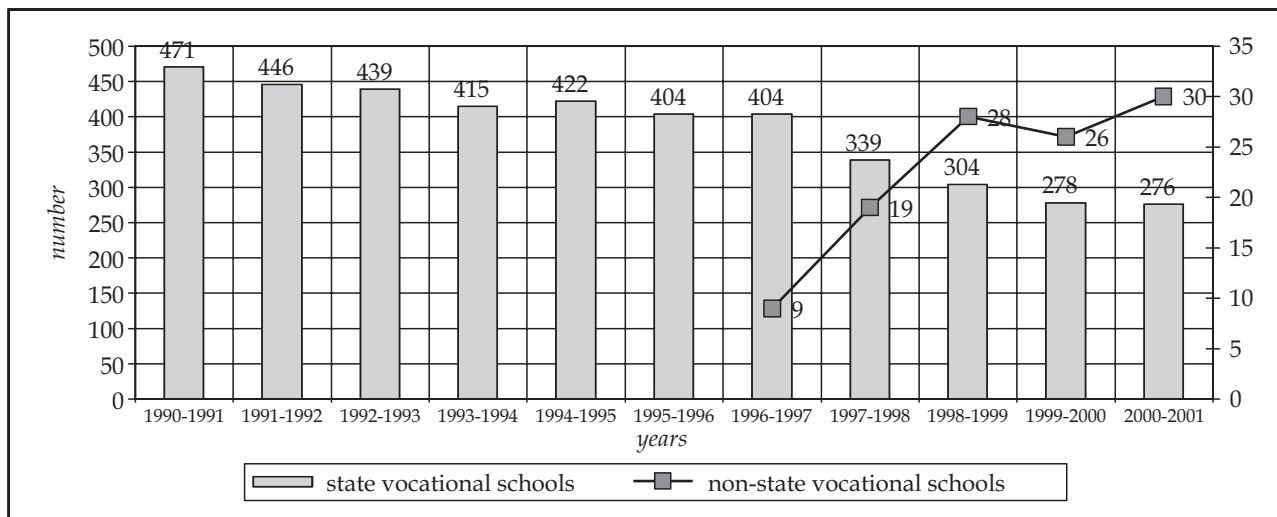


These figures indicate that from 1991 onward there is a clearly marked trend to cutbacks in the network of educational organisations (an exception is the system of higher education which has been proliferating, due to the increase in the number of non-state higher education schools). This has particularly affected the network of pre-school institutions and vocational schools.

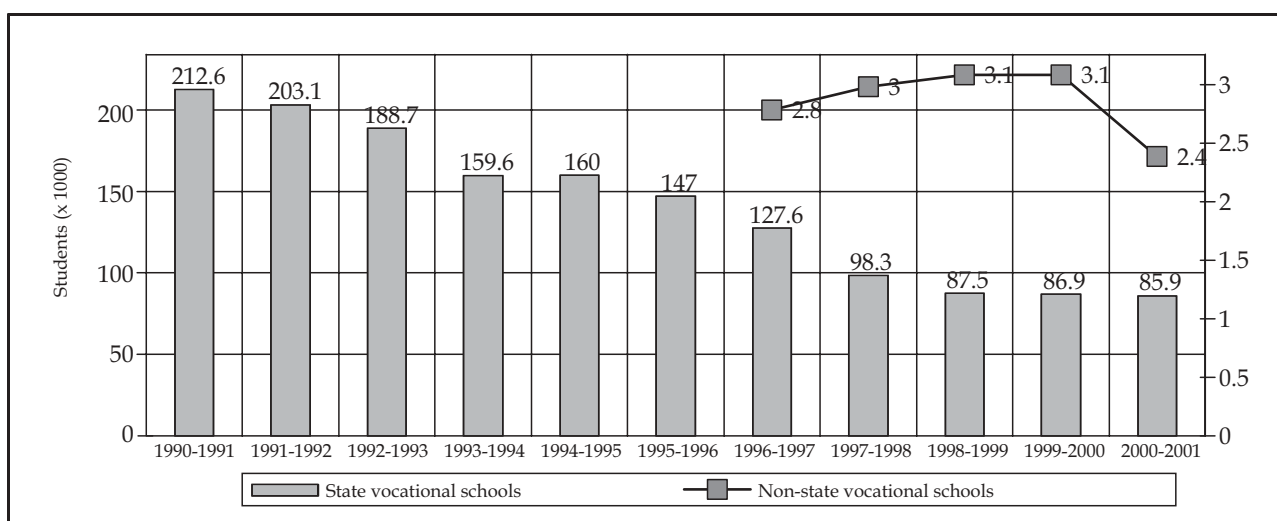
Again according to figures from the statistics agency, the number of vocational schools in the 1999/00 academic year was 285, the number of students in them was 89,900 and the number attending on a fee-paying basis within that figure was 2,719, the number of graduates – as qualified workers – was 40,246 (39, p. 3). The dropout rate among students in initial vocational education in 1999/2000 was 9.4%. Analysis of the situation in initial vocational education and training indicates that from 1990 through to 2000 the number of vocational schools in the public sector fell by 59% from 471 to 276.

Developments in market relations have led to the establishment of non-state educational institutions. There were nine in 1996 and 30 in 2000. In October 2000 the cohort of students in state educational institutions was 85,900 while in non-state ones it was 2,352. The average indicator for the cohort of students in state vocational schools was 311.5 and in non-state ones it was 78.4 people.

**Figure 5. Curve showing change in network of state and non-state vocational schools in the Republic of Kazakhstan in 1999-2000**



**Figure 6. Number of students in state and non-state vocational schools in the Republic of Kazakhstan in 1990-2000**



In the period from 1990 to 2000, there was a sharp fall in the cohort of students in vocational schools, and the intake into vocational schools fell correspondingly. In 1992 the intake was 152,500 while in 2000 it was 36,900. In the 1999/2000 academic year only 6.8% of 9th grade graduates were able to continue training in vocational schools, lyceums and colleges.

The reduction in numbers of students and in the intake into vocational schools took place against a background of overloading in the general education schools, particularly in urban areas. The sharp drop in the cohort in vocational schools – to the average indicator of 311 students for an estimated number of 850-900 places – made the vocational schools, with their fixed educational assets, unprofitable.

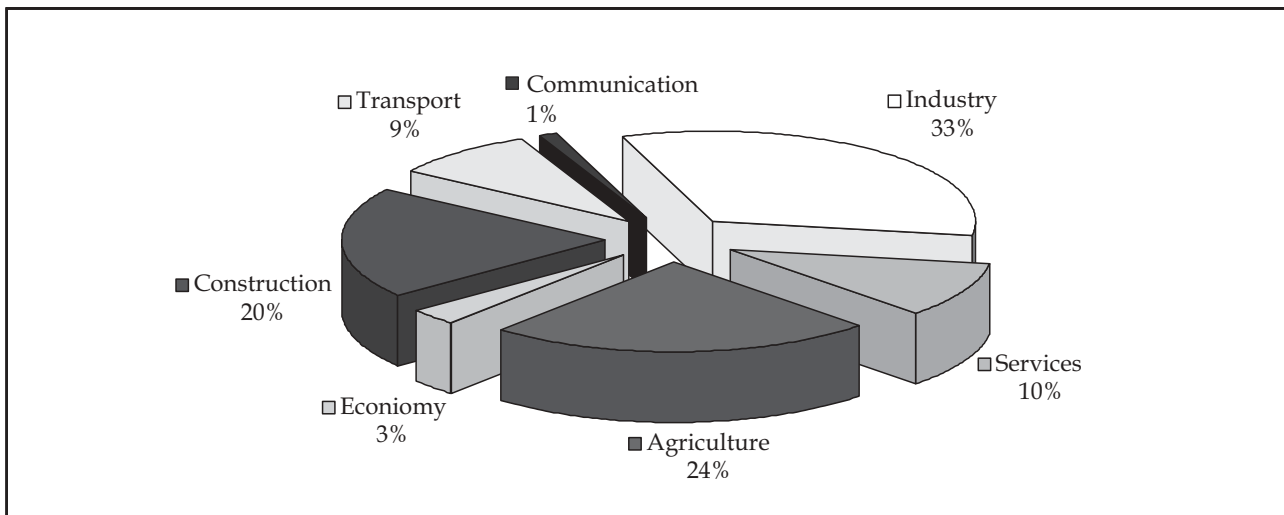
Non-state initial VET establishments also began to experience difficulties in 1996-2000, according to the indicators on the number of students. In 1996 the cohort for these educational establishments was 2,800 students, and numbers reached a peak in 1998-1999 with 3,100 students. In 2000, however, numbers dropped to 2,400 students. There are similar indicators for intake in non-state vocational schools. Reasons for the fall in numbers in the cohort were a fall in the population's ability to pay and saturation of the labour market with specialists in certain occupations.

Against the background of implementation of state programmes for the development of languages, teaching of the national language in vocational schools fell by 65%; in 2000 there were 17,500 students as against 49,700 in 1990. In addition to the reasons given above for the decrease in the cohort, other reasons can be added here: dearth of textbooks and teaching aids in the Kazakh language, and the flow of specialists able to speak Kazakh away from educational establishments.

Changes in the funding volume and mechanisms have led to a significant reduction in or total shutdown of hostels; this has deprived rural youth of the opportunity of continuing education in the towns. Vocational schools began to concentrate on attracting school graduates from the urban areas where, in fact, they were located. As a result, many of the vocational schools became monopolies in training for particular occupations throughout the country (printing, rail transport, communications, etc.), but they could usually attract matriculated students in the settlements where they were located. This gave rise to the problem of too many specialists being trained in one region while in another there was no opportunity for a young person to receive training in that occupation.

Analysis of sectoral specialisation in vocational schools in Kazakhstan indicates that the distribution of training for the labour resources in different sectors of the economy is typical for times when the economy is stable.

**Figure 7. Distribution of numbers of students in vocational schools in Kazakhstan, by sectoral groups of occupations and specialities, as at 1 October 2000**



Many vocational schools and lyceums registered in the state records as training specialists for industry had in fact changed their vocational training profile. There is a redistribution of training for labour resource in different sectors of the economy, with increase in training specialists for the service industries and non-manufacturing sector.

**Secondary vocational education.** At the beginning of the 2000/01 school year there were 176 state and 117 non-state secondary vocational training institutions, located in virtually every region of Kazakhstan, and 63 colleges, functioning as departments of the higher education colleges, and initial

VET institutions training specialists with secondary vocational education. (40, p. 1). They had 168,200 students, and of these, 125,000 were internal students (cf. Annex 14).

In recent years, due to the lack of clear forecasting of the size and structure of the labour resource training requirement and also the information widely available to the public on the situation in the labour market, the intakes of students into economics and law specialities have sharply increased while the intakes to the technical and agricultural specialities have dropped. There is a risk of interrupting training in many specialities essential to the economy, but perceived by the public not to be prestigious.

These circumstances are leading to gradual diversification in VET, the emergence of new kinds of educational institutions and the re-profiling of traditional ones, the refocusing of educational content onto the interests of the individual, different social and professional groupings in the population, and the requirements of the labour market and the economy as a whole. In the secondary vocational education system there are trends to regionalisation, re-profiling and multi-channel funding.

On the whole, the share of positive change in VET would seem as yet to be significantly less than negative trends in the system, due to the effect of a variety of reasons, for instance:

- an outdated list of professions in which training courses were until recently offered in the VET system (which was adjusted to train labour force in a stable economy);
- lack of a national organisation which could carry out real and effective monitoring, in a systematic and focused way, of the labour market. At present this work is done within the framework of international projects. Educational institutions have therefore to work out their own profile independently as a VET institution or to go along with the wishes of the students or their parents and offer training in particular specialities.
- Transfer of the vocational schools funding functions to regional budgets, leading to excessive regionalisation in VET institutions which used to prepare specialists for all regions of Kazakhstan (for example, railway workers, printers, etc.). Despite the introduction of local budget funding all VET institutions are as before subordinate to the Ministry of Education and Science; in other words, the authority for planning, organisation, methodological provision, and monitoring of the system is vested in central management bodies.

The analysis of the negative trends continuing to take place in VET in recent years was used as the basis for the government's review of educational policy, and the VET system in particular. One of the outcomes, as noted in Chapter 3, was the development and outlining, in the 1999 law *On education*, of a new model for secondary education a component part of which is initial and secondary vocation education. Under this law, to receive initial vocational education, a student has to study in a vocational school for two to three years or a vocational lyceum for three years, while the study period for initial VET for particularly difficult occupations (often for servicing one-off types of equipment) is four years. This type of education is targeted at training workers for qualified work (as workers or office workers). Initial education for individual occupations is based on general secondary education with a reduction in its usual number of years.

Vocational education may also be undertaken through work, in industry training units, training centres, on courses and in other industry training structures offering training to manual and office workers. According to the national report *Education for all – 2000*, there are over 15,000 industry training units, training centres and various courses in Kazakhstan (20, p. 6).

Secondary vocational education is acquired after basic general education, with competitive entry; it is combined with secondary general education and is targeted at training specialists with secondary vocational education. The length of study in a college is three to four years. Students with secondary

general education or initial vocational education in related specialities may be allowed a reduced or accelerated period of study in secondary vocational education. Initial VET programmes may be undertaken in colleges or schools which hold an appropriate licence.

In the 2000/01 school year 62% of students in colleges paid the full fees for their courses. At the moment a mechanism is being developed and introduced to offer students in colleges the opportunity to get state general education scholarships and credits, on a competitive basis.

The state and non-state VET institutions offer vocational training in line with model curricula and other regulatory documents approved at national level. Training institutions are free to choose teaching technologies but responsible for the quality of the vocational training. The proportion of practice to theory envisioned in the model curricula is on average 40% practice and 60% theory in initial VET institutions and in colleges it is 25% and 75%.

On the whole, the VET system incorporates a branched network of formal state and non-state educational institutions and a whole range of organisations offering non-formal vocational education and training, such as business schools, institutes of qualification upgrading, training centres and various courses for training and retraining the unemployed and other groups of the population. This system also includes departments and branches of foreign training institutions and various nongovernmental organisations (NGOs). At present there are increasing opportunities to undertake vocational training abroad.

The NGO sector, which grew up in the years of reform, is not yet in high demand in Kazakhstan. According to statistics agency figures, 2,703 NGOs were registered in Kazakhstan in mid 2000. The non-governmental sector is consolidating, however, and in April 2000 an NGO conference was established which took an active role in the dialogue with the government on its contribution to helping resolve issues such as employment, poverty and other social concerns.

One reason for the gradual growth and the diversity of institutions offering additional informal vocational education, particularly over the last three years, is the growth in the market sector of the economy, accompanied by the emergence of new occupations. These include market specialists (the commodity and stock exchanges, the markets for securities, capital and investment), specialists in management, marketing, banking, insurance and auditing, customs and tax services, administrative law, finances etc.

There is a demand for middle-level specialists who are computer literate and have a knowledge of foreign languages, secretaries/PAs, account executives, and qualified clerks for the business environment in the republic. There is also a fairly high level of demand for people in the service industry, qualified seamstresses, tailors and designers, salespeople etc.

It is not possible to describe precise changes in this area due to the lack of information on informal vocational training and the associated statistical base.

## 4.2 *Continuing education and training*

In conformity with the law *On education*, the foundation stone of the principles underlying the continuing education system is continuity through all educational stages: from pre-school to general initial and secondary education, initial and secondary vocational education to higher vocational education, then postgraduate education, and qualification upgrading and staff retraining under the umbrella of further vocational education. Each of these is offered by its own specific type of educational establishment. The most important link in this system is vocational education offered in all the above listed stages of education after the basic (5th to 9th grade) general education.

Reforms in Kazakhstan's economic sector in the 1990s encouraged the emergence and growth of educational services aimed at training in entrepreneurial activity and service sector. When courses in these areas began the level of educational services offered was fairly low and limited to a narrow spectrum of market knowledge and skills. In addition to specialist disciplines their curricula offered introductory and applied courses in the basics of management, marketing, audit, banking, stock exchange and customs. The courses' themes in the service industries usually dealt with issues relating to the work of hairdressers, masseurs, cosmetologists, secretaries, chefs etc. There is a certain amount of homogeneity in the courses for consumers of educational services offered by the larger and established training centres: their prospectuses often have no more than 20 disciplines and specialities.

In the last five years, due to increasing competition in the market place for such services, the curricula have become more focussed to match what is actually happening in various spheres of the economy in Kazakhstan. Instead of general familiarisation courses, multi-level curricula for training and retraining business people and specialists have been introduced.

Nonetheless, updating and expansion of the list of services offered are still slow to happen. New curricula include courses in currency dealing, computer repair and updating, being a tour guide, and flower arranging. Training for manual occupations is limited to refrigeration fitters, lift operators, heavy plant movers, electricians, gas welders and plumbers.

One of the results of the transition economy was the rapid growth of small and medium-sized business schools which concentrated on training specialists who already had basic higher education in management, marketing, managing relations with the financial world, foreign languages, etc.

The largest and best established training centres have a contract with the employment services and try to help graduates look for and get work in their speciality. This trend is not widespread throughout the republic and the practice of contracting with an employer to train personnel according to the employers' needs is very much on an individual basis and limited to the major towns and cities (these services are usually used by banks, hotels or restaurants, who pay for training specialists they need).

Since most of this kind of training and retraining is offered within the non-state environment and is comparatively costly, such training and retraining courses are becoming inaccessible to a substantial proportion of those who would like to undertake them, especially young people and the unemployed. Free training in business curricula is usually only organised as part of international projects. According to official and unofficial sources, there are around 10,000 such courses in Kazakhstan.

An integral part of the continuing education system is management training. The training of middle and senior managers educated at least to baccalaureate level in business administration is offered at the Kazakh National Academy of Management. In addition, Bolashak, an international programme set up by presidential decree in 1993, is still running. Training for masters degrees, for example a masters in business administration, and upgrading of qualification of the managerial personnel are also run by non-state higher education establishments such as the Kazakh Institute of Management and Economic Forecasting, the National Higher School of Management of Kazakhstan, the International Business Academy and the Higher School of International Business.

Qualification upgrading for managerial personnel in the secondary education system is run at the Republican Institute for Qualification Improvement. This institute's curricula are mostly targeted at upgrading of qualifications in the fields of management, pedagogics, psychology and computer literacy.



### 4.3 *Training of teachers and trainers*

At a conference of education employees in Kazakhstan in February 2001 some of the priorities highlighted were the need to enhance social status and improve the role of the teacher in society, the issue of rationalising the teaching load and improving salary conditions (33, p. 17).

The law *On education* framed the payment system for teachers, their rights and duties, and social guarantees. The standard weekly teaching load, for teachers in state establishments for vocational education, is 18 hours. Salary conditions for employees in non-state educational organisations are set by the founders of the organisation or their authorised representatives. Teachers have the right to work in conditions suitable for professional activity, to have free choice of methods and forms of organising that professional activity and must adhere to state educational standards; they also have the right to upgrade their qualifications, paid leave of 56 calendar days, individual teaching activity, etc.

The educational process in vocational training institutions is carried out by two main types of teachers. Theoretical training is given by teachers of general education subjects. These teachers usually have higher pedagogical education, having graduated from a teacher training college or university. Practical (industrial) training is given by qualified industrial trainers who may be graduates of secondary or higher vocational establishments, including industrial pedagogical colleges (faculties) and tekhnikums (specialist secondary schools). These colleges and faculties have now been abolished as a result of an optimisation drive. New staff recruited has gone through engineering training.

Specialists in economics disciplines who have appropriate higher education (such as engineers, technologists, doctors, designers, architects, etc) have the right to teach general technical and special disciplines.

Teaching staff who have not had a pedagogical education are encouraged to undergo teacher training during their first two years of work in a training institution. Such training is usually offered as correspondence courses with teacher training colleges or upgrading of qualifications at the qualification upgrading institutes. Enrolment of teachers and industrial trainers is not governed by any other particular requirements (such as an academic degree or title).

At present teachers are taught the fundamentals of psychology and pedagogics through self-managed learning, short qualification upgrading courses and seminars, while accumulating work experience. There is no single establishment in Kazakhstan dedicated to the upgrading of qualifications of the academic and managerial personnel of initial and secondary training institutions. There is an acute need for managers, teaching and engineering staff to have their knowledge and skills refreshed, especially in subjects such as management, educational business and entrepreneurship, market analysis methodologies, application of new VET standards, new forms of training delivery and quality assurance in the education process.

The requirements for pedagogical staff and the procedure for certification are laid down in regulatory documents produced by the Ministry of Education and Science.

On 1 October 2000, the total number of teachers in initial and secondary vocational education and training in Kazakhstan was 22,836. Of these, 19,328 worked in state and 3,508 in non-state training institutions. The indicators for vocational schools and colleges are shown in the table below.

**Table 4. Numbers of teachers and trainers in VET**

<b>Number of teachers and trainers</b>	<b>State</b>	<b>Non-state</b>	<b>Total</b>
Colleges	11,475	3,191	14,666
Vocational schools	7853	317	8,170
Total:	19,328	3,508	22,836

Analysis of the student-teacher ratio shows that in state colleges there is one teacher to ten students while in non-state colleges the ratio is 1:13. In state vocational schools there is one teacher or trainer to 4.7 students while in non-state schools this ratio is 1:4.9. Training labour resources in vocational schools is, according to this indicator, twice as expensive as in colleges.

In colleges and vocational schools there is a steady trend to teacher ageing, loss of better qualified and promising teachers due to low salary levels and the low social standing of teaching as a profession, and weak social support for educational workers.

Due to the reduction of number of students in vocational schools teachers are obliged to double as trainers, that is teach both theory and industrial practice. This has its positive and negative points. On the positive side, the teachers can, during the practical lesson, see the fruits of their teaching of the theory. On the negative side, it undermines the standardisation of pedagogical work and, as a consequence, the outcome of student training.

### ***Brief summary:***

The unmanageable conditions of the transition economy resulted in the continuation of a range of unfavourable factors in the VET system in Kazakhstan. No national policy on vocational education has as yet been fleshed out, its links with enterprises have not been regulated, neither has the role of enterprises under different types of ownership been defined in relation to the staff development with initial and secondary vocational education. The issue of upgrading qualifications for teachers in VET has not been successfully addressed.

In juxtaposition, however, the last two years have seen the emergence of positive trends as well as a deceleration in reducing the number of initial VET establishments and relative stability in secondary vocational education and training. Diversification in VET began to appear, typified by a multilevel structure, more variety in the kinds of education and training on offer and marked by a broadening of the functions of the establishments in the system. Two-level educational institutions were set up, offering secondary education and an increased level of occupational knowledge, associated with higher qualifications.

Due to intensifying competition in the educational services market, VET curricula became more focused on current processes taking place in different areas of the economy in Kazakhstan. Measures to develop VET standards were adopted and implemented, although this process is not yet complete.

# Chapter 5.

## Anticipation of skills needs and standards

### 5.1 *Skills needs and standards*

Kazakhstan's transition to the market economy has changed the way employment is distributed in the manufacturing sector and in the non-productive sectors, with a migration of workers from the first to the second. This has led to a radical rewriting of the list of occupations taught in the VET system, a renewed profiling of a significant number of vocational training institutions, a radical reform of standardisation in VET, and the creation of a new generation of curricula and teaching materials for training institutions in this system.

In the Kazakh Academy of Education's methodological recommendations (28, p. 3), the standard for vocational education is defined as a set of regulatory documents which define the main content of vocational education and training, establish its primary goals for specific occupations (specialities) and provide, through the regulation of skills and knowledge, a guaranteed level and quality of vocational education and training. The main function of VET standardisation is to provide:

- a unified educational space in Kazakhstan;
- conditions and state guarantees for VET quality, meeting the requirements of the country's economy;
- harmonisation of VET with international standards and the labour market requirements.

The organisation, coordination and provision of the optimum level of work, in terms of standardisation, are carried out by the Ministry of Education and Science. It is the main client for the development of standards because of the budget and other funds it disburses. The Ministry of Education and Science approves state VET standards, after agreement with the Ministry of Justice, the Ministry of Labour and Social Protection and the Committee for Standardisation, Metrology and Certification.

The Institute of Vocational Education of the Kazakh Academy of Education exercises the methodological guidance in the development of the standards. It also drafts instructions, regulatory and methodological documents on standardisation. Temporary teams may also be set up in local education bodies, companies, educational institutes and other organisations, to draft sectoral standards for enterprises. They carry out methodological, organisational and experimental work on standardisation. Regional teaching associations may also be involved in these tasks.

The type and level of graduates' abilities to perform an occupation or continue education is reflected in the qualification received, which shows level to which the profession was learned. The main requirements for the skills and knowledge needed to carry out productive work successfully are laid down in the qualification requirements. The function of this document is to express what society expects from the training of a worker (specialist) and serve as the basis for determining the content

of the education offered, a forecast of the need for specialists of a particular profile and their rational use in all spheres of activity. In line with the *Single Wage and Skills Catalogue* and the qualification requirements, specialists' ranges of grades or class (category) established for a particular occupation is indicated.

Qualification requirements are worked out with initial and secondary VET training institutions and must be agreed with the clients/employers, with the health authorities and other stakeholder organisations. They are then sent to the Ministry of Education and Science which, after agreement with the Ministry of Labour and Social Protection, includes them in the list of occupations and specialities to be trained at schools.

There are no stable contacts, coordinated and controlled by the government, between VET establishments and the labour market to draft the qualification requirements. This particular task is at present mainly done within international projects, sometimes in the service sphere, or in the economics sector where there is complex technology, and in joint ventures.

As already mentioned, changes in the economic situation brought about the need for a new list of occupations - the classifier of specialities in initial and secondary vocational education - to be written, keeping it in line with the International Standard Classification of Education (ISCED). The new classifier includes names of specialities, qualifications, VET profiles, codes for vocational education levels and a glossary. This document is approved by the minister of education and science and is registered with the Committee for Standardisation, Metrology and Certification of the Republic of Kazakhstan.

The Institute of Vocational Education of the Kazakh Altysaryn Academy of Education has drawn up a new classifier which pairs specialities in initial and secondary vocational education with the ISCED codes and which now includes around 340 occupations. Standards for specialities in 130 occupations have now been drafted, guided by the new classifier. Even though these were approved by the Ministry of Education and Science in 2000, work on completing them has been extended, since not all the requirements of the international standard classification were taken into account.

The qualification requirements and the classifier of occupations can be used as basis for selecting and structuring the training content to fit each speciality and for formulating requirements for the level of training when the model and working curricula and other training documentation is being drafted.

In conformity with the provisions of the state standard, the content of vocational education and training is divided into two components: invariable and variable. This called for the use of a two-level approach in the drafting of the training documentation. At national level there are model curricula and programmes prepared by the management and academic structures together, while at regional (local) level there are working documents drafted by the methodological units and training institutions on the basis of model documents, taking local features into account.

The curriculum is a national document containing the basic requirements of the education content of any given occupation or speciality; it specifies the list of subjects, volume, sequence, length of study of different subjects, types and duration of practical training, forms of organisation of the training process and monitoring of knowledge, skills and habits, and types and duration of intermediate and final attestation. The content and volume of each discipline is specified in the syllabus.

At present, as part of the development and approval of new state and sectoral standards, the content of curricula and syllabi is being renovated. The main principles for change are the need to achieve internal unity and continuity in all sections, and a clearer outline of the specifics of an occupation, the opportunity to bring in more depth and flexibility in content, to be more able to satisfy the

expectations of consumers of educational services. Model curricula for initial education institutions offer training based on:

- basic general education, having completed general secondary education;
- basic general education, not having completed general secondary education;
- general secondary education.

Curricula for initial vocational education and training include two main units: general education and vocational education (with three cycles – general vocational, special and practical). Models of curricula for secondary VET institutions provide training on the basis of:

- basic general education, having completed general secondary education;
- general secondary education.

Curricula for secondary VET institutions are structured into four main units: arts and humanities, socio-economics, general education and vocational education.

In addition to these main units, the curricula include types of monitoring and attestation, consultation, subjects to be chosen and optional studies. The new curricula and syllabi have incorporated additional time blocks to allow the opportunity to study new production technologies and equipment, new types of services, and to offer familiarisation with new occupations and specialities.

On finishing a course at a VET institution or other vocational education institution, graduates who have gone through the process of state attestation are awarded standard state documents showing their level of education and qualification:

- A certificate is a document certifying that the student has completed vocational education through accelerated vocational training at qualification levels 1 and 2.
- A diploma is a document certifying that the student has completed vocational education at qualification levels 3 and 4.

## 5.2 *Curriculum development*

The curriculum for each subject is the same for all types of training in initial and secondary VET establishments. A model curriculum is the document which defines the concrete content of the basic training component and the quality criteria for learning each subject in the model curriculum. The working curriculum is based on the model curriculum and is worked out for each specific sector and occupation (speciality). It describes the training content, with adjustments for sectoral and regional components.

Model curricula are drafted and approved by the Ministry of Education and Science. Working curricula are drawn up by VET institutions which can make changes or addition in the variable part of the content, sequence of study of the training material, allocation of training hours by section and theme within the limits of the time budget set in the syllabus of the subject. Curriculum content includes the requirement for the students to have certain levels of knowledge, skills and habits. Working curricula are discussed at meetings of the methodological units and approved by the manager of the training institution.

Renovation of the content of the curricula and syllabi is encouraging a broadening of the list of business disciplines, in-depth computer training and introduction of modern technology in the educational process.

## **5.3        *Research***

The main research centre examining valid and reasoned principles for the initial and secondary vocational education system in Kazakhstan is the Institute of Vocational Education. Its work is coordinated by the Department of Initial and Secondary Vocational Education at the Ministry of Education and Science.

The research undertaken at the Institute of Vocational Education deals with issues primarily concerned with standardisation in initial and secondary vocational education. In the last three years researchers at the institute have drawn up and published the following documents:

- 1998 - Collection: State standards in initial vocational education (structure, content and drafts of some occupational standards)
- 1999 - Compulsory state standard for initial and secondary education in the Republic of Kazakhstan (general provisions)
- 2000 - Methodical recommendations for developing compulsory state standards for vocational education; State standard for initial vocational education: Economics specialities; Classifier of specialities in initial and secondary vocational education; and several others

The plans the Department and the Institute of Vocational Education has for joint action encompass the drafting of a national programme for creating textbooks and training material for VET institutions (a working version has been compiled), the preparation of materials for monitoring this system, the publication of a journal on vocational education and the launch of a VET standards competition.

Research programmes have been drawn up and approved by the academic board of the Institute of Vocational Education. These programmes will be run with the regional colleges, vocational schools and lyceums. Generally, however, this work is held back by lack of financial resources and poor material and technical basis. For this reason the list of issues to be dealt with as a matter of immediacy cannot include research into the labour market.

This topic was the subject of survey carried out within the framework of the ETF programme on setting up a network of National Observatories. Participants in the project were Institute for Vocational Education, the Department of Education in Almaty, the Department of Labour, Employment and Social Protection and other organisations.

Cooperation between the Institute for Vocational Education and other research establishments and universities is in the initial stages. Contacts have recently been established between the Institute of Vocational Education and the National Observatory in Almaty. One of the results of this cooperation has been the joint elaboration of drafts for the methodology of VET standards and the structure of modular programmes.

***Brief summary:***

The positive processes described in this chapter are still in their early stages, and national VET standards are therefore not yet entirely drafted and approved. The scientific and methodological output of the various institutes involved does not fully meet the requirements of practitioners. There is no focused research in the field of VET management, the labour market, employment forecasting and staff requirements. VET establishments run almost exclusively on outdated curricula and syllabi. There is an acute need for radical transformation in VET content and technology, based on training focused on developing individual needs.





# Conclusions and proposals

1. Kazakhstan's economy has, in the period under review, undergone a cycle of crisis and stagnation and entered a period of stabilisation. Economic growth is still unstable and depends on the state of the world economy, due to its reliance on the production of raw materials. Priority sectors and regions have been identified, measures have been undertaken to improve the investment climate and promote business and entrepreneurship.
2. More than 40% of the population lives below the poverty line. The country's population is declining due to migration and the fall in natural population growth. To change social and democratic conditions, the issues of poverty and unemployment have to be tackled, through an extensive programme of training and retraining.
3. The labour market in Kazakhstan remains depressed, with a reduced demand for labour resources. This is reflected in the drop in real wages and in the worsening conditions for renewal of manpower. One of the sources of unemployment among 17-18-year-olds is the influx of secondary school graduates.
4. Regulation and self-regulation of the labour market is based on new principles of economic activity which correspond to new changes in the forms of ownership. These are self-employment, entrepreneurship, hired labour and unemployment. The employment environment is restructuring, new spheres for labour are emerging and the non-state sector of the economy is expanding.
5. Other typical features of the labour market in Kazakhstan are the following:
  - the employers dictate their conditions, especially in the private sector
  - significant numbers of people are employed in the shadow economy;
  - social assistance for the unemployed is limited
  - there is a divergence between the population's actual labour potential and the type of vacant jobs actually available, usually in the service sector
  - opportunities to receive free vocational training and retraining are increasingly declining
  - there are no links between work and wages, and increasing wage differentiations
  - discrimination on grounds of age and gender in hiring and firing is growing.
6. In the medium-term development of the country, education and health have been identified as priority sectors to be given particular attention by the government.
7. As reforms in Kazakhstan's education system deepen, legislation remains a key factor in the development and implementation of strategy and policy in education. There are no independent documents (concepts, programmes), offering an integrated approach to the development of the system in the long term or in the near future.
8. 1998-2001 saw the achievement of positive changes, important in terms of market relations, in the legislative support for reform in vocational education. The most weighty contribution here

was the 1999 education law. The new legislation reinforced provisions for the non-state sector in education, changed the system of state financing and established multi-channel structures for funding, recognised international and foreign educational establishments, paved the way for conditions enabling social mobility and broadened the autonomy of training institutions.

9. Despite this, there still remained an acute need to make additional amendments to the law, introducing specific, goal-oriented decrees aimed at finding solutions to many current problems in vocational education. These include the issues of modernisation and the establishment of priorities in vocational education, the quality of training and the quality of the work force, funding, social partnership, methodological provision in vocational education etc.
10. In the more practice-oriented areas there have been some positive movements in VET, such as the deceleration of the rate at which initial VET institutions were closing and the relatively stable situation in secondary vocational education (mainly due to the increase in the number of private colleges).
11. The combined efforts of central and regional education management bodies have made a start on measures to provide a more flexible management system and decentralise the VET system; and they are finding ways to establish new links between vocational education and the work and employment environment at local level. Nationally, employers do not play an as yet noticeable role in discussions and decision making on VET issues.
12. Efforts to broaden the spectrum of educational services have been fairly limited. However, in recent years, the public has got a wider choice of VET institutions and vocational and educational curricula.
13. There has been a noticeable improvement in the methodological provision of VET institutions. Among the outcomes are the new classifier of specialities and occupations and vocational education standards. These were produced by the Institute of Vocational Education, within the Kazakh Academy of Education.
14. At the same time, the uncontrollable difficulties of the transition period led to maintaining a series of unfavourable factors in the VET system:
  - due to the significant cuts in funding volumes, the number of state initial VET institutions and their student numbers continued to fall, although this trend does appear to be slowing.
  - as before, the existing fiscal and tax policy lags behind real needs for the effective functioning of the VET system and staff development. The decentralisation process has not yielded improvements of efficiency in management and funding.
  - miscalculations continue to be made in the structure and size of staff development and in defining needs for it. Staff development in the VET system retains the inertia of the past: training is conducted not so much in response to actual needs but is in line with local traditions and existing practice.

Further development of the VET system depends to a large extent on how the following issues are resolved:

- Drafting of clear legislation, concepts and policies outlining the role and place of vocational education while society in Kazakhstan is undergoing reform,
- Review of the profiles of initial and secondary vocational education to bring them into conformity with the labour market at regional and national level,

- Strengthening of vertical management in vocational education,
- Re-establishing and renovating methodological provisions in vocational education,
- Activating the VET system to be involved in training and retraining the unemployed in marketable occupations, entrepreneurship and to set up their own businesses,
- Reorganising the skills upgrading and continuing education system on a new basis, encouraging private and public sector cooperation in the areas of continuing education and skills upgrading,
- Training and retraining workers in new technology trends requiring accelerated development, making use of facilities in modern businesses,
- Improving the equipment level in the VET system, in line with current and future industry developments; increasing student intake in engineering and technical specialities; increasing information technology, computer literacy and other advanced supplementary disciplines in the VET system,
- Putting the apprenticeship system on a new footing,
- Improving the labour market information system, analysing labour supply and demand,
- Gradually redirecting the majority of young people and the adults which need retraining to obtain a worker occupation with a high qualification,
- Revising VET standards, bearing in mind the economic realities of Kazakhstan and international experience,
- Targeting curricula and training technologies to develop students' market skills.



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# Annexes

(contents of tables, except 1a, 13 and 16 are taken from data issued by the Statistics Agency of the Republic of Kazakhstan)

## *Annex 1. Key economic indicators*

	1995	1996	1997	1998	1999	2000
Total GDP, billion tenge	1,014.2	1,415.7	1,672.1	1,733.3	2,016.5	2,596.0
Per head of population, tenge	64,123	90,880	109,045	114,991	134,880	174,577.3
GDP, million dollars	16,645	21,041	22,172	22,139	16,854	18,264.7
GDP per head of population, dollars	1,052.4	1,350.7	1,445.9	1,468.8	1,127.4	1,228.3 (working data)
Volume of industrial production, billion tenge	660.0	719.1	810.7	808.0	1,112.7	1,798.3
Volume of gross agricultural production, billion tenge	191.6	270.6	297	246.1	335	402

## *Annex 1a*

Macroeconomic indicators for 2000-2001 (from the Announcement of the government of the Republic of Kazakhstan on directives for economic and social policy and economic indicator forecasts in connection with the tenth anniversary of independence of the Republic of Kazakhstan, March 2001)

Indicators	2000 report	2001 forecast
GDP in real terms (as percentage of previous year)	109.6	104
Volume of industrial product in real terms (as percentage of previous year)	114.6	108.0
Including processing industries	115.6	106.0
Investments in capital assets (as percentage of previous year)	129.4	122
Consumer price index at end of year (%)	9.8	6.9
Consumer price index – average for year (%)	13.2	8.4

Indicators	2000 report	2001 forecast
State budget revenue (percentage of GDP)	23.0	23.4
National Fund revenue (percentage of GDP)	-	5.0
State budget deficit (credit) (as percentage of GDP)	0.1	-2.6
Export f.o.b. (as percentage of previous year)	160.3	102.5
Import f.o.b. (as percentage of previous year)	128.6	104.5

### *Annex 2. Investment in major construction projects and their structure in terms of funding sources*

	1997	1998	1999	2000
Total investment in major construction projects, billion tenge	139.8	214.5	275.7	414.2
Investment in major construction projects (%) in total, including those funded from:	100	100	100	100
■ budget resources	6.9	11.8	9.7	9.1
■ own funds of enterprises and organisations	67.8	56.9	46.8	55.1
■ own funds of individual developers	3.5	2.2	2.1	-
■ foreign investments	21.8	29.1	41.4	35.8

### *Annex 3. Expenditure on social needs from the state budget*

	1998		2000 (14)	
	Million tenge	% of total	Million tenge	% of total
Expenditure and credit	377,397	ō	602,024	ō
Education	69,462	18.4	84,668	14.1
Health	26,024	6.9	54,323	9.0
Public order and safety	31,133	8.2	47,738	7.9
Social security and assistance	53,618	14.2	171,065	28.4



**Annex 4. Population (x 1,000)**

Year	Total	Urban	Rural	Urban population, as percentage of total population	Population density per km <sup>2</sup>
1990	16,358.2	9,366.9	6,991.3	57.3	6.0
1994	15,956.7	8,884.4	7,072.3	55.7	5.9
1998	14,957.8	8,368.8	6,589.0	55.9	5.5
1999	14,896.1	8,322.2	6,573.9	55.9	5.5
2000	14,841.9	8,283.2	6,558.7	55.8	5.5

**Annex 5. Natural population increase per 1,000 inhabitants**

Year	Total	Urban	Rural
1990	14.3	11.0	18.8
1994	9.0	4.6	14.5
1998	4.6	1.8	7.9
1999	4.4	1.9	7.7
2000	4.6	2.2	7.7

**Annex 6. Trends in demographic indicators:  
15-18 year olds in 1995-2000 (x 1,000)**

	1995	1996	1997	1998	1999	2000
14 year olds	297.8	295.7	301.1	299.0	310.3	310.9
15 year olds	296.0	290.6	290.0	294.6	293.8	307.6
16 year olds	299.7	290.5	284.6	283.3	289.2	291.2
17 year olds	288.4	289.2	283.6	276.2	275.6	285.1

## *Annex 7. Sectoral specialisation and employment structure in SMEs in Kazakhstan*

Sector	Share of production of goods (labour, service) of SMEs (%)	Share of the employed in SMEs (%)
Agriculture, hunting, forestry, fishing and fish-farming	16	56
Industry	2.4	11
Including: processing industries	3.7	13.4
Transport and communications	1.5	7.7
Trade	34	73.4
Services	54.5	13

## *Annex 8. Labour mobility in Kazakhstan, 1994-1998*

	1994	1995	1996	1997	1998
Hired people (x 1,000)	1,016.5	893.7	859.0	822.6	749.8
■ as a percentage of established number of workers	19.3	20.1	19.4	22.5	24.2
Laid off people (x 1,000)	1,482.8	1,271.0	1,489.9	1,405.8	1,101.9
■ as a percentage of established number of workers	28.2	28.5	33.6	38.4	35.5
■ including those leaving work at own request, thousand people	1,060.5	940.2	977.8	811.4	690.0
■ as a percentage of established number of workers	71.5	74.0	65.6	57.7	62.6
Replacement of laid off workers (%)	68.6	70.3	57.6	58.5	68.0

## *Annex 9. Unemployment rate*

	1995	1996	1997	1998	1999
Overall unemployment rate	11.0	13.0	13.0	13.1	13.5
Official unemployment rate*	2.1	4.2	3.8	3.7	3.9
men	1.6	2.9	2.4	2.8	3.0
women	2.7	5.6	5.5	5.3	5.3
16 - 29 year olds	4.0	7.1	5.7	5.3	4.7

\* as a percentage of the economically active population

***Annex 10. Forecast unemployment rate by region  
(data from the Ministry of Labour and Social Protection)***

Region	Unemployment rate		
	2000	2001	2002
Akmola	13.3	11.3	9
Aktyubinsk	21.8	18.8	14.9
Almaty	7.3	4.2	3.3
Atyrau	22.0	19.8	15.4
East-Kazakhstan	18.0	16.5	13.0
Zhambyl	5.2	4.4	3.4
West-Kazakhstan	11.7	10.0	7.8
Karaganda	10.1	8.6	6.8
Kyzylorda	40.1	35.7	28.1
Kustanay	17.0	14.7	11.5
Mangistau	31.6	26.1	19.8
Pavlodar	20.8	17.9	14.0
North-Kazakhstan	12.5	10.6	8.3
South-Kazakhstan	5.1	4.3	3.4
City of Almaty	7.8	6.6	5.2
City of Astana	11.0	8.9	6.8
Country as a whole	13.5	11.5	9.0

### *Annex 11. Employment distribution: women employed in various areas of the economy (%)*

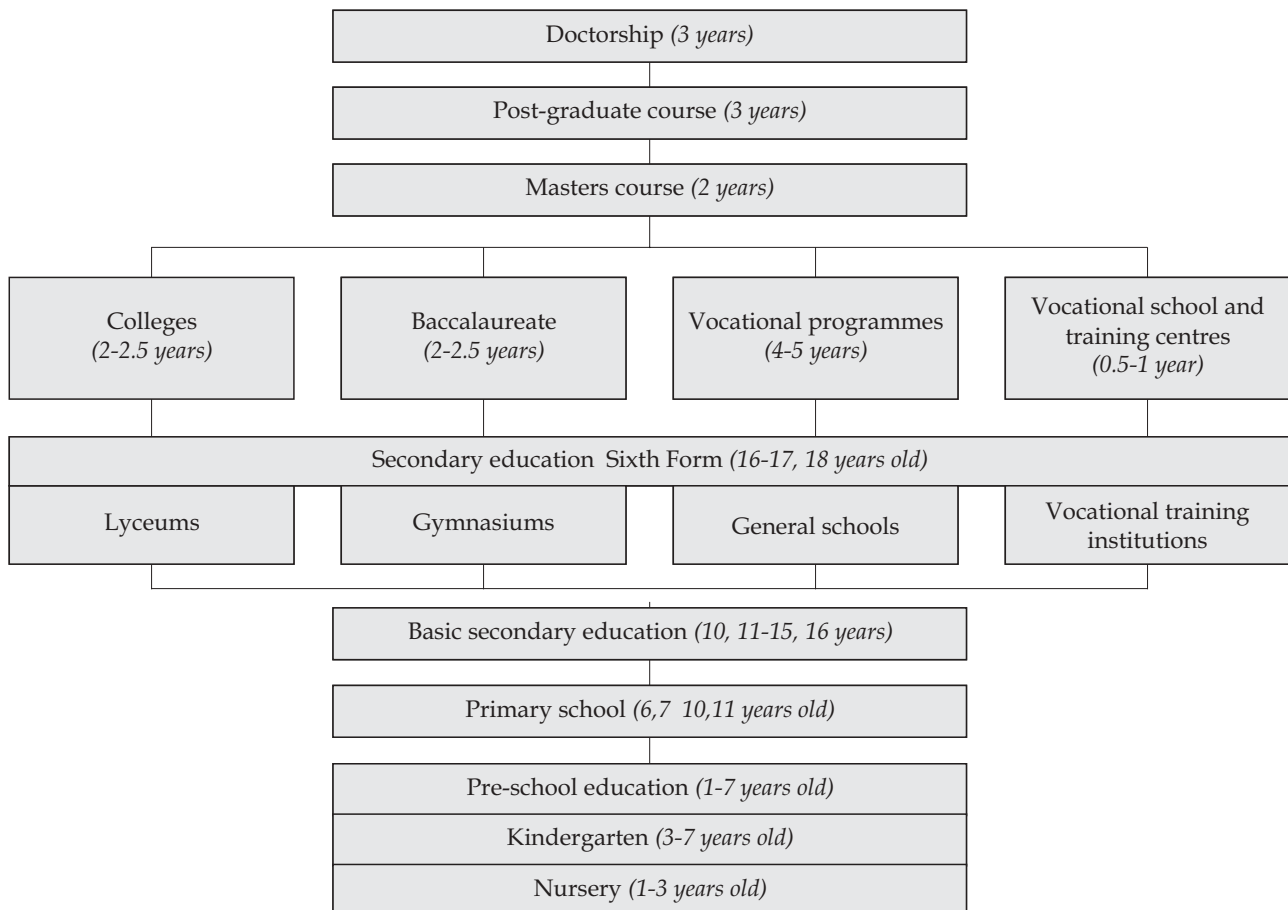
	Number of women	Workers	Officials	Managers	Specialists
Total, in all types of activity	100	100	100	100	100
Agriculture, hunting, forestry	9.5	17.9	2.8	3.4	2.2
Fishing, fish farming	0.1	0.2	0.0	0.0	0.0
Industry, incl.	19.2	31.3	9.4	22.9	7.8
Mining and extraction	2.6	4.0	1.5	3.1	1.3
Processing	13.7	23.0	6.2	16.8	5.0
Power, gas and water production and distribution	2.9	4.3	1.7	3.1	1.5
Construction	1.9	2.6	1.4	3.4	1.0
Trade and repair of vehicles and consumer goods	2.6	4.0	1.6	3.3	1.2
Hotels and restaurants	0.6	0.9	0.3	0.4	0.1
Transport and communications	7.6	10.6	5.2	9.2	4.3
Financial activity	1.7	0.3	2.8	4.2	2.1
Civil service, public management	6.1	3.0	8.6	9.5	8.2
Education	27.0	12.6	38.6	24.9	42.7
Health and social services	16.8	11.1	21.4	7.9	23.0
Utilities, social and personal services	2.6	2.0	3.1	4.3	2.8

### *Annex 12. Number of employed and relationship in terms of average monthly nominal wage, by type of economic activity, in Kazakhstan*

	Employment (x 1,000)		Wages (%)		
	1998	1999	1998	1999	2000
Total, by types of activity	6,127.6	6,105.4	100	100	100
Agriculture, hunting, forestry	1,353.9	1,342.3	40.2	38.1	31.1
Fishing, fish farming	5.9	5.8	49.6	49.2	50.5
Industry, incl.:	903.2	910.7	139.1	144.8	143.1
Mining and extraction	123.7	129.0	209.8	214.6	213.2

	Employment (x 1,000)		Wages (%)		
	1998	1999	1998	1999	2000
Processing	627.0	627.8	117.3	122.3	125.5
Power, gas and water production and distribution	152.5	147.7	146.6	137.2	123.2
Construction	222.9	210.6	127.8	131.7	131.9
Trade and repair of vehicles and consumer goods	1,404.6	1,467.8	85.1	89.2	92.1
Hotels and restaurants			89.4	148.5	151.0
Transport and communications	560.2	576.3	123.2	124.6	123.8
Financial activity	37.9	36.0	199.6	238.5	267.8
Civil service, public management	178.7	343.5	106.5	96.8	82.8
Education	521.7	513.1	74.8	69.1	60.8
Health and social services	325.9	320.5	66.7	57.6	51.0
Utilities, social and personal services	186.8	390.1	81.6	88.1	89.3

### Annex 13. Structure of the educational system of Kazakhstan



### ***Annex 14. Main indicators for secondary vocational education (compared with the 1991-1992 school year)***

<b>No.</b>	<b>Indicator</b>	<b>School year 1991/92</b>	<b>School year 20/01</b>	<b>As a percentage of 1991/92 school year</b>
1.	Number of educational institutions	244	293	120
	■ of which state:	244	176	72.1
	■ of which private:	-	117	
2.	Student cohort (in 000s)	238.3	168.2	70.6
	■ in state training institutions:	238.3	121.4	50.9
	■ in private training institutions	-	46.8	
	■ in internal courses	165.0	125.0	75.8
	■ in evening courses	4.7	0.6	12.8
	■ in external courses	68.6	42.6	62.1
	■ in courses funded from the state budget	238.3	44.7	18.8
3.	Number of students in secondary vocational educational institutions per 10,000 inhabitants:	140	114	81.4
4.	Student intake (x 1,000)	80.9	77.8	96.2
	■ in state training institutions	80.9	53.4	66.0
	■ in private training institutions	-	24.4	
5.	Graduates: specialists (x 1,000)	69.1	43.7	63.2
	■ in state training institutions	69.1	33.6	48.6
	■ in private training institutions	-	10.1	
6.	Number of teaching personnel (x 1,000)	14.4	12.8	88.9

## *Annex 15. Structure of Kazakhstan's population, by age*

Years	Males	Females	Total
14 year olds	158,495	153,345	311,840
15 year olds	150,767	146,264	297,031
16 year olds	144,663	140,222	284,885
17 year olds	136,978	133,044	270,022
18 year olds	132,821	129,702	262,523
19 year olds	131,459	128,333	259,792
Total 14-19 year olds	855,183	830,910	1,686,093

## *Annex 16. Current regulatory documents applicable to VET funding:*

- Law *On education* (1999) which establishes multi-channel funding for educational organisations and the provision on funding training for any specific student
- New law *On employment of the population* which came into effect on 1 January 1999 and defined parameters for the setting up of a state fund for employment promotion as an independent financial system
- Law *On the republic's budget* for the current year based on the indicators in the indicative plan of the country's socio-economic development
- Governmental decree *On approval of the programmes and sub-programmes of the Ministry of Education, Culture and Health of the Republic of Kazakhstan* for the drafting of the state Budget for 1999, which confirms that initial and secondary VET institutions are contained within the local budgets
- Governmental decree of the Republic of Kazakhstan, 1998, *On measures for the further reform of the secondary education system in the Republic of Kazakhstan*, making it compulsory for the relevant bodies in regions and towns to adopt measures to make maximum use of vocational and technical training institutions as regional centres for training the unemployed and non-employed population using funding from the employment services
- Law of the Republic of Kazakhstan *On the budget system* which regulates financial relationships and provides for the allocation of all state expenditure on relevant functions, programmes and sub-programmes.

## *Annex 17. Numbers and types of teachers and trainers in non-state colleges in the Republic of Kazakhstan, as of 1 December 2000*

people

No.	Region or city	Number of colleges	Total	Including		Categories within total number		
				Salaried teachers	With higher college or university education	Higher	First	Second
				A	B	1	2	3
1.	Akmola	2	74	64	72	22	14	16
2.	Aktyubinsk	8	186	132	157	30	48	60
3.	Almaty	5	182	123	140	87	46	35
4.	Atyrau	2	37	26	26	12	11	5
5.	East-Kazakhstan	13	70	42	42	49	11	10
6.	Zhambyl	11	242	130	196	62	27	37
7.	West-Kazakhstan	5	267	233	262	90	59	51
8.	Karaganda	11	186	133	594	46	37	12
9.	Kyzylorda	3	68	53	65	8	31	11
10.	Kustanay	5	215	132	130	59	78	42
11.	Mangistau	4	113	68	63	13	69	13
12.	Pavlodar	10	284	225	271	113	75	31
13.	North-Kazakhstan	3	139	104	133	26	61	52
14.	South-Kazakhstan	9	259	143	227	109	55	27
15.	City of Almaty	36	725	476	413	340	214	104
16.	City of Astana	9	144	94	116	65	36	10
	Country as a whole	136	3,191	2,178	2,907	1,131	872	516



# Glossary

**State Educational Standards: (Государственные образовательные стандарты)** – collection of documents, mandatory for the fulfilment of requirements at each level of education, and laying down the content of education, the maximum volume of the training load, the rules and procedures of state control of education quality, the level to which students are prepared, the forms of documents certifying students' achievements in educational programmes.

**Qualification grade: (Квалификационный разряд)** – level to which a student is taught, acquisition of knowledge, skills and habits required to carry out specific work.

**Qualification: (Квалификация)** – type and level of a student's vocational training, shown in the document on education, for carrying out a professional activity or continuing education.

**Key skills: (Ключевые умения)** - set of skills necessary for work in real life

**Modular programme: (Модульная программа)** – training programme based on a set of modules, which provides the required level of flexibility and freedom in the choice and makeup of specific materials for training (and independent learning) for a certain category of students, and the implementation of special educational and professional aims.

**Educational process: (Образовательный процесс)** – system of building a relationship between training and learning, allowing scope for the development of personality and individuality. Its content, methods and techniques are aimed at the discovery and use of the subjective experience of each student and are subordinate to the formation of personally important methods of learning through organisation of integrated learning (cognitive) activity.

**Vocational school: (Профессиональная школа)** – secondary educational establishment carrying out curricula in general secondary education, initial vocational education and training workers for qualified work in various types of professional activity.

**Vocational education (Профессиональное образование):**

- **Initial vocational education:** education acquired in vocational schools, vocational lyceums, at work, in training centres, on courses etc, based on basic general education; initial vocational education is combined with general secondary education and is aimed at training workers for qualified work (blue and white collars) in various types of labour;
- **Secondary vocational education:** education providing training of specialists in colleges and specialist schools, based on basic general education on a competitive basis, may be combined with initial vocational education and general secondary education;
- **Higher vocational education:** first cycle higher education (baccalaureate), post graduate professional education (master) and higher specialist education.

**Occupation (Профессия)** – basic type of employment, working activity of a person, supported by appropriate documents on education.

**Technology of education (Технология образования)** – outline of a particular pedagogical system in use (defined set of teaching aids, methods and processes).

**Curriculum (Учебная программа)** – document outlining for each subject the content and scope of knowledge, skills and habits which have to be mastered.



# List of abbreviations and acronyms

ПОО	профессиональное образование и обучение	Vocational education and training	VET
НПО	неправительственная организация	Nongovernmental organisation	NGO
МОиН	МОиН – Министерство образования и науки	Ministry of Education and Science	
ИПО	Институт профессионального образования	Vocational Education Institute	VEI
КАО	Казахская академия образования	Kazakh Academy of Education	
РУМК	Республиканский учебно-методический кабинет	Republican Teaching and Methodological Unit	
МОКиЗ	Министерство образования, культуры и здравоохранения	Ministry of Education, Culture and Health	
ПШ	профессиональная школа	Vocational school	
МСП	Малые и средние предприятия	Small and medium-sized enterprises	SME



# Main organisations

No.	Organisation (in English and Russian)	Address, post code, telephone and fax numbers, e-mail addresses (in English and Russian)
<b><i>National organisations</i></b>		
1.	Ministry of Education and Science, Republic of Kazakhstan (MES RK)  Министерство образования и науки РК (МоиН РК)	60, pr. Respubliki 47300 Astana Tel: (3172) 333325 Fax: (3172) 333412 473000, Астана, пр. Республики, 60. Тел: (3172) 333325, факс: (3172) 333412.
2.	Ministry of Labour and Social Protection, Republic of Kazakhstan  Министерство труда и социальной защиты населения РК	2, ul. Manasa 473000 Astana Tel: (3172) 153636 Fax: (3172) 153654 473000, г. Астана, ул Манаса, 2. Тел.: (3172) 153636, факс: (3172)153654
3.	Department of General Secondary and Initial Vocational Education of the Ministry of Education and Science, Republic of Kazakhstan Департамент общего среднего и начального профессионального образования МоиН РК	60, pr. Respubliki 473000 Astana Tel: (3172) 333409 473000, Астана, пр. Республики, 60. Тел: (3172) 333409
4.	Kazakh Academy of Education (КАО)  Казахская Академия образования (КАО)	25, ul. Zhambyla 480100 Almaty Tel: (3272) 915682 480100, Алматы, ул. Жамбыла, 25. Тел.: (3272) 915682
5.	Institute of Vocational Education of the Kazakh Academy of Education (ИПО КАО)  Институт профессионального образования Казахской Академии образования (ИПО КАО)	25, ul. Zhambyla 480100 Almaty Tel: (3272) 915966 480100, Алматы, ул. Жамбыла, 25. Тел.: (3272) 915966
6.	Republic Institute for Upgrading Qualifications for Administrative and Academic Staff in the Education System (RIPKSO)  Республиканский институт повышения квалификации работников системы образования (РИПКСО)	6, ul. Mitina 480020 Almaty Tel: (3272) 645844 e-mail: ripkso@nursat.kz 480020, г. Алматы, ул. Митина, 6. Тел.: (3272) 645844. E-mail: ripkso@nursat.kz

No.	Organisation (in English and Russian)	Address, post code, telephone and fax numbers, e-mail addresses (in English and Russian)
7.	National Observatory of Kazakhstan  Национальный Наблюдательный Центр Казахстана	Eurasian Centre for Development of Education c/o Republican Institute for up-grading qualification of administrative and academic staff of education Room 209 Mitin Street, 6 480020 Almaty Tel.: +7 (3272) 65-00-07/ 64-12-86 Tel/Fax: +7-3272-64-12-86 E-mail : Shaizada@nursat.kz Евразийский Центр Развития Образования Республиканский институт повышения квалификации руководящих и научно-педагогических кадров системы образования г. Алматы, 480020 ул. Митина 6, комн. 209
8.	Statistics Agency, Republic of Kazakhstan  Агентство по статистике РК	125, pr. Abaya 480008 Almaty Tel: (3272) 423387 Fax: (3272) 622388 480008, Алматы, пр. Абая, 125. Тел.: (3272) 423387, факс: (3272) 622388
<b><i>International organisations</i></b>		
9.	Delegation of the European Commission in Kazakhstan  Представительство Европейской Комиссии в Казахстане	ul. Kazybek bi 480100 Almaty Tel: 636265 Fax: 910749 e-mail: marion.michaud@delkaz.cec.eu.int 480100, Алматы, ул Казыбек би, Тел.: 636265, факс: 910749 E-mail: marion.michaud@delkaz.cec.eu.int
10.	UNESCO Cluster Office in Kazakhstan and in Central Asia and the Transcaucasus  Представительство ЮНЕСКО в Казахстане и в государстве Средней Азии и Закавказья	67, ul. Tole bi 480091 Almaty Tel: (3272) 582646 Fax: (3272) 695863 Email: j.sequeira@unesco.org 480091, Алматы, ул. Толе би, 67. Тел.: (3272) 582646, факс: 480091, Алматы, ул. Толе би, 67. Тел. (3272) 695863 E-mail: j.sequeira@unesco.org
11.	International Labour Organisation in Kazakhstan  Международная Организация труда в Казахстане	67, ul. Tole bi 480091 Almaty Tel: (3272) 582643 Fax: (3272) 582645 e-mail: muzyka_ilo@unesco.iatp.kz 480091, Алматы, ул. Толе би, 67. Тел. (3272) 582643, факс: (3272) 582645 E-mail: muzyka_ilo@unesco.iatp.kz

No.	Organisation (in English and Russian)	Address, post code, telephone and fax numbers, e-mail addresses (in English and Russian)
12.	Soros-Kazakhstan Foundation  Фонд «Сорос-Казахстан»	117-20, ul. Furmanova 480091 Almaty Tel: (3272) 503811 Fax: (3272) 503814 e-mail: skalik@soroskz.glas.apc.org 480091, Алматы, ул. Фурманова, 117-20. Тел.: (3272) 503811, факс: (3272) 503814 E-mail: skalik@soroskz.glas.apc.org
<b><i>Employers' organisations</i></b>		
13.	Open Joint-Stock Company Rakhat  Открытое Акционерное Общество «Рахат»	2а, ul. Zenkova 480002 Almaty Tel: (3272) 306824 Fax: (3272) 308679 480002, Алматы, ул. Зенкова , 2а. Тел.: (3272) 306824, факс: (3272) 308679
14.	Almaty Association of Entrepreneurs  Алматинская Ассоциация Предпринимателей	1, Abaya 480100 Almaty Tel: 638810 Fax: 639847 480100. Алматы, Абая, 1. Тел.: 638310, факс:639847

