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HIGHER EDUCATION IN UKRAINE

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Co-Editors

in collaboration with

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Contents

PREFACE.....	7
CONTRIBUTORS	9
INTRODUCTION.....	11
CHAPTER 1. HIGHER EDUCATION – PAST AND PRESENT	13
1.1. Brief Historical Survey.....	13
1.2. Higher Education since Independence	18
1.2.1. Systemic Changes.....	18
1.2.2. Policy on Higher Education.....	18
1.3. Structure of the Ukrainian Higher Education System	24
1.3.1. Academic and Professional Qualifications.....	24
1.3.2. Professional Higher Education Qualifications	26
1.3.3. Qualification Levels in Higher Education.....	27
CHAPTER 2. HIGHER EDUCATION ADMINISTRATION	29
2.1. National Legislation	29
2.1.1. Laws on Higher Education.....	29
2.1.2. Other Regulations	29
2.1.3. System of Standards for Higher Education	30
2.2. Higher Education Administration in Ukraine.....	38
2.2.1. Administration Levels	38
2.2.2. Governing Bodies	38
2.3. Accreditation, Monitoring, and Evaluation	39
2.3.1. Accreditation of Educational Activities.....	42
2.3.2. Accreditation of Directions and Specialisms in Higher Education	43

2.3.3. Institutional Accreditation of Higher Education Institutions	43
CHAPTER 3. INSTITUTIONAL DEVELOPMENT.....	45
3.1. Types of Higher Education Institutions	45
3.2. Access to Higher Education	49
3.3. Role of Information Technology	51
3.4. International Co-operation.....	58
CHAPTER 4. GOVERNANCE AND ADMINISTRATION OF HIGHER EDUCATION INSTITUTIONS	63
4.1. Institutional Autonomy	63
4.2. Governance	63
4.2.1. Public Bodies	65
4.2.2. Student Participation	66
4.3. Public Organizations.....	66
4.3.1. National Congresses	66
4.3.2. Associations and Unions.....	67
4.3.3. Regional Rectors' Councils.....	68
4.3.4. Student Associations (Unions).....	69
4.3.5. Mass Media in Higher Education.	69
4.4. Management of the Higher Education System	70
4.4.1. Administration at the System Level.....	70
4.4.2. Corporate and Advisory Bodies.....	70
4.5. Funding of Higher Education	72
4.5.1. Institutional Funding.....	72
4.5.2. Student Financial Support	73
CHAPTER 5. INSTITUTIONAL AND ACADEMIC STRUCTURES.....	75
5.1. Internal Structure of Higher Education Institutions.....	75
5.2. Staff.....	76

5.2.1. Teaching Staff.....	76
5.2.2. Teaching and Research Staff.....	76
5.3. Academic Work: Teaching and Research	76
5.3.1. Teaching.....	76
5.3.2. Research	77
5.4. Research Institutes	79
5.4.1. Scientific-Methodical Centres	79
5.4.2. Academy of Pedagogical Sciences of Ukraine	80
5.5. The National Academy of Sciences of Ukraine.....	81
CHAPTER 6. STUDENTS AND GRADUATES	83
6.1. Students.....	83
6.2. Studies at Doctoral Level	85
6.3. Student Support.....	86
6.4. Employment of Students and Graduates.....	88
CHAPTER 7. PROSPECTS FOR UKRAINIAN HIGHER EDUCATION	91
REFERENCES AND BIBLIOGRAPHY	95

LIST OF FIGURES

FIGURE 1. The structure of the education system in Ukraine.....	25
FIGURE 2. Characteristics of education-qualification.....	32
FIGURE 3. Structure of the education-professional programme	33
FIGURE 4. Interaction of separate components in the Ukrainian system of higher education standards	34
FIGURE 5. Identifying quality in higher education.....	35
FIGURE 6. Structure of higher education standards	36
FIGURE 7. State administration of higher education	41

FIGURE 8. Flowchart of the licencing and accreditation procedure.....	42
FIGURE 9. Higher education institutions by accreditation level (2004)	47
FIGURE 10. Higher education institutions, by number and type.....	48
FIGURE 11. Number of students per 10,000 inhabitants (for the 2002/2003 academic year).....	48
FIGURE 12. URAN and its regional networks	56
FIGURE 13. The Ministry of Education and Science of Ukraine – Organizational structure	71
FIGURE 14. Teaching and research staff by academic degree/title (in numbers)	78
FIGURE 15. Evolution of student numbers, by institutional accreditation level	84
FIGURE 16. Doctors of Sciences, Candidates of Sciences, Professors, and Docents, per 100 students.....	87
FIGURE 17. Planned training of specialists by main economic sectors.....	89

LIST OF TABLES

TABLE 1. Research and teaching staff training (in numbers).....	15
TABLE 2. Ukrainian postgraduate students between 1959 and 1967 (in numbers)	17
TABLE 3. Research and teaching staff holding academic degrees	17
TABLE 4. Qualification groups and the level of education in Ukraine and ISCED	27
TABLE 5. Telecommunications coverage in Ukraine (per 100 inhabitants)	54
TABLE 6. Communication channels of the URAN network	57

Preface

Ukraine joined the Bologna Process on May 19, 2005, at the Conference of European Ministers Responsible for Higher Education, held in Bergen, Norway. This was an acknowledgement of the country's continual pursuit of reform and modernization of higher education, and of responding to the needs and aspirations of Ukraine since acquiring sovereign independence. It also reflects the country's commitment to meeting the objectives agreed upon for the Bologna Process.

This historical event for Ukraine's higher education was preceded by a number of policy measures initiated by forward-looking politicians and academic leaders, among them the authors of this monograph, who – with audacity and commitment – made important steps in integrating the country's higher education into the process leading to the creation of the European Higher Education Area.

UNESCO-CEPES has been an 'assisting observer' of these efforts in the period preceding the accession of Ukraine to the Bologna Process, the culmination of which was the International Seminar on Higher Education in the Ukraine and the Bologna Process, 13-14 May 2004 in Kyiv, jointly organized by the National Technological University of Ukraine "Kyiv Polytechnic Institute" and UNESCO-CEPES, in partnership with the European University Association (EUA), the Council of Europe, and in collaboration with the Ministry of Education and Science of Ukraine.

In his first report to the Bologna Follow-up Group, the body in charge of the implementation of the Bologna Process between the ministerial meetings held every second year, the Deputy Minister for Education and Science in Ukraine, Mykhaylo Stepko, and one of the authors of this monograph, confirmed their commitment,

In the present-day world, Ukraine views its development within the context of integration into Europe, orienting itself to the fundamental values of Western culture, above all to parliamentarism, human rights, liberalisation, freedom to travel, and equal access to quality education at all levels ... Ukraine is striving to be a fully-fledged participant to the process of European integration [and] this is why the modernisation of Ukraine's higher education is being realized.¹

¹ Available at www.bologna-bergen2005.no/EN/national_impl/New/040916_Ukraine.pdf.

Higher education in Ukraine has a long and rich history. Its students, graduates and academics have long been known and appreciated worldwide. The pioneering research of scholars working in the country's higher education institutions and academies, such as Metro Mendeleev, Mykola Zhukovsky, and Yeugeny Paton, are part of the universal history of scientific progress. Ukrainian higher education derives inspiration from the past, while present-day needs and aspirations call for a corresponding system and institutions.

In part, the current monograph, published by UNESCO-CEPES under its *Monographs on Higher Education* series, is a consolidation and follow-up of the analyses of higher education in Ukraine carried out in the context of the above-mentioned International Seminar on Higher Education in the Ukraine and the Bologna Process. It is also a response to keen international interest in the developments in Ukraine, including the country's higher education system, particularly given recent political changes and the country's economic progress.

Following the format of previous monographs, the study provides a comprehensive analysis of the systemic, institutional, and academic structures (past and present) in Ukrainian higher education, together with detailed explanations of institutional governance and management processes, student and graduate competencies, and the future prospects and challenges facing the sector.

In addition to the authors of this monograph, we would like to express our thanks to Professor Joseph Stetar of the Seton Hall University, South Orange, New Jersey, USA, for his early editorial contributions to the text of this publication.

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Introduction

During the first decade of its independence, attained in 1991, Ukraine underwent a historical transformation towards a new social order: from totalitarianism to democracy, from command economy to market economy, from a passive to an active social role of individuals serving their nation and local communities. Changes in the social structure, economy, and ideology involved also concurrent changes in the country's social priorities, including education.

Higher education acquires special significance, since the higher education system facilitates the transition to an information economy and the achievement of the new social and political priorities. A highly educated younger generation is Ukraine's main strategic reserve, highly instrumental in carrying out social and economic reforms.

Striving for accelerated development, Ukraine encourages and supports development of its educational and intellectual potential. The estimates are that only countries where 40 to 60 percent of school leavers are educated at the post-secondary level will be able to cope with the challenges of a knowledge-based economy and reach high standards of prosperity.

Ukraine's present policy and strategies aim at the further development of the national education system, its adjustment to a new economy, and its integration into the European and global community. Education – a powerful factor of intellectual and moral development – should help ensure the scientific, cultural, and economic development of the country.

The *Constitution of Ukraine* (VRU, 1996a), *Law on Education* (VRU, 1996b), and the *Law on Higher Education* (VRU, 2002a) constitute the legal frameworks for democratic governance in education. Implementation at all levels calls for radical – if gradual – changes in the structure, content, financing, and management of education. Albeit in difficult circumstances, executive bodies across the country are working to reorganize national higher education system and enhance its institutional development. A systematic programme of reforms has been developed and gradually implemented.

Since its independence, Ukraine has also made significant progress in developing democratic principles and humanistic values in its education as well as an orientation towards individual development. At the same time, adjusted educational and qualification levels, structures, and quality control are bringing Ukrainian national education system closer to European

standards. Thus, at the beginning of the third millennium, Ukraine demonstrates its capacity and determination for a resolute educational policy in line with the mainstream transformations in European education in general and higher education in particular.

Ukraine's accession to the Bologna Process represents an important context and incentive to continue the process of reforms and the further development of its national higher education system.

Chapter 1

Higher Education – Past and Present

1.1. BRIEF HISTORICAL SURVEY

Ukrainian higher education has long and deep-rooted traditions. The first educational institutions emerged in Ukraine as early as the late sixteenth and early seventeenth centuries. They played an important role in the country's economical and cultural development.

The first Ukrainian educational institution was the *Ostrozka* School, or Ostrozkiy Greek-Slavic-Latin *Collegium*, similar to Western European higher education institutions of the time. Established in 1576 in the town of *Ostrog*, the *Collegium* was the first higher education institution in the Eastern Slavic territories. It brought together talented local and foreign personalities: famous intellectuals, men of letters, linguists, and other teaching staff from Slavic countries. The *Ostrozka* School served its mission for sixty years; among its achievements is the publication, in 1581, of the first complete Bible translated into the Church-Slavonic language. Among its approximate 500 graduates, one may find many writers and other famous personalities. The School closed in 1632.

In 1632, the Bratskiy *Collegium*,² in Kyiv, opened its doors. This institution, later renamed *Kyivo-Mohylanskyj Collegium*,³ made a considerable contribution to the further development of Ukrainian higher education. In 1694, the government of Imperial Russia officially recognized *Kyivo-Mohylanskyj Collegium* as a higher education institution and in 1701 granted it the status of Academy (*Kyivo-Mohylanska Akademiya*). In the mid-eighteenth century, the number of students enrolled at the Academy reached 1,200, including talented

² The school was called Bratskiy, since it was controlled by local Orthodox Brotherhood.

³ In honour of Kievan Metropolitan Petro Simonovich Mohyla (1596-1647), one of the most respected Ukrainian Orthodox theologians and Church leaders.

scholars from Ukraine, Bulgaria, Serbia, Montenegro, Greece, and other European countries.

From the mid-eighteenth century, after the foundation of the Imperial Moscow University (1755) and the Teachers' School in Sankt Petersburg, the influence of the Kyiv Academy as a secular education institution decreased; eventually it was transformed into an Orthodox ecclesiastical institution that only trained future priests. However, at the beginning of the nineteenth century, new secular higher education institutions were established on Ukrainian territory, beginning with universities in Kharkiv and Kyiv (1833).

In the context of the rich but intricate history of the present-day Ukraine, it is appropriate to point out the existence of other higher education institutions, founded and functioning according to local political and cultural realities. Typical in this respect is the University at Chernivtsy, founded in 1875, where most of the teaching was initially provided in the German language. Between 1919 and 1940, when this area of the Austro-Hungarian Empire became part of Romania, the language of instruction at the university was Romanian. In 1938, the University received the name of King Carol II University of Chernivtsy. Since late 1944, when the present-day boundaries of Ukraine were generally established (except for the Crimean peninsula), the university operated within the Soviet academic system. Since 1991, the year of Ukraine's independence, the university has been acting as an important unit of the Ukrainian higher education system.

By the end of the nineteenth century, within the boundaries of present-day Ukraine, universities in Kharkiv, Kyiv, Odessa, Lvov, and Chernivtsy had been established. During the last decades of the nineteenth century, several vocational higher education institutions emerged, including the Nizhin Historical and Philological Institute, a Veterinary Institute and a Technological Institute in Kharkiv, a Polytechnic Institute in Kyiv and a Higher Mining School in Katerynoslav (currently Dnipropetrovsk). By 1914, Ukraine had 27 higher education institutions with a student enrolment of approximately 25,000.

Due to the historical events that followed the October Revolution of 1917 in Russia, Ukraine eventually became part of the Soviet Union. Consequently, its institutional framework, organization, and content of study programmes reflected those of the Soviet ideological orientation, with clear party control over the educational system and organization of research. The number of educational institutions increased; by 1925, 35 institutes and 30 teaching subdivisions were training future specialists in different higher education areas. The opening of new laboratories and the establishment of new academic traditions fostered further academic development.

However, this rapid growth also had some negative consequences, including a chaotic institutional structure for the higher education system. After the Civil War (1918-1920) and up to the 1930s, there was a critical shortage of teaching staff, engineers, and agronomists – when, because of the State’s proletariat-focused policy in higher education, few of the older generation of the university professors resumed teaching in higher education institutions. Organization of new research departments in higher education and special research institutions helped to solve this problem.

Table 1 shows the dynamics of research and teaching staff training in Ukraine in the 1930s.

TABLE 1. Research and teaching staff training (in numbers)

	Academic years						
	1921/22	1922/23	1924/25	1925/26	1926/27	1927/28	1929/30
Research departments	53	78	85	-	-	-	-
Postgraduates	121	274	366	509	866	1285	1,673

Source: Ministry of Education and Science of Ukraine.

By the end of 1928, 33,406 students were attending 38 Ukrainian higher education institutions taught by 3,998 researchers and lecturers, although only 721 of these researchers and lecturers were permanent staff members. Professors were lacking in all subjects, especially in technical institutions. In the five technical institutes – the Dnipropetrovsk and Donetsk Mining Institutes, the Kyiv and Kharkiv Polytechnic Institutes, and Kharkiv Technological Institute – the body of professors⁴ amounted to only 45 percent of all teaching staff. In order to solve this problem, the systematic training of young teaching staff in postgraduate courses began in 1930. In the 1930-1931 academic year, 1,500 candidates attended postgraduate courses, including 60 percent trained in industrial, technical, and agricultural specialisms. In 1932, admission requirements became more rigorous, and only higher education graduates could attend postgraduate courses. In 1930, the number of teaching staff in all Ukrainian higher education institutions

⁴ Here the term ‘professors’ is used to signify all degree- and academic title- holders.

amounted to only 2,576 members, by 1937 this number had increased to 7,258 and by 1939 to about 10,000.

The present network of public⁵ Ukrainian higher education institutions evolved between 1960 and 1970. By 1975, this network included 143 full-cycle higher education institutions (granting degrees comparable to the degree of Master) as well as 730 technical and vocational schools (granting degrees comparable to those of Associate and Bachelor). Between 1970 and 1975, the total number of graduates amounted, in the two groups of institutions, to 632,500 and 1,108,000, respectively. Between 1971 and 1975, the network of Ukrainian higher education institutions expanded to include six newly established institutions: Ternopil Finance and Economic Institute, Makiivka Civil Engineering Institute, Vinnitsa Polytechnic Institute, Zaporizhia Industrial Institute, Poltava Cooperative Institute and Simferopol University. At the same time, more than 43 vocational higher education institutions either closed or merged.

The extension of the higher education network and the concurrent growth of student numbers continued during the 1970s. By 1980, there were 147 full-cycle higher education institutions and 727 technical/vocational schools, enrolling 699,000 and 803,100 students, respectively. Four new higher education institutions also opened: Kirovograd Higher Civil Aviation Pilot School; Rivno Institute of Physical Culture; Kherson Industrial Institute, and Zaporizhia University.

During the 1960s, following the increase in student numbers, Ukrainian higher education institutions increased their range of postgraduate courses. In 1967, the number of postgraduates tripled, compared to 1959 (Table 2).

New fields of study emerged in the 1960s, such as Physical Electronics, Chemical Cybernetics, Biophysics, Computing Instruments and Devices, Nuclear Power Installations, Anaesthesiology, Cardio Surgery, Radiology and Radiation Hygiene, Computing in Economics and Economic Research, Mathematical Methods in Economic Studies, etc.

By the beginning of 1967, research and teaching staff in all Ukrainian higher education institutions numbered 44,800 (about 45 percent of all scientists in Ukraine). The academic staff included 1,240 Doctors of Sciences and 12,800 Candidates of Sciences. Table 3 offers comparative data on the quantitative and qualitative composition of research and teaching staff for the 1959-1985 period. By 1985, about 47 percent of the academic and research

⁵ Within the Ukrainian context, 'public' refers to State-owned and directly State-governed institutions.

staff held academic degrees; since 1959, the number of degree-holders has quadrupled.

TABLE 2. Ukrainian postgraduate students between 1959 and 1967 (in numbers)

Year	Postgraduate students, including:			Graduates
	Total	Full-time	Distance learning	
1959	2,346	1,558	788	427
1960	3,058	1,901	1,157	447
1961	3,919	2,327	1,592	554
1962	4,957	2,881	2,094	728
1963	6,037	3,550	2,487	511
1964	7,048	4,154	2,894	1,282
1965	7,584	4,546	3,138	1,638
1966	7,955	4,691	3,264	1,898
1967	8,305	4,858	3,447	2,107

Source: Ministry of Education and Science of Ukraine.

TABLE 3. Research and teaching staff holding academic degrees

Year	Holding academic degrees							
	Total No.	% increase on 1959	Total		Doctor of Sciences		Candidate of Sciences	
			No.	% increase on 1959	Total No.	% increase on 1959	Total No.	% increase on 1959
	1959	2,3280	100	9,122	100	827	100	8295
1965	3,9229	169	12,488	137	1,108	134	11,380	137
1970	5,4292	233	19,569	215	1,754	212	17,815	215
1975	7,0074	301	26,502	291	2,330	282	24,172	291
1980	8,4836	364	32,914	361	2,658	321	30,256	365
1985	7,3037	314	34,151	374	3,034	367	31,117	375

Source: Ministry of Education and Science of Ukraine.

During the entire Soviet period (up to 1988), over 22,000,000 individuals entered the Ukrainian higher education system. By 1988, Ukraine counted 146 full-cycle higher education institutions, enrolling over 850,000 students. Since 1960, the annual number of graduates of the full-cycle higher education institutions has doubled, while that of secondary-level vocational schools has tripled.

1.2. HIGHER EDUCATION SINCE INDEPENDENCE

1.2.1. Systemic Changes

Having proclaimed its independence in 1991, Ukraine started the development and implementation of its own educational policy. Ukraine today aims at attaining European standards in terms of access to education, revival of national traditions, modernizing content, forms and methods of teaching, and the development of the nation's intellectual capital.

Ukraine inherited a well-developed system of education, in many respects *on par* with those of the most developed European countries. However, the development of Ukraine within the body of Soviet Union also had negative effects. For the benefit of the Union, some fields of study received a disproportionate emphasis: for example, there were too many engineers, yet few lawyers, economists, sociologists, psychologists, and managers.

The key concepts of the reform in education were defined by the *National Programme Osvita* [Ukraine of the 21st Century] (CMU, 1993b) adopted by the First Congress of Ukrainian Educators in December 1992 and subsequently approved by the Cabinet of Ministers. The *Programme* identified priorities in the development of Ukrainian education, such as meeting the educational needs of all, irrespective of ethnic origin. The re-examination of the content and coordination of Ukrainian education at all levels helped to achieve the task, as well as to introduce progressive teaching ideas and technologies to a new generation of teaching staff.

Other areas of reform included an increasing autonomy of educational institutions,⁶ the reconsideration of State control in education, diversification of educational planning and financing, and the democratization of academic governance.

1.2.2. Policy on Higher Education

The *Constitution of Ukraine* (VRU, 1996a), *Law on Education* (VRU, 1996b), *Law on Higher Education* (VRU, 2002a), decrees, and regulations of the President and Cabinet of Ministers of Ukraine define the main directions of Ukrainian State policy for higher education.

The *Law on Higher Education* (VRU, 2002a) regulates the professional training of Ukrainian citizens and sets the legal, organizational, and financial

⁶ This process has been partially reversed since the mid-1990s.

basis for the national higher education system. The *Verkhovna Rada* (Parliament) of Ukraine provides a general outline of the State policy in the field of higher education, based on the following principles:

- Merit-based access to higher education for all Ukrainian citizens;
- Independence of higher education institutions from political parties and/or public and religious organizations;
- Pursuit of the international integration of Ukrainian higher education, while preserving the achievements and traditions of the national system;
- State support for training specialists in fundamental and applied research;
- Raising the educational level of Ukrainian citizens and widening the prospects for higher and other forms of post-secondary education;
- Availability of student loans;
- Granting special rights to students at higher education institutions;
- Adequate support for the education of the disabled;
- The modernization of the Ukrainian higher education system.

Section VI of the *Law* (VRU, 2002a) regulates the autonomy of higher education institutions and provides for the decentralization of the decision-making process. Higher education institutions hold certain rights of self-organization. Each higher education institution, as a community of scientists, teaching staff, and students, accepts corporate responsibility for the activities of its administration and governance. Higher education institutions may also establish their own organizational forms of instruction and research, both within the institution as a whole and in the subordinate structures (institutes, colleges, technical schools, departments, etc.).

The filling of vacant posts at the head of higher education institutions is competitive. The highest body of collective self-governance of the relevant higher education institution (by law, this must be the Conference or General Meeting of the employees in the concerned institution) elects the best candidate by secret ballot. Normally, candidate who has received no less than 30 percent of voices must be then appointed to take the office by the owner of the institution in question (a State body or private person(s)). Article 39 of the above *Law* describes this procedure in considerable detail, including possible conflict resolution procedures.

The fields of most apparent democratization and public participation are the development of higher education standards, quality assurance, structure of academic cycles, and assessment procedures. The principles and factors of democratization include:

- New market-oriented and competitive social and economic media;
- Distinction between education and professional training in higher education;
- Growing differentiation of content among the different educational and qualification levels;
- Introduction of objective evaluation and monitoring of results.

The First All-Ukrainian Congress of Educators (2001) analyzed and evaluated the status of the Ukrainian educational system. *The National Doctrine on the Development of Education* (President of Ukraine, 2002) outlined further the goals, strategy, and the main lines of development of the Ukrainian system of education for the beginning of the twenty-first century.

Objective and Priorities. Pursuant to the *Doctrine*, education is the basis of individual and social development of Ukrainian society. It is a strategic resource for common welfare and national interests, as well as the most important prerequisite for Ukraine's international recognition. Therefore, the immediate efforts of the State aim at widening access to quality lifelong education for all. The State ensures special support through a number of programmes, such as one to supply rural schools with teachers, computers, and buses; another programme supports gifted children, etc. State efforts also foster various research activities, the development of information technologies, and in-service personnel training, etc.

The challenges of the twenty-first century call for a radical modernization of the system of education and guaranteed self-realization of every person based on lifelong education. At present, the priorities of the Ukrainian educational policy include:

- Ensuring equal access to higher education;
- Changing the content of education and the structure of the educational system;
- Developing continuous education and lifelong learning;
- Fostering the development of the Ukrainian language;
- Satisfying the needs for education of national minorities;

- Ensuring a better economical and social status for teaching and research staff;
- Integration of education and science;
- Development of pedagogical psychology;
- Implementation of information and communication technologies;
- Marketization of educational services;
- Integration of Ukrainian science in European and international research networks.

National Education. Ukrainian education is humanistic-oriented and based on the cultural, historical, and spiritual heritage of the nation. The national education system conveys principles of humanism, democracy, cultural diversity, consistency, and tolerance.

Language Education. The system of education should continue to ensure knowledge of both native and foreign languages. Education should address the right of national minorities to be educated in their native language and safeguard their culture with State support and protection.

Development of Civil Society. The State promotes the establishment of a democratic system of education and public self-governing institutions. The State also encourages the activity of boards of trustees, sponsors, public organizations, charity funds, and mass media, and fosters their involvement in education.

Equal Access to Education. The State guarantees equal and merit-based access to education of all citizens, irrespective of their social origin, status, religion, place of residence, or state of health. Achieving this right presupposes transparency, continuity, and consideration of demographic, social, and economic changes.

Quality of Education. Modernization of the system of education should take place in accordance with the latest achievements in all fields of studies. The quality of education is a national priority and State standards, monitoring, and public evaluation of the education services are stringent requirements.

Lifelong Learning. The implementation of State policy in the field of continuous education takes into account international and domestic trends of social and cultural development. Continuous education is attainable through:

- Provision of a coordinated succession of educational activities at different levels;
- A focus on self-education;

- Refresher courses and skill development;
- Integrated curricula and education programmes;
- Organization and development of distance learning;
- Adjustment of providers' programmes for adult education to the labour market demands.

Funding of Education. Funding of education is a priority of State planning of expenditures. It has the following main parameters:

- Elaboration of a multi-source funding system;
- Stimulation of investments, sponsorships, and charitable contributions to education;
- Application of market economy norms and payment systems;
- Identification of priorities in the funding of education;
- Tax exemption for educational activities, with the reinvestment of collected amounts in the educational process.

Ukraine is gradually increasing its allocations for education, aiming to attain European standards by spending a minimum of 10 percent of the GDP on education by 2015. Gradual decentralization, separation of budgetary and extra-budgetary resources, correlation between allocated funds and educational services rendered, and a competitive fund allocation will ensure the efficiency of educational expenditures. Annually-allocated State funds depend on costs per student. Various forms of financial support include direct budget financing of tuition fees, State scholarships, various grants, and municipal loans.

Scientific Research. Ukrainian higher education institutions have always considered student participation in research as a basic, necessary element of their training. Today, the Humboldtian unity of education and science remains a major factor in the development of higher education institutions. The following measures should help to ensure the development of research activities:

- Adequate level of funding and support for research publications;
- Encouragement of innovations in all higher education institutions;
- Protection of intellectual property;
- Involvement of students and teaching staff in research activities;

- Co-operation between education institutions and research institutes, including those subordinated to the National Academy of Sciences;
- Accelerated development of intellectual capacity.

Academic Staff. In order to ensure training and development of teaching and research staff, the State provides a sound legal basis for professional activities. It forecasts demand and plans refresher training, including courses in informational technologies, provides incentives for professional growth, including instruction in foreign languages. The involvement of young highly educated persons in teaching activities is one of the main goals of State policy.

Social Security. Ukraine strives to raise the prestige and social status of teaching staff, research staff, and students. Students receive health care services free of charge, public transportation discounts, and educational loans. Teaching and research personnel enjoy medical coverage, social insurance, realistic teaching loads, sabbaticals at research centres, merit-differentiated salary schemes, selected tax credits, and subsidized access to academic literature (within the limits of available financial resources). The pension rights of teaching and research staff amount to 80 and up to 90 percent of their monthly salary.⁷

International Co-operation. In the context of globalization and creation of regional education areas, the State promotes the entry of Ukrainian education into the world educational market and fosters international co-operation between Ukrainian stakeholders and international organizations. The co-operation between Ukrainian educational institutions and various intergovernmental and non-governmental international organizations – UNESCO, UNICEF, the European Union, the Council of Europe, etc. – is strengthening. The main trends of Ukrainian international co-operation in the field of education and science include joint research, co-operation with foundations, organization of scientific conferences, seminars and symposia, educational and scientific exchange, and research publications. The Ukrainian educational system is open to collaboration with various international institutions and organizations with the purpose of the development of mutual understanding and tolerance and contribution to the European Project, while preserving Ukraine's national heritage.

⁷ Guaranteed by the State only for teaching and research staff of State-owned educational institutions. Private institutions are encouraged, by law, to ensure similar pension rights for their teaching staff via private pension funds, recently permitted by Ukrainian legislation.

A noteworthy initiative in the area of educational planning is the national programme *Vchitel* [Teacher] (CMU, 2002b), launched in 2002 for a ten-year period under the aegis of the Ministry of Education and Science of Ukraine. It focuses on professional activities and postgraduate training of teaching staff. The programme's major goals include: resource optimization, enhanced postgraduate training, raising social status of teaching staff, use of innovative educational technologies, development of a network of higher education institutions for teacher training, fostering further academic and research careers of graduates, elaboration and publication of teacher training textbooks and manuals, computerization of educational units, and promotion of Ukraine's access to the European and world education arenas, including stronger ties with Ukrainian Diaspora.

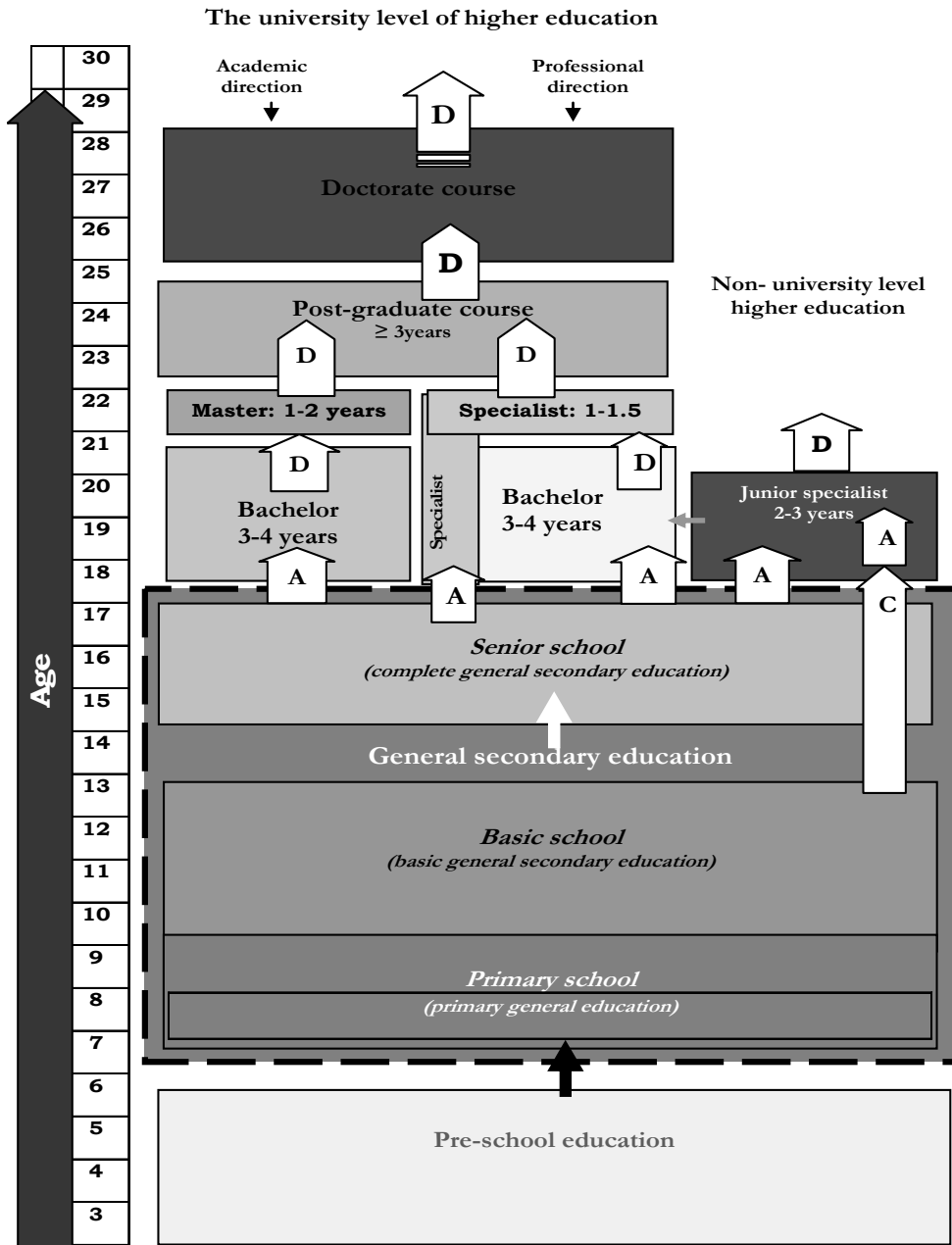
1.3. STRUCTURE OF THE UKRAINIAN HIGHER EDUCATION SYSTEM

1.3.1. Academic and Professional Qualifications

As in all post-soviet countries, the Ukrainian higher education system offers a combination of academic and professional qualifications acquired by mastery of the corresponding levels of educational and professional training. The Diploma, the State-recognized document issued to higher education graduates of all levels, usually serves as both an educational certificate and a professional licence, confirming the joint acquisition of educational and professional training.

Ukrainian higher education consists of a multi-layered system of studies, based on several teaching cycles. The *Law on Education* (VRU, 1996b) mentions higher education degrees of Minor Specialist, Bachelor, Specialist, and Master. A Bachelor's degree programme usually assigns about 30-35 percent of academic time given to professional training, with the rest devoted to theoretical studies. A four-year cycle of the Bachelor's degree programme entitles successful graduates to a corresponding educational and professional qualification (Bachelor of...). This qualification also enables Bachelor's degree holders to continue their education at the second-cycle programme for the degrees of Specialist or Master, again with further professional training. The programmes of postgraduate training for Specialist's or Master's degrees usually take one to two years of study. The place of higher education in the system of continuous education in Ukraine is shown in Figure 1.

FIGURE 1. The structure of the education system in Ukraine



Note: C – Certificate A – Attestation D – Diploma

Source: Ministry of Education and Science of Ukraine.

Section 1 of the *Convention on the Recognition of Qualifications concerning Higher Education in the Europe Region* (Council of Europe and UNESCO, 1997) defines Ukrainian professional qualifications offered by the national higher education system. At all levels of higher education, each programme is classified as having either an *academic orientation* and /or a *professional orientation*.

The *Law on Higher Education* (VRU, 2002a) establishes the following educational levels:

- Incomplete higher education – Minor Specialist’s degree;
- Basic higher education – Bachelor’s degree;
- Complete higher education – Specialist and Master’s degrees.

1.3.2. *Professional Higher Education Qualifications*

Diplomas of higher education of all levels confirm both the educational level and professional qualification, adjusted according to national and international labour markets, where professional qualifications are defined as competence to fulfil specific professional tasks and duties.

The *List of Directions and Specialties* (CMU, 1997a) specifies the professional qualifications in the Ukrainian higher education system, according to the requirements of national and international labour markets. The levels of professional activity in Ukraine are defined as follows:

- User-level – skills for using an adjusted system;
- Operator-level – skills for preparing, adjusting, and operating a system;
- Operation-level – skills for testing and analyzing system operation;
- Technological-level – skills for developing systems;
- Research-level – skills for conducting system research.

In this system, ‘User-level’ corresponds to the skills of a qualified worker and to the level of general secondary education. ‘Operator-level’ corresponds to the skills of a Junior Specialist’s degree with incomplete higher education. ‘Operation-level’ corresponds to the Bachelor’s degree with basic higher education. ‘Technological level’ is interpreted as corresponding to the Specialist’s degree, and ‘Research level’ as corresponding to the Master’s degree, although both Specialist’s and Master’s degrees are associated with the same educational level of complete higher education.

These levels of professional activity also require professional qualifications, related to certain groupings in the *Ukrainian State Classifier of Professions* (1996), as presented in Table 4.

TABLE 4. Qualification groups and the level of education in Ukraine and ISCED

Levels of professional activity	Qualification groups (levels) in accordance with DKP 003-95	Education / qualification	Education	ISCED 1997 educational levels			
		Levels as per <i>Law on Education</i> and <i>Law on Higher Education</i>					
Research	2. Professionals	8. Master's degree	Complete higher education	6.	Higher education - second cycle (Master's degree) conferring research qualification		
Technological		7. Specialist's degree			5.	Higher education - first cycle (Bachelor's degree) does not confer direct research qualification	
Operation	3. Experts	6. Bachelor's degree	Basic higher education				
Operator		5. Junior Specialist	Incomplete higher education				
User	5. Workers in commerce and services	4. Qualified Worker	4.	3.	Post-secondary, non-higher education training		
	7. Qualified workers with machinery					Vocational education	
	6. Qualified workers in agriculture, forestry, fish-farming and fishery					Complete secondary education	Second stage of secondary education
	8. Operators and assemblers of equipment and machines					Basic general secondary education	2.
9. Manual labour							
			1.	Primary general education	Primary education, or first stage of basic education		
				0.	Pre-school education		

Sources: The State Classifier of Ukraine (1995) and UNESCO (1998).

1.3.3. Qualification Levels in Higher Education

Ukrainian legislation establishes a system of qualification levels in higher education, defined as follows:

- *Junior Specialist* – incomplete higher education, skills and knowledge sufficient for entry-level tasks; professional activity at operator's level.

- *Bachelor* – basic higher education, skills and knowledge adequate for general professional tasks and duties; the holder may perform professional activities at operation and operator's level.
- *Specialist* – completed higher education, adequate skills and knowledge sufficient for advanced professional tasks and duties; the holder may perform professional activities at a technological level.
- *Master* – complete higher education, skills and knowledge sufficient for advanced professional tasks and duties; professional activities performed at a research level.
- Thus, in Ukraine a three-level structure of higher education (incomplete, basic, and complete levels) combines with a three-level structure of educational degrees (Junior Specialist's, Bachelor's, and Specialist's/Master's) and corresponding professional qualifications. However, 'incomplete higher education', resulting in the degree of 'Minor Specialist', usually represents a separate branch of training (offered by separate vocational institutions), while Bachelor's and Specialist's /Master's degree programmes aim at developing a European-style, two-level higher education system. In addition, in some special cases (such as Medicine and Veterinary studies), the Specialist's degree⁸ programme is available directly on the basis of secondary education, incorporating a basic higher education, yet without offering an intermediate Bachelor's degree.

⁸ A traditional degree inherited from the Soviet higher education system.

Chapter 2

Higher Education Administration

2.1. NATIONAL LEGISLATION

2.1.1. *Laws on Higher Education*

The Ukrainian legislation regulating higher education is provided by the *Constitution of Ukraine* (VRU, 1996) and consists of:

- The Laws of Ukraine On Education (VRU, 1996b); *On Higher Education* (VRU, 2002a), and *On Scientific Research and Scientific Research-Technical Activities* (VRU, 1991a);
- President of Ukraine Orders regulating higher education issues (President of Ukraine, 1995; 1996b; 2001; 2002);
- Cabinet of Ministers of Ukraine decisions on higher education (CMU, 1997a and b; CMU, 1998a and b; CMU, 2001a, b, and c);
- Other legal documents adopted in accordance with the core of Ukrainian legislation.

If international agreements approved by the *Verkhovna Rada* stipulate other rules than those envisaged in national legislation, international agreements take legal priority.

2.1.2. *Other Regulations*

In accordance with national policy on the development of the educational system, Ukrainian educational administration aims to be public. It should take into account regional peculiarities, autonomy trends in educational institutions, and competitive education services. The administrative model is increasingly open and democratic, combining State control with public influence along the following lines:

- Optimization of administrative structures, decentralization, autonomy of higher education institutions;
- Distribution of responsibilities between central and local authorities and educational institutions;
- New ethical principles based on mutual respect and positive motivation;
- Monitoring of managerial decisions and their implementation;
- Widespread use of information management and computer technologies;
- Democratization of appointment procedures for heads of educational institutions and their subdivisions;
- Improvement of licencing and accreditation mechanisms;
- Development of student associations.

2.1.3. System of Standards for Higher Education

The design of professional higher education in Ukraine aims for the acquisition of professional duties and tasks, as well as at the attainment of a specific professional position. Since most positions require practical experience, Ukrainian professional training is oriented towards so-called 'initial positions'. The qualifications for such positions are usually defined by legislative documents, such as the *Directory of Qualification Characteristics* (Productivity Centre, n/d.). The *Directory* specifies tasks and duties, required professional knowledge and necessary qualification levels. Every qualification characteristic defines certain place(s) of graduates in the national economy; it indicates relevant competence requirements and higher education standards in the form of the skills necessary to fulfill certain professional tasks. In the system of standards of higher education the above requirements are presented in a generalized form in Figure 2.

Characteristics provide a model of professional competence and serve as a guideline for education – the professional programme presented in the system of content modules (Figure 3).

Based upon education professional programmes – curricula, educational programmes, and other documents are developed as higher education standards of a higher education institution (Figure 4). The objectives of any academic discipline should conform to the requirements of the education

qualification characteristics. The procedures for the accreditation of higher education institutions and those for the attestation and professional certification of graduates, determine the correspondence of educational services to the relevant higher education standards. The higher education standards also include diagnostic tools for quality assurance (Figure 5).

The term, quality, requires essential clarification. At present, in the democratic Ukrainian society, characterized by the emergence of market-oriented social and economical structures, graduates now enter a new and competitive labour market, which is less State-controlled than in Soviet times. Education and professional training should train students for labour mobility, possible re-training, and other shifts in their professional careers.

Higher education provides graduates with the possibility of pursuing careers while observing the principles of social justice, responsibility, and common human and moral values. A remaining challenge is the shift of emphasis from acquisition of knowledge and skills to the development of intellectual capacity.

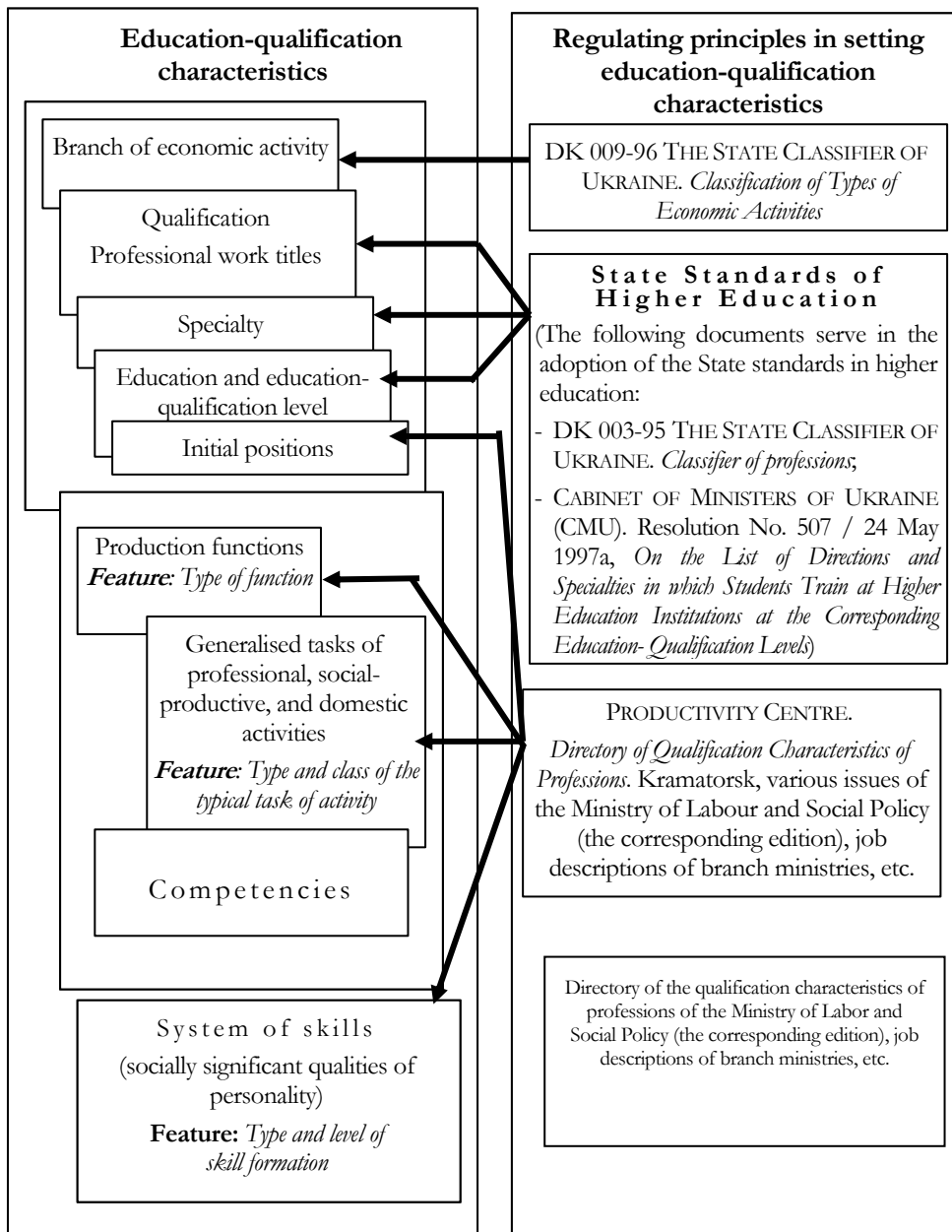
Quality assessment includes such procedures as attestation of graduates, development of monitoring and rating systems, monitoring the achievements of graduates, etc. From an international perspective, it seems that the most efficient form of monitoring is standardized testing, linked to a unified system of graduate attestation and professional certification. This standardized approach should address a number of problems in the current Ukrainian higher education system.

The development of standards should rely on the following four main principles:

- Goal-setting;
- Predictability;
- Technological effectiveness;
- Diagnostic ability.

The main goal-setting priorities of the higher education system are labour and social relations. Professional training takes into account requirements of initial positions, defined in accordance with the *Directory of Qualification Characteristics* (Productivity Centre, n/d.), and training principles for the given position listed in the *Classifier of Professions* (State Classifier, 1995).

FIGURE 2. Characteristics of education-qualifications



Source: Ministry of Education and Science of Ukraine.

FIGURE 3. Structure of the education-professional programme

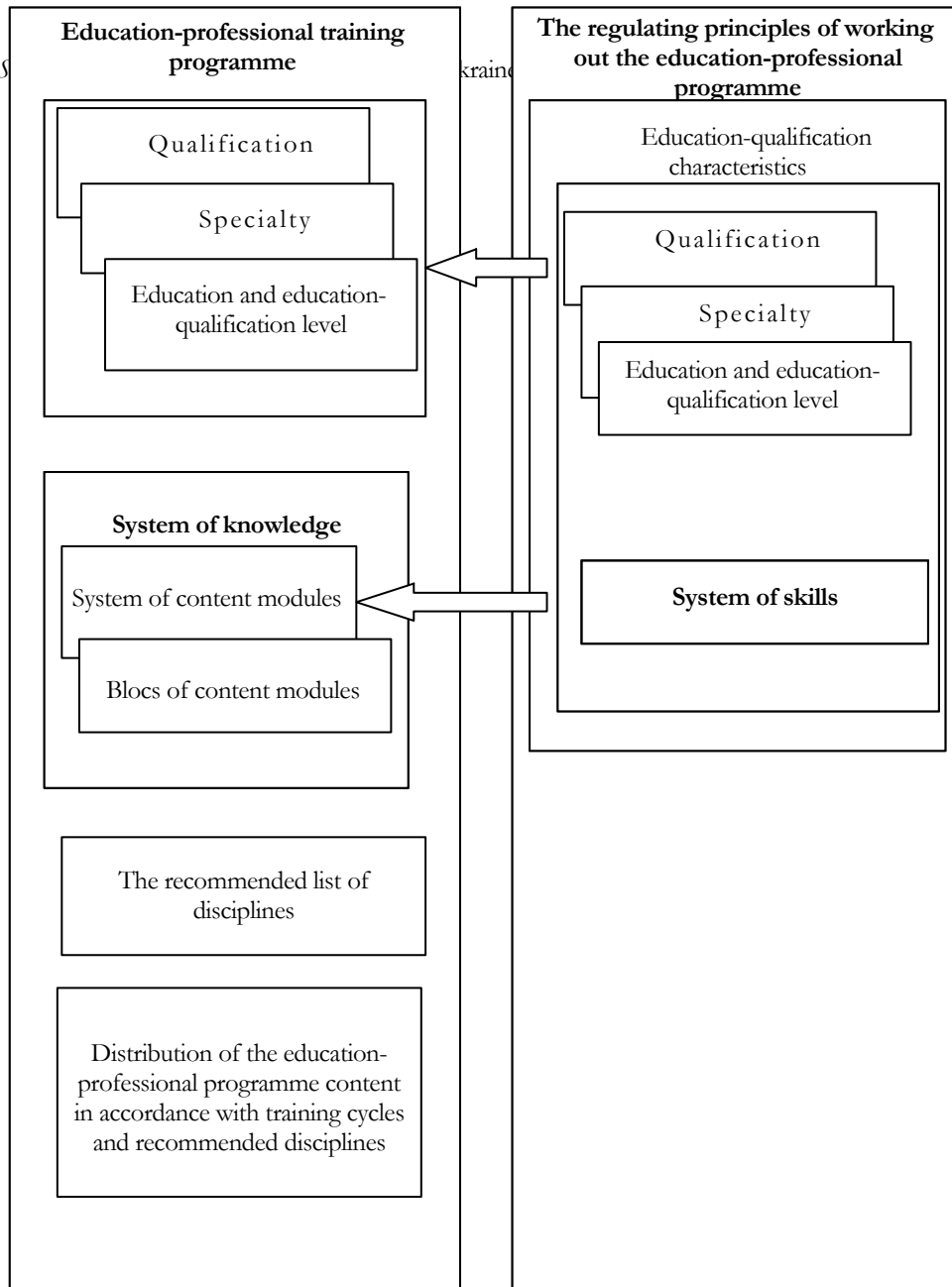
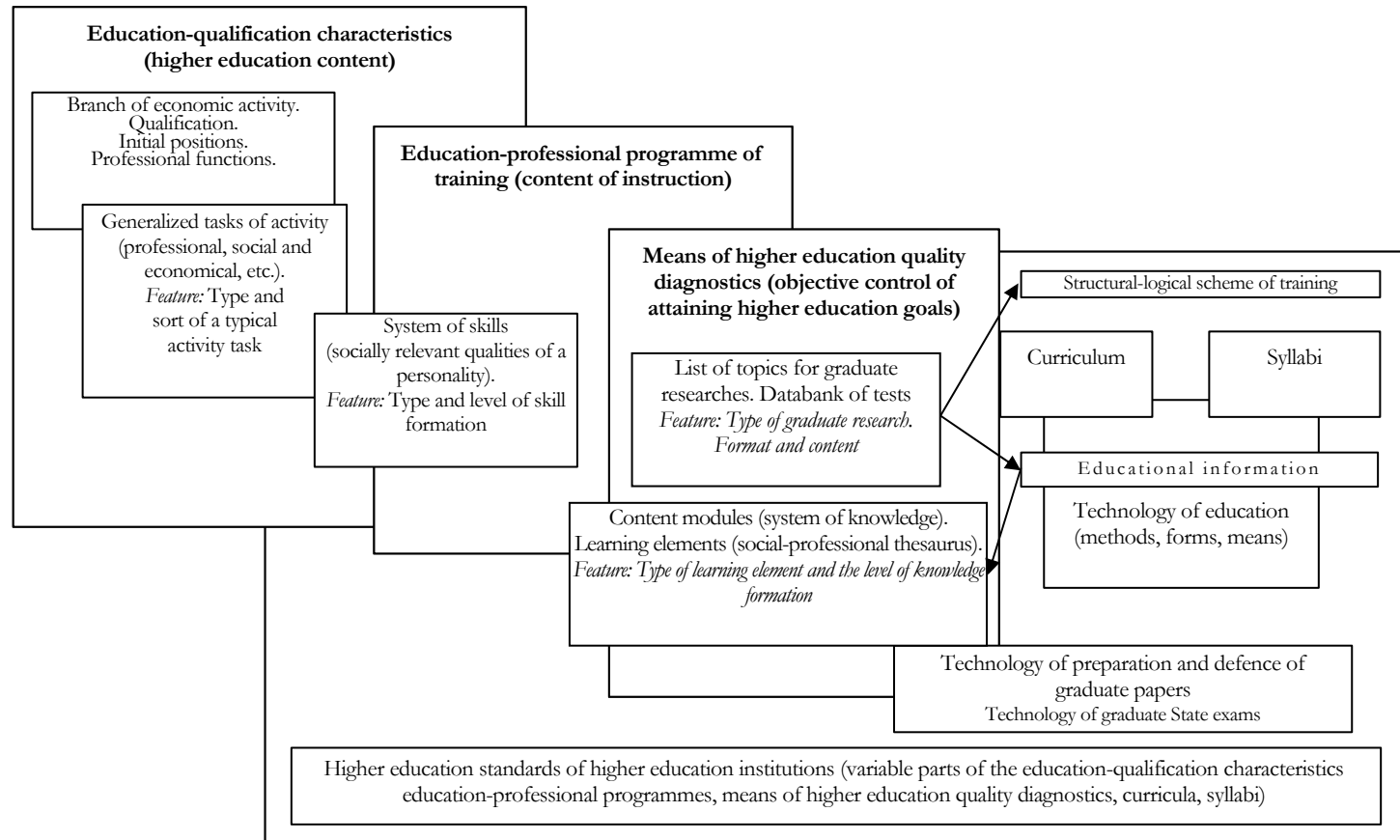
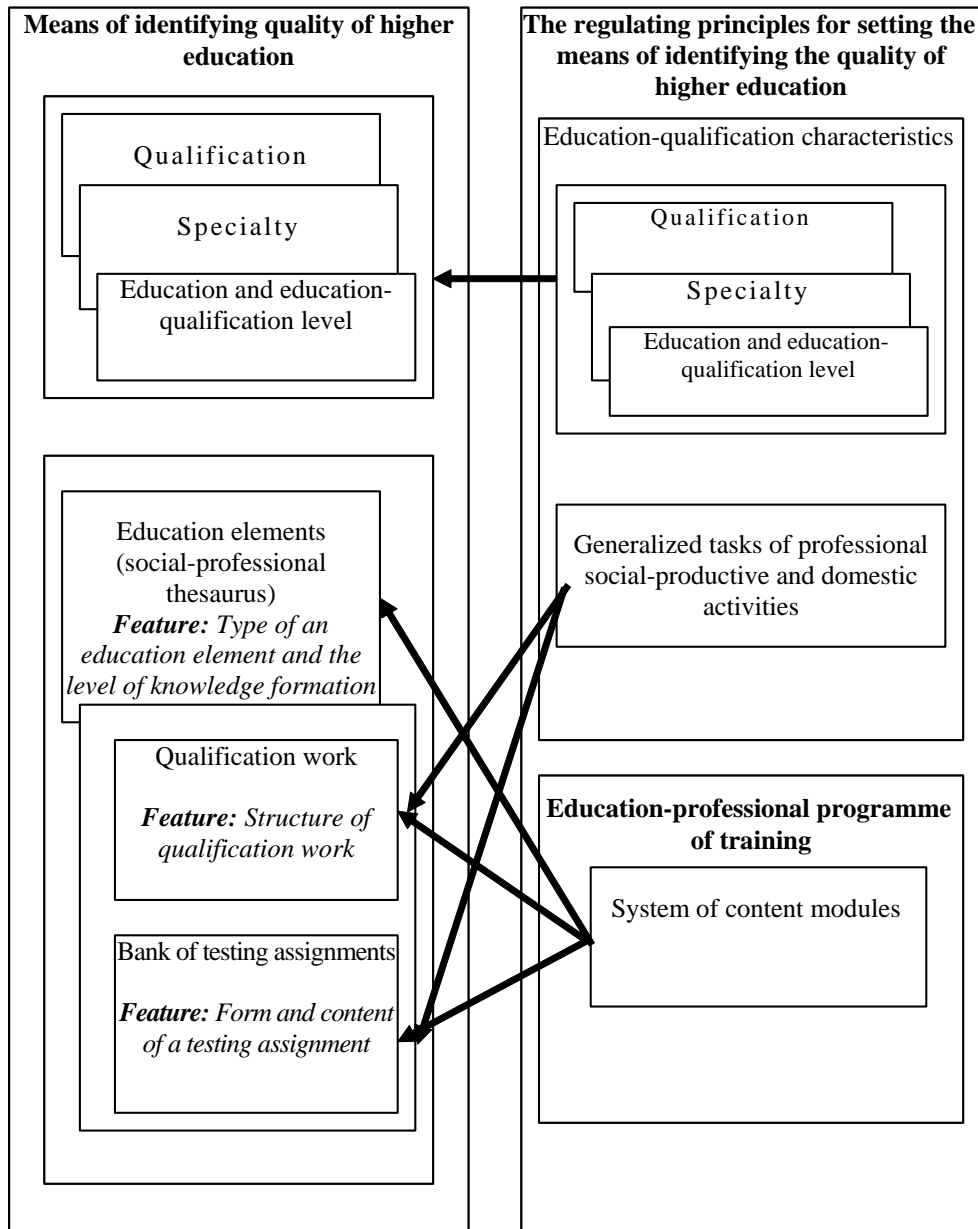


FIGURE 4. Interaction of separate components in the Ukrainian system of higher education standards



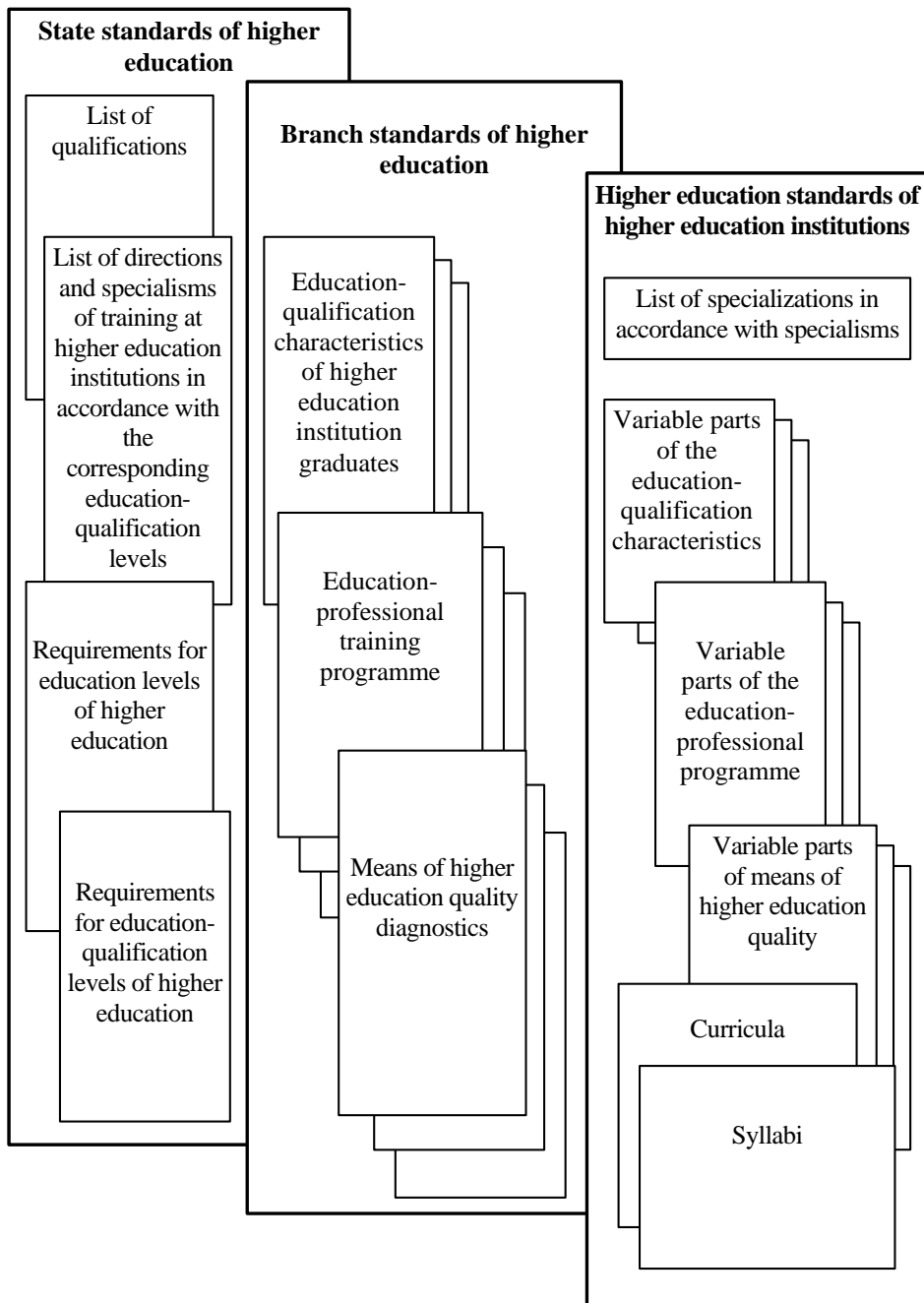
Source: Ministry of Education and Science of Ukraine.

FIGURE 5. Identifying quality in higher education



Source: Ministry of Education and Science of Ukraine.

FIGURE 6. Structure of higher education standards



Source: Ministry of Education and Science of Ukraine.

The development of standards for higher education also considers European experiences and the promotion of Ukraine's integration into regional educational networks. The structure of Ukrainian standards follows subject areas, such as Law, Ecology, Ethics, Philosophy, etc.

Currently, the development of standards is a challenge faced by many European countries. According to Article 11 of the Law of Ukraine *On Higher Education* (VRU, 2002a), higher education standards result from interconnected components regulating the type and content of higher education at national, local and institutional levels.

The *State Standard of Higher Education* (MESU, 2003) defines the lists of qualifications, directions of training, and specialisms, as well as general requirements for each qualification level. The *List of Directions and Specialisms*, approved by the Cabinet of Ministers of Ukraine in 1997, provides guidelines for higher education institutions training students at the corresponding qualification levels. According to the qualification requirements of the labour system, the initial positions of Bachelor's, Specialist's, and Master's degree holders involve certain predefined professional activities. In addition, the Ukrainian structure of knowledge areas and training directions should correspond to those listed in the *International Standard Classification of Education* (UNESCO, 1998).

Following its amendment between 1998 and 2003, the current *List of Directions and Specialisms* contains 76 directions and 580 specialisms of educational and qualification levels. Figure 5 illustrates the interconnection of the separate components of the system of higher education standards.

A new feature of Ukrainian higher education is providing students with the option to choose a particular specialism upon completion of the baccalaureate (within the limits of the given baccalaureate, interpreted in Ukraine as a general direction of professional training – e.g., Bachelor of Physics). This option is only available in the new two-level system (Bachelor's degree plus Master's degree). In the past, almost every student had to choose his/her future specialism before entering the university, unaware of labour market trends. The introduction of a national credit transfer system, similar to the European Credit Transfer System (ECTS), will further expand student mobility.

2.2. HIGHER EDUCATION ADMINISTRATION IN UKRAINE

2.2.1. Administration Levels

The Cabinet of Ministers (the Government of Ukraine) and its executive bodies are the highest executive authorities for higher education. The Government of Ukraine implements State policy in the field of higher education, including the corresponding national programmes; it also adopts rules and regulations regarding higher education. The following bodies also exercise control in the field of higher education, within their areas of competence:

- The Ministry of Education and Science of Ukraine, which is the core executive body in the field of education and science;
- Other central executive bodies, sharing control of State-owned higher education institutions (*e.g.*, The Ministry of Health Protection, Ministry of Defence, etc.);
- Highest Attestation Commission;
- Authorities of the Autonomous Republic of Crimea;
- Local governments;
- Corporate and private owners of higher education institutions.

2.2.2. Governing Bodies

Ukraine's Ministry of Education and Science is responsible for strategic planning in higher education. It participates in the development of State policy with regard to standards and quality of education, forecasts national needs for specialists at all levels and directions of training, initiates international co-operation and organizes the licencing and accreditation of higher education institutions. The Ministry also approves the statutory documents of all higher education institutions (State-owned as well as private), appoints rectors of State-owned higher education institutions subordinated directly to the Ministry, approves the appointment of rectors of other higher education institutions, and monitors the implementation of State policy nation-wide.

Other central executive bodies (*e.g.*, ministries, State committees, etc.) also participate in the implementation of State policy. Among them, the Highest Attestation Commission of Ukraine supervises the attestation of all academic

staff and the activity of all research-degree-granting academic bodies. The authorities of the Autonomous Republic of Crimea, as well as some central executive bodies, also have several higher education institutions under their jurisdiction and thus co-operate with the Ministry of Education and Science of Ukraine.

Figure 6 presents the system of Ukrainian State governance in the field of higher education.

2.3. ACCREDITATION, MONITORING, AND EVALUATION

Acknowledging Ukraine's integration into the international system of specialized training, accreditation, and certification, one of the most important tasks is the creation of a national system of consumer protection against low-quality education services. This task also supports requirements for quality assurance in education.

Along with other important indices of educational quality, such as the selection of teachers and administrators, development of new technologies and methodologies, and the integration of educational and research activities, the constant monitoring of knowledge transfer is essential. Licencing and accreditation procedures serve to ensure the evaluation of the quality of education at the national and international levels, with due regard to academic autonomy. The Ukrainian philosophy and practice of monitoring educational activities should rely on the principles of openness, comprehensibility, validity, and reliability. Legislative documents regulating licencing and accreditation should ensure the implementation of these principles.

Initially, the resolution of the Cabinet of Ministers, *On the Accreditation of Higher Education Institutions* (CMU, 1992), established the licencing and accreditation procedures in higher education institutions in Ukraine. According to the resolution, the Inter-regional Republican Accreditation Commission was set up to organize licencing and accreditation procedures and to develop higher education quality standards.

Licencing concepts, principles, and procedures further developed between 1992 and 1996. These developments resulted in the identification of criteria for various directions of training, evaluation of educational quality by national and international standards, as well as in the awareness of labour market dynamics. The network of licenced higher education institutions gradually expanded. Currently, Ukrainian legislation bans any unlicenced higher education services. On the other hand, licenced higher education services

need eventual accreditation to issue State-recognized degrees and qualifications.

In 1996, according to the resolution *On Licencing, Attestation, and Accreditation of Education Institutions* (CMU, 1996), the Inter-regional Republican Accreditation Commission was replaced by a newly established State Accreditation Commission, with reconsidered tasks, duties, and procedures. The leading State-owned higher education institutions were delegated part of the processes of licencing and accreditation; however, that failed to eliminate complaints of subjectivity in the evaluation process.

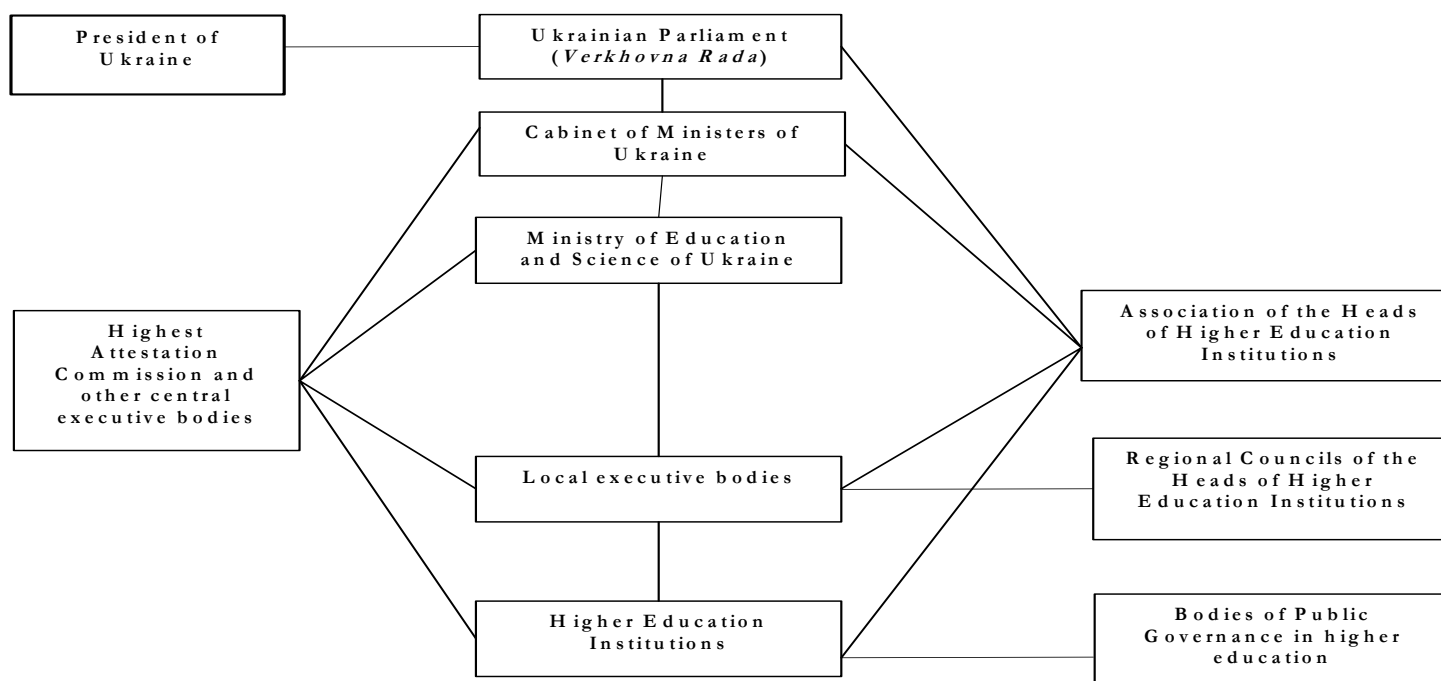
Between 1992 and 2000, the higher education system in Ukraine grew and expanded. By the end of 2000, there were 979 higher education institutions, including 315 (223 State-owned and 92 private) accredited as full-cycle institutions (offering degrees higher than Bachelor's). Admission to full-time study programmes during 1995 – 2000 increased to almost 46 percent. In addition, 664 educational institutions (State-owned and private) obtained accreditation to grant Minor Specialist's and/or Bachelor's degrees.

The rapid expansion of the market of educational services raised increased concerns about quality assessment. Accordingly, the Ministry of Education and Science of Ukraine continued to search for improved organizational solutions. The network of accreditation councils, situated in the leading State-owned higher education institutions, in many cases proved to be too complicated and unreliable. Since 2001, licencing and accreditation have evolved into a more transparent, efficient and centralized system, modified by such governmental documents as *On the Accreditation of Education Institutions and Specialisms at Higher Education Institutions and Vocational Schools* (CMU, 2001b) and *On Licencing of Education Services* (CMU, 2003a). Based on these documents, the Ministry of Education and Science of Ukraine adopted special directives, *On the Conditions of Educational Services Licencing*, *The Procedure of Control over Licencing Conditions*, and *On the Expert Commission and Licencing Expertise*, registered by the Ministry of Justice of Ukraine in January 2004.

Figure 8 presents the algorithm of the licencing or accreditation procedure.

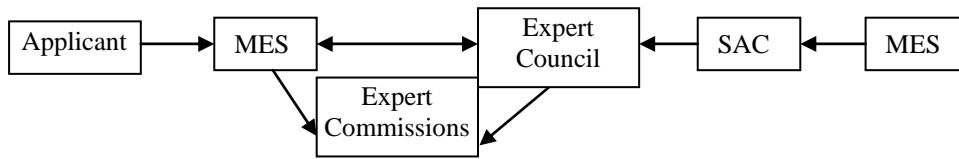
To have a study programme licenced or accredited, applicant institutions should provide the Ministry of Education and Science of Ukraine (MESU), with a self-evaluation report. The Ministry of Education and Science appoints an Expert Commission to examine the report and the programme itself. The Commission submits its conclusions to the Expert Council, which, in turn, forwards its recommendations to the State Accreditation Commission (SAC). The decision of the State Accreditation Commission is subject to approval by the Ministry of Education and Science of Ukraine.

FIGURE 7. State administration of higher education



Source: Ministry of Education and Science of Ukraine.

FIGURE 8. Flowchart of the licencing and accreditation procedure



Source: Ministry of Education and Science of Ukraine.

The Ministry and representatives of the academic community participate in the elaboration of the criteria used for the evaluation of higher education services. The criteria for evaluation include assessment of staff, teaching methods, material and technical resources, and the organization of research. The parameters of evaluation are gradually becoming more transparent and more easily measured.

Updated curricula, scientific research, trained personnel, and an adequate infrastructure secure the enhanced quality of higher education services. Order No. 285 of the Ministry of Education and Science of Ukraine of July 31, 1998 (MESU, 2003) sets the requirements for higher education quality, including standardized evaluation techniques, which represents a significant innovation.

2.3.1. Accreditation of Educational Activities

The accreditation procedure applies to the type of studies, specialism, qualification level, institutional premises, and branches or departments.

In higher education, the following services need mandatory accreditation:

- Degree-granting programmes at all levels;
- Postgraduate non-degree-granting training;
- Introductory courses for foreign citizens entering Ukrainian higher education institutions.

The Ministry of Education and Science of Ukraine, regional branches of educational administration, and the State Inspection of Education Institutions verify compliance with accreditation terms; these agencies conduct on-site inspections and have the right to withdraw accreditation, if violations of accreditation and/or licencing requirements emerge during inspection.

2.3.2. Accreditation of Directions and Specialisms in Higher Education

Accreditation of higher education services for every direction of training is subject to approval at the national level. Accreditation of direction of training (baccalaureates) and specialisms (at post-Bachelor's degree level) is the responsibility of the Ministry of Education and Science of Ukraine. Where applicable, accreditation takes place in accordance with the *Regulations on Accreditation of Higher Education Institutions and Specialisms at Higher Education Institutions and Higher Vocational Schools* (CMU, 2001b).

Accreditation of a new specialism or direction of studies (baccalaureate) in a higher education institution consists of the following stages:

- Self-evaluation organized by the accredited institution;
- External peer review of the accredited institution's activities;
- Case examination by the Expert Council of the State Accreditation Commission, and then by the State Accreditation Commission itself;
- Adoption of the SAC decision.

During the process of self-evaluation, an accredited institution prepares a systemic analysis of its activities and quality of education. The Expert Commission conducts an external assessment and the State Accreditation Commission receives the assessment report for its consideration. The Expert Council at the State Accreditation Commission convenes a meeting of the State Accreditation Commission and any ensuing decision receives approval from the Ministry of Education and Science of Ukraine.

The Certificate of Accreditation of baccalaureate or specialism, issued as a confirmation of the SAC decision, includes a description of the accredited direction of training, qualification level, period of validity (up to ten years) and legal address of the accredited institution.

2.3.3. Institutional Accreditation of Higher Education Institutions

A higher education institution may receive institutional accreditation of a certain level (not-automatically), if at least two thirds of its specialisms have already received accreditation at this level. The Law of Ukraine *On Higher Education* (VRU, 2002a) establishes four levels of accreditation of higher education institutions.

- Higher education institutions of the first accreditation level train students at the level of Minor Specialist.

- Higher education institutions of the second accreditation level train students at the levels of Minor Specialist and/or Bachelor.
- Higher education institutions of the third accreditation level can train students at the levels of Bachelor's, Specialist's, and Master's degrees (in some specialisms).
- Higher education institutions of the fourth level of accreditation train students at all levels, including no less than 75 percent at the level of Master's degree.

Additional criteria for institutions of the fourth accreditation level include postgraduate and Doctoral courses, plus high-level research and publications activities. Higher education institutions of the third and fourth accreditation levels may also be registered as research institutions, which gives them access to budget funds allocated for research activities (in the case of State-owned institutions) or some tax privileges (in the case of private institutions).

The State Accreditation Commission, together with the Ministry of Education and Science of Ukraine, accredits higher education institutions. Based upon the results of the expert assessment and the conclusion of the State Accreditation Commission, the Ministry of Education and Science accepts or rejects the application for accreditation. A certificate of institutional accreditation includes the name of the institution, its level of accreditation and period of validity, legal addresses of the institution and its separate branches (where applicable).

A certificate of accreditation is subject to cancellation according to criteria and procedures stipulated by the legislation. In the case of a declined application for accreditation, the applicant may appeal to the Court of Justice.

Chapter 3

Institutional Development

3.1. TYPES OF HIGHER EDUCATION INSTITUTIONS

In accordance with national legislation and licencing requirements, Ukrainian higher education institutions focus on education and research. Laws *On Higher Education* (VRU, 2002a) and *On Scientific Research and Scientific Research-Technical Activities* (VRU, 1991a) grant higher education institutions of the third and fourth levels of accreditation a status equal to that of the research institutes subordinated to the National Academy of Sciences.

In terms of educational services, the major tasks of the Ukrainian higher education institutions are:

- Training of specialists at relevant education-qualification levels and in compliance with established standards;
- Compliance with State-defined standards of training;
- Training of research and teaching staff to be employed at educational institutions of different levels;
- Study of labour market demands and forecast of future employment trends;
- Supporting patriotism and esteem for the Constitution of Ukraine.

As a legal entity, any higher education institution may enter education-research-production complexes or similar entities created jointly by several legal entities (educational institutions, research institutions, factories, etc.).

Ukrainian higher education institutions belong to one of the following types:

- State-owned higher education institutions, established by the State and funded from the State budget; they are subordinated to a corresponding governmental body (*e.g.*, the Ministry of Education and Science, Ministry of Culture, etc.) and have the status of budgetary institutions;

- Higher education institutions of the Autonomous Republic of Crimea, established by its government, funded from its budget, and subordinated to governmental bodies of the Autonomous Republic of Crimea;
- Communal higher education institutions, established by local authorities, funded from local budgets and subordinated to local authorities;
- Private higher education institutions.

From January 2002 to September 2005, the *Law on Higher Education* (VRU, 2002a) required that no less than 50 percent of the students in State-owned and community higher education institutions should receive budget-financed higher education. However, in practice this norm failed from the outset, being too unrealistic, at least for some State-owned higher education institutions. In September 2005, the Ukrainian Parliament cancelled the norm.

State-owned higher education institutions of the fourth level of accreditation may receive the status of national institutions, according to which they enjoy wider autonomy in decision-making, in some areas:

- Creation, reorganization, and decommissioning of their structural units;
- Lease of estate items to other legal entities;
- Establishment and awarding of their own academic degrees of Docent and Professor;
- Internal incentives offered to their teaching and research staff.

Creation, reorganization, and liquidation of State-owned higher education institutions of the third or fourth accreditation level rests with the Cabinet of Ministers of Ukraine. State-owned higher education institutions of the first or second levels of accreditation are created, reorganized, and decommissioned by decisions of the Ministry of Education and Science, other central executive bodies or local authorities, including those of the Autonomous Republic of Crimea.

Ukrainian higher education institutions may establish structural subdivisions abroad, in accordance with the legislation of the corresponding countries. Likewise, foreign higher education institutions may establish their structural subdivisions in Ukraine. Both procedures are subject to approval by the Ministry of Education and Science of Ukraine.

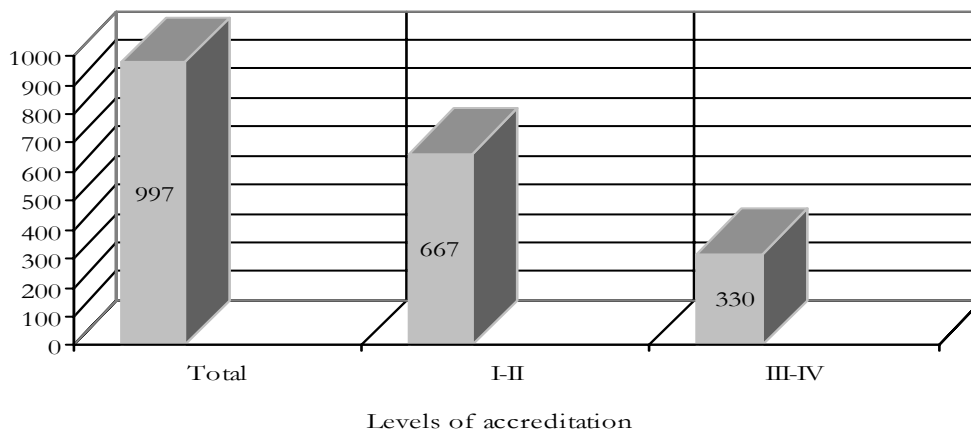
The network of higher education institutions in Ukraine has undergone substantial changes since independence. The Ministry of Education and Science of Ukraine has reorganized or closed a number of institutions, with beneficial effects on the educational network as a whole. Some institutions, especially of the first and the second levels of accreditation, have merged into larger, highly developed educational structures. Due to coordinated programmes at different educational levels, Junior Specialists now have wider access to further educational and professional training.

Currently (2005), the Ukrainian system of higher education embraces 1,003 various higher education institutions of all accreditation levels (Figures 9 and 10 represent the situation as of 2004). The total number of students amounts to 597,000, i.e., about 125 students per 10,000 inhabitants (Figure 11).

There are 669 institutions of the first and the second accreditation levels (590 public and 79 private) and 334 institutions of the third and the fourth accreditation levels (232 public and 102 private). Ukraine boasts with 130 universities, 63 academies, 135 institutes, and 2 conservatories. At present, 66 State-owned universities and academies have earned national status.

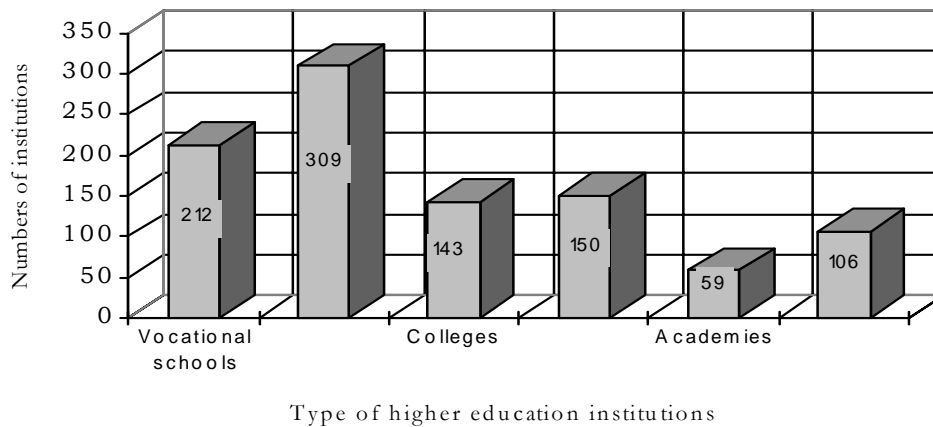
The Ukrainian higher education system provides training in 76 fields and almost 600 specialisms. Continuous education receives constant attention as does short-term postgraduate professional education. Continuous, lifelong learning is regulated by the draft of the *Law on Adult Education (Lifelong Learning)* recently prepared by the Ministry of Education and Science.

FIGURE 9. Higher education institutions by accreditation level (2004)



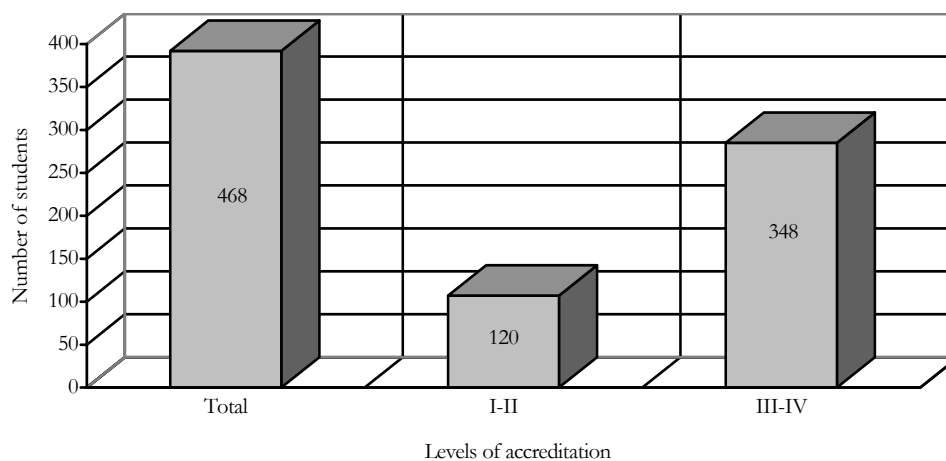
Source: Ministry of Education and Science of Ukraine.

FIGURE 10. Higher education institutions, by number and type



Source: Ministry of Education and Science of Ukraine.

FIGURE 11. Number of students per 10,000 inhabitants (for the 2002/2003 academic year)



Source: Ministry of Education and Science of Ukraine.

By definition, Ukrainian universities are leading institutions accredited at the fourth accreditation level. They provide academic and research training in a wide range of fields and contribute to scientific progress at national level, while promoting social, cultural, and educational development. Their structure either follows a classical university model or focuses on some particular professional field (Technical, Medical, Agricultural, Pedagogical, Economics, etc., all transformed from similarly oriented institutes in Soviet times).

According to the Law, Academies also belong to the fourth accreditation level. They are leading institutions in one of the general directions of training (Science, Industry, Arts, etc.). Conservatories, similar to Academies in their official rank, train musical performers, composers, musicologists, and teachers in music-related disciplines.

By Law, Institutes are higher education institutions of the third or fourth accreditation level and may be either independent institutions or structural subdivisions of a university or academy. The institutes provide training in some specific area (Humanities, Engineering, Arts, Agriculture, Management, etc.).

Colleges are institutions of the second level of accreditation and may be either independent or subdivisions of a higher-level education institution.

Technical schools operate at the first accreditation level, and may operate as subdivisions of a higher-level educational institution. In some cases, technical schools can train qualified workers, although generally this task resides with vocational education.

Ukraine has a well-developed system of postgraduate training, which serves as a ground for lifelong education. Over 30,000 graduates of higher education institutions are re-trained yearly and about 300,000 specialists update and expand their qualifications in 563 institutions of postgraduate education and their branches. The draft of the *Law on Adult Education (Lifelong Education)* and the introduction of distance learning programmes will give new impetus to this system.

3.2. ACCESS TO HIGHER EDUCATION

Access to higher education is subject to admission regulations, which are mandatory for Ukrainian higher education institutions at all accreditation levels. Citizens of Ukraine and foreign citizens residing in Ukraine have equal, merit-based, access to higher education institutions. School graduates who

have completed general secondary education may enter higher education institutions of any level of accreditation to receive undergraduate training.

Higher education institutions of the third and fourth accreditation levels may also admit persons holding the degrees of Minor Specialist and Bachelor. Foreigners and persons without citizenship may benefit from higher education in Ukraine according to special legislative acts, such as *On the Legal Status of Foreigners and Persons without Citizenship* (VRU, 1994); *On Education of Foreign Citizens in Ukraine* (CMU, 1993a); *On Measures Regarding the Development of Economic Co-operation of Regions of Ukraine with the Border Regions of the Russian Federation* (President of Ukraine, 1994) and *Regulations on Admission of Foreigners and Persons without Citizenship to Higher Education Institutions* (CMU, 1998).

Foreign citizens of Ukrainian parentage enjoy special access, equal in status to that of Ukrainian citizens, to higher education programmes in Education and Pedagogy, Philology, Arts, History, and Journalism. In other fields, they have access to higher education institutions as foreigners.

All Ukrainian citizens are guaranteed competitive merit-based access to tuition-free (budget-financed) education in State-owned institutions, irrespectively of their gender, race, social status, political ideology or affiliation, religion, etc. Secondary school graduates undergo a comprehensive evaluation of their knowledge according to *Regulations on the Summary Attestation of Graduates of General Secondary Education* (MESU, 2000).

The quota of students enrolled to higher education on tuition-free (budget-financed) basis depends on budget allocations for personnel training provided by executive bodies of the central and local governments.

Another financing option is the application for a long-term preferential loan. In this case, the admission commission of a higher education institution will consider the candidate's application dossier against loan availability. If a State-owned higher education institution admits students beyond the number of available State-funded places, yet within the limits permitted by the licence, tuition fees apply. The admission commission at every institution is headed by the rector, in accordance to the *Regulations on Admissions Commissions* (MESU, 1995) adopted by the Ministry of Education and Science and registered at the Ministry of Justice.

Governmental executive bodies define national demand for trained specialists, with particular attention paid to economic, educational, and social policy perspectives. A specially authorized central executive body also defines State demand for research; its decisions may entail distribution of some budget funds assigned for researches among research-oriented State-owned higher education institutions.

3.3. ROLE OF INFORMATION TECHNOLOGY

The emergence of the information society or knowledge society has had a radical impact on higher education. Information-driven changes in social relations in Europe and across the globe have also affected Ukrainian higher education.

Knowledge is becoming the core resource of economic development. Since the training and re-training of personnel requires more time and resources, the knowledge economy also influences market relations in education. Owing to such changes, various social institutions, organizations, and enterprises increasingly assume educational functions. Informal, non-traditional approaches to education counterbalance drawbacks and contradictions of traditional education.

Gradually, socio-economic demand forces for education emanating from individuals replace the State demand for trainees. Likewise, a transition is taking place from one-off or periodical education to continuous education and perpetual retraining. The attitude towards adult education has undergone radical changes.

Internationalization of education entails competition, greater institutional independence, and flexibility, development of national and international systems of licencing and accreditation. Academic mobility is rising and, as education standards converge, transparent schemes of international comparison and compatibility of education become more necessary than ever.

New forms of education delivery, such as distance education, are rapidly developing. They integrate information and communication technologies and secure continuous, lifelong learning relatively easily. Such methods of education delivery allow students to increase their competitiveness in the labour market. Thus, innovations in education delivery are among the most important mechanisms of social and economic development.

On the other hand, the processes listed above give rise to new social and professional challenges:

- Globalization of education is a threat to countries with less developed educational infrastructures, as reflected in economic and labour market outcomes.
- Flexibility, mobility, and adaptability have become urgent requirements.
- The challenge of raising the qualification of teaching staff is vital, as academics must quickly update their knowledge, skills, and

competence not only in their professional field, but in teaching and IT-related technologies as well.

- New difficulties arise with regard to the financial support of educational services and the rapidly changing content and technologies.
- Delivery of education in a highly competitive environment is a challenge within, as well as among, individual countries.

The globalization of educational markets has led to increased competition not only among universities and countries, but also among huge regional educational networks (*e.g.*, educational systems of North America and Europe). To fulfil its goal of joining the Bologna Process, Ukraine has prioritized the development of e-learning in four main directions:

- Modernization of infrastructure and equipment, to ensure Internet access of all educational institutions and at a ratio of less than 15 students per one PC.
- Expanded teaching of IT fundamentals at all levels of education.
- Development of high-quality informational services.
- Access to European educational institutions via unified e-networks.

With regard to the process of European integration, the plan of activities prepared by EU-candidate countries (with the support of the European Commission) specifies the following priorities:

- Inexpensive, high-speed, and reliable Internet access;
- Investment in people, knowledge, and skills;
- Stimulated access to and use of the Internet.

The plan of activities defines the main goals and indices for institutions entering the European information society. The plan represents an important framework document for Ukraine and, although it contains no direct references to educational systems, its implementation influences the higher education sphere. The indices for comparison among EU countries (and among other countries) include the following:

- Speed of Internet searches;
- Number of computer terminals per 100 students;

- Number of Internet-connected computer terminals per 100 students;
- Number of computer terminals with high-speed Internet connection per 100 students;
- Percentage of teachers using the Internet in computerized teaching.

The list of indices may also include:

- Number of electronic textbooks per 100 students;
- Number of distance-learning courses per 100 students;
- Number of electronic tests per 100 students;
- Percentage of students tested electronically.

The reforms of the Ukrainian system of higher education will take into account the above indices. In addition, they will incorporate such guiding principles as State-support for educational networks, investments in information technologies, broad media coverage of the introduction of information and communication technologies (ICTs), etc.

An efficient introduction of ICTs in education is possible only with the political and financial support of the State, as the successful examples of the USA and Japan suggest. In the context of Ukraine, the following are worth mentioning:

- Fields such as education are lagging behind, in terms of use of ICTs and telecommunication networks. Although the infrastructure of regional computer networks is developing, the speed, scale, and quality of this process need considerable improvement.
- The academic community is not yet unanimous in its support of ICTs and its role in the process of training specialists, falling prey to either radical skepticism or unrealistic enthusiasm.
- Ukraine lacks a well-regulated system of training in ICTs and their multiple applications to the delivery of education, planning, and teaching materials.
- More conceptual work is required on the possibilities inherent in e-learning. Practical experience suggests that e-learning can be operated on a self-financing/self-pay basis; however, many institutions cannot cover even the initial expenses for the introduction of e-learning services.

- Developers of distance learning/e-learning courses and software need effective mechanisms for the protection of intellectual property.

The Ukrainian system of higher education is modernizing its technical base and introducing modern technologies, despite substantial financial difficulties. Ukraine has one of the highest formal education indices in the world and, with a population of 48 million people, thus shows great potential for the development of higher education. In 1952, Ukraine's computer scientists built the third computer in the world, after those built in the USA and United Kingdom. The academicians Sergey Lebedev and Victor Glushkov established a renowned school of cybernetics and computing.⁹ In 1980, Victor Glushkov made an outstanding theoretical contribution to our understanding of the information society. Subsequently, the academicians Mikhalevich, Sergienko, Koukhtenko, and Ivakhnenko developed his ideas to a new level and brought fame to the Ukrainian school of cybernetics.

Many of their followers are now working in Ukraine on the implementation of information technology-driven changes in research and education. The *Verkhovna Rada* of Ukraine approved *The National Programme for Informatization of Ukrainian Society (Glushkov Institute, 1998)*. Nevertheless, the infrastructural prerequisites of ICTs usage are still relatively weak in Ukraine, compared to other European countries.

TABLE 5. Telecommunications coverage in Ukraine (per 100 inhabitants)

	Ukraine	Europe average
Fixed telephone communication lines	30	40
Mobile communication	5,5	50
Internet	4,5	36

Source: Ministry of Education and Science of Ukraine.

With a view to improving the access to information technology for children and youth, the State launched a programme for the computerization of rural schools in 2001.

Ukraine has three main priorities: to ensure wide access to education and information; to provide the conditions for continuous education according to the principle of lifelong learning; and to become a fully-fledged member of

⁹ Details available at www.pact.sccc.ru/history/early.html.

the European Higher Education Area (EHEA) and the European Research Area (ERA).

A good example of institutional initiative is the creation of a national education and research network, known as the Ukrainian Research and Academic Network (URAN). The purpose of URAN is to provide all stakeholders in the fields of education, science, and culture with access to worldwide informational resources, primarily through the Internet. In the future, this network could also serve as the basis for a national system of distance learning.

The URAN network operates at three levels. The first two levels include a central node in Kyiv, which supports both main channels of data transfer (fibre optic and satellite) and connection to the global Internet network. The third level is informational infrastructure linking campuses, university networks, scientific libraries, and the like. In other Ukrainian regions, regional hubs replicate the same basic structure (Figure 12).

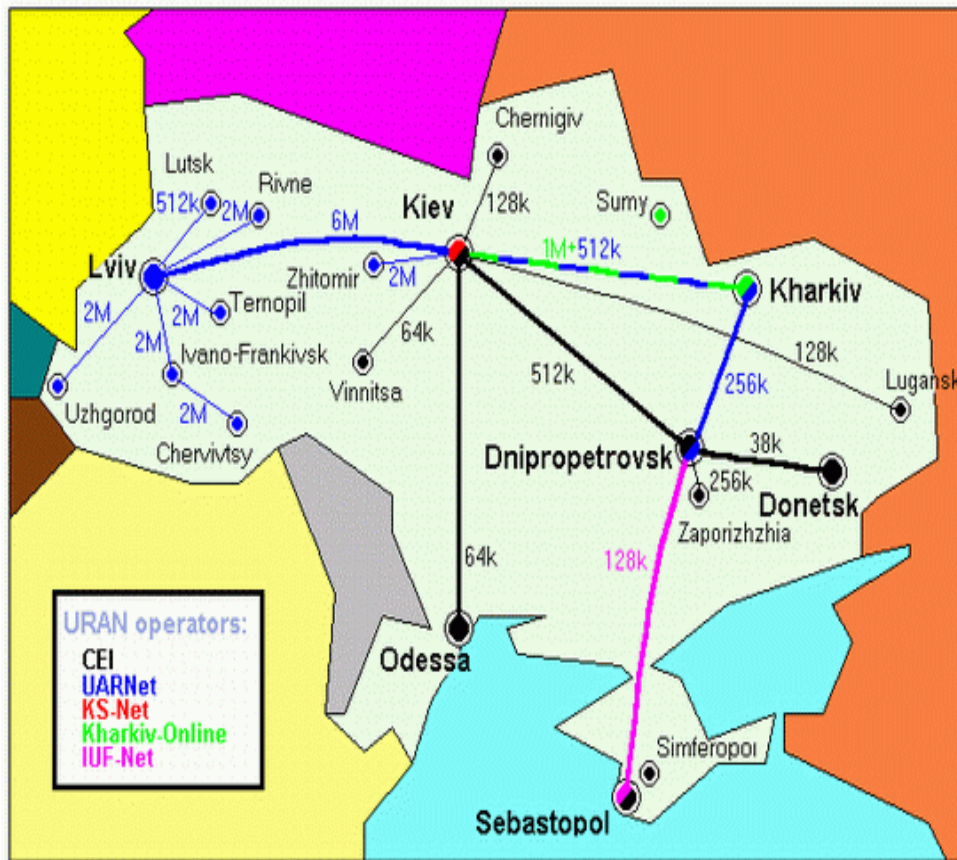
Based on a unified ideology and design, the URAN network makes use of optimal platforms and a balanced regional division of informational resources. URAN uses various types of communication channels, such as those of Ukrtelecom (the telecommunication provider in Ukraine), satellite channels, and the so-called 'last mile' connections for collective users in remote areas of the country.

In time, the URAN network will provide access to substantial intellectual content, databases in various fields, electronic libraries, distance-learning courses, powerful search engines, and multi-server information processing. It will also provide users with the possibility of synchronous and asynchronous communication, related to the implementation of a national system of distance learning.

Osvita [Education] – the automated system based on the URAN network – ensures the optimal management of the educational system. It collects various data from all levels of the system in a centralized databank, provides analytical functions. It also offers information on institutional activities and a database of educational documents.

One more step in the attainment of European standards of ICT coverage in education was the opening of two computing testing centres, in accordance with the international European Computer Driving Licence (ECDL), a European standard on computer literacy. The first centre, *EuroOsvita*, opened at the National Technical University of Ukraine in Kyiv and the second one at the National Technical University of Ukraine in Kharkiv (former Kharkiv Polytechnic Institute).

FIGURE 12. URAN and its regional networks



Source: www.cei.uran.net.ua/eng/uran.htm.

Such developments are of particular significance in light of the 32nd General Conference of UNESCO (October 2003), which agreed to establish a virtual campus of e-learning centres for Central and East European countries. The main mission of this initiative, known as CEEVU, is the sub-regional integration in science, technology, and engineering. In accordance with the main principles of the information society (lifelong learning and learning without borders), the CEEVU initiative will support training of a new generation of specialists. The coordinating institution for the CEEVU initiative in Ukraine is the National Technical University of Ukraine in Kyiv. Participants in the project are technical and engineering universities from nine countries in Central and Eastern Europe, and two in the Caucasian region.

TABLE 6. Communication channels of the URAN network

Direction of communication channel	Network capacity of communication channel (kbit/s)					Number of scientific and educational institutions in the region	Number of students in the region (thousands)
	2000	2001	2002	2003	2004		
External communication channels							
Network – other networks and Internet	768	2048	4096	8192	32768	527	1,163
Communication channels to regional nodes of the network							
Kyiv-Odessa	64	128	256	2048	8192	29	72
Kyiv-Dnipropetrovsk	64	128	256	4048	8192	33	78
Kyiv-Kharkiv	128	256	512	4096	16384	40	152
Kyiv-Donetsk	33	128	128	4096	8192	42	100
Kyiv-Lvov	64	128	256	2048	8192	27	72
Dnipropetrovsk-Simferopol		128	256	1024	2048	40	41

Source: Ministry of Education and Science of Ukraine.

The emergence of URAN as a distance-learning platform also fosters further development of this line of study. Currently, the Ukrainian distance-learning centre operates at the National Technical University of Ukraine in Kyiv, tasked with the following responsibilities:

- Participation in the preparation of norm-setting documents on distance learning;
- Development of scientific and technical documentation on distance learning;
- Development of quality assurance systems for distance education.

The centre receives support from leading Ukrainian higher education institutions, usually the regional centres of URAN network, and collaborates with them in developing the components of a national e-learning infrastructure. The centre has organized five laboratories tasked with the development of e-courses in Economics, Languages, Engineering, Information Technology, and the Humanities. At present, 79 distance education courses are available. In Ukraine, distance learning has gained wider

use for corporate purposes, in particular for State officials and banking personnel. A module system trains teachers, distance learning coordinators, and curriculum developers. Over 1,060 education specialists from 187 institutions, representing all Ukrainian regions, have received training via distant learning courses. Currently, over 40 educational institutions in Ukraine have established partnerships with the centre.

3.4. INTERNATIONAL CO-OPERATION

Having gained its independence, Ukraine has actively sought new opportunities for international co-operation, including in education. The State encourages international co-operation in higher education and welcomes mutually beneficial bilateral and multilateral treaties and agreements of all types. The Ministry of Education and Science co-operates with EU members and other neighbouring countries of the region. Most recently, the Ministry approached the ministries of education of EU Member Countries with the request to support Ukraine in its joining the Bologna Process.

The Law of Ukraine *On Higher Education* (VRU, 2002a) encourages student and teaching staff mobility, and grants institutions the autonomy to start programmes of mutual staff and student exchanges. The Ministry of Education and Science also supports the mobility of Ukrainian students and their studies in higher education institutions abroad through a system of grants. The mobility of students, academics, and researchers is increasing; the introduction of distance learning technologies continues, and the network linking Ukrainian higher education institutions to similar institutions abroad is expanding. These and other developments open new possibilities for joint efforts toward international integration. In 1999, the Ukrainian Ministry of Education and Ukrainian higher education institutions had agreements with 46 countries; today there are 82 inter-governmental and 46 inter-departmental agreements signed with corresponding institutions in 60 countries.

Inter-governmental agreements with sixteen countries – Armenia, Azerbaijan, Belarus, Bulgaria, China, Estonia, Georgia, Hungary, Kazakhstan, Libya, Moldova, Romania, Russia, Slovakia, Turkmenistan, and Uzbekistan – on the mutual recognition of academic degrees and titles are in force. This is a significant progress, given that, in 2003, Ukraine signed only four inter-governmental (Libya, Luxembourg, and Russia (2)) and six inter-departmental (Albania, the Czech Republic, Finland, Guam, Vietnam, and Tajikistan) agreements of this type. Between 2000 and 2003, Ukraine prepared and sent to partner ministries in Asia, Africa, and Latin America about forty drafts of inter-governmental and inter-departmental agreements on co-operation and

degree recognition. At present, agreements on mutual recognition with the Kyrgyz Republic, Mongolia, Peru, Poland, and Vietnam, and inter-departmental agreements with Algeria, Bahrain, Bulgaria, Guinea, Iran, Romania, and Sierra Leone are underway.

With regard to Europe, the Ministry of Education and Science of Ukraine co-operates with the EU in general within the framework of the Tempus programme, and on a bilateral basis with member countries and their education agencies. From 1993 to 2003, 37 higher education institutions implemented 105 projects. Since 2003, Ukrainian universities have initiated 14 more projects. During the first ten years of Ukrainian involvement in Tempus, Ukrainian higher education institutions submitted about 500 applications for competition.

Ukrainian authorities follow UNESCO recommendations regarding education and the spirit of international understanding, co-operation, peace and tolerance, e.g. in the national programmes *Education in Ukraine in the 21st Century* (CMU, 1993), *Children of Ukraine* (President of Ukraine, 1996), and the *National Doctrine on the Development of Education* (President of Ukraine, 2002).

The main directions of international co-operation among higher education institutions is the exchange of students, teachers and researchers for the purposes of joint research, international conferences, teaching programmes, joint publishing activities, etc.

At present, over 10,000 Ukrainians study abroad and about 25,000 students from 110 countries study in Ukraine, including 28 from European countries, 40 from Asian countries, 30 from Africa, and 12 from Latin America. Some of the most active Ukrainian institutions in the process of internationalization are: Shevchenko National University and its Institute of International Relations; National Technical University of Ukraine in Kyiv (formerly, Kyiv Polytechnic Institute), Kyiv National Economic University; the National Aviation University; National Technical University Lvovska Polytekhnika; Lvov National University; Kharkiv National University; Uzhgorod National University; Chernivtsi National University; Zaporizhia State University, and Kyiv National Trade and Economics University.

Nascent forms of co-operation are the opening of foreign branches and consulting offices of Ukrainian higher education institutions and the establishment of joint universities or university departments with foreign partners. Specialists from France, Turkey, Slovakia, the USA, Poland, Germany, China, and other countries are now working in Ukrainian educational institutions. In 2002, over 6,000 Ukrainians representing 66 'national' higher education institutions visited 71 countries for academic

purposes. Similarly, 59 Ukrainian higher education institutions hosted 3,152 foreign specialists from 59 countries. In 2003, 1,054 foreign specialists came to Ukraine, and in 2004, 1,313 more specialists arrived. Every year, Ukrainian citizens of foreign descent enrol in higher education institutions of their mother country, and foreign citizens of Ukrainian descent enrol in Ukrainian higher education institutions. For instance, in 2003 foreign citizens of Ukrainian descent received 335 scholarships.

Universities and technical schools in Lvov, Odessa, Ivano-Frankivsk, Uzhgorod, and Chernivtsy currently offer teacher training courses in the languages of Ukrainian national minorities.

Under the aegis of Tempus, the Institute of International Relations of Shevchenko National University in Kyiv, Technical University of Aachen, Germany, and Imperial College in London, United Kingdom, have jointly established the Innovation Centre for International Education Programmes (known as INKOC). The Centre assists higher education institutions gain access to non-budget financial resources, participate in international research and education programmes, and establish contacts with foreign partners. Thanks to INKOC, Ukrainian institutions have already signed about sixty agreements with foreign parties.

At present, 50 Ukrainian higher education institutions and 15 research institutes have co-operation agreements with 61 German higher education institutions. In 1998, a conference of Ukrainian and German rectors signed a co-operation agreement among their higher education institutions. This co-operation includes the Ukrainian Free University in Munich, Germany, one of the oldest cultural centres of Ukrainian Diaspora in Western Europe.

Projects on European standards for food production quality and on tourism, both supported by Tempus, provide students at Ukrainian higher education institutions access to a consortium of universities in Germany, United Kingdom, and Italy.

The recognition of foreign qualifications is under the sole authority of the Ministry of Education and Science, except for special cases. Thus, the evaluation of foreign qualifications in medical or military fields is within the competence of, respectively, the Ministry of Public Health and the Ministry of Defence of Ukraine.

The national criteria for evaluation of foreign qualifications are based on the *Convention on the Recognition of Qualifications concerning Higher Education in the Europe Region* (Council of Europe and UNESCO, 1997) and Law of Ukraine *On the Ratification of the Convention on Recognition of Higher Education Qualifications in the European Region* (VRU, 1999). The Ministry of Education and Science

participates in the activity of the Committee created by the Lisbon Convention and in the activities of ENIC and NARIC Networks.¹⁰

In accordance with the Lisbon Convention, recognition applies only to foreign educational qualifications received in recognized institutions of the home country. The current practice regarding recognition in Ukraine takes into account existing discrepancies between national and foreign systems, and requires ascertainment of equivalence and comparative analysis of educational programmes. Ultimately, Ukrainian recognition authorities seek to define a level of correspondence between the degree in question and Ukraine's own education-qualification levels. If the foreign qualification level desired by the applicant does not correspond to the level of the desired Ukrainian degree, further checking applies (additional study, examination, competence tests, etc.) to ensure consistent recognition of the same foreign credential for future reference. With regard to non-budget-financed employment positions in the private sector, degree recognition is up to the concerned employer.

Due to the growing country's access to the international education arena, equivalence and recognition of academic degrees have become high priority issues. The Ukrainian degree of Candidate of Sciences is, roughly equivalent to the PhD degree. The second higher-level research degree of Doctor of Sciences is generally close to the status of *Habilitation*, awarded in a number of countries based on research productivity criteria. In Ukraine, a Doctor's degree requires one more dissertation defence after the defence of the dissertation for the degree of Candidate. In addition, the Doctoral candidate must have published at least one monograph on the topic and no less than twenty articles in the national journals, selected by the Higher Attestation Commission separately for each specialism. The Ukrainian academic title of Docent may be considered as equivalent to the title/position of Associate Professor, and the Ukrainian title of Professor as equivalent to Full Professor. The Ukrainian academic title of Senior Researcher has no equivalent in the countries of the European Union, although similar titles exist in some East European countries.

¹⁰ For information on these networks see www.enic-naric.net.

Chapter 4

Governance and Administration of Higher Education Institutions

4.1. INSTITUTIONAL AUTONOMY

The State legislation defines the scope of autonomy and self-governance of Ukrainian higher education institutions, according to the principle of autonomy. Institutional autonomy includes a series of activities:

- Identifying suitable forms of studies and administration;
- Recruitment of teaching and research staff, and other personnel;
- Delivery of additional educational services;
- Development of study and research programmes;
- Publishing activities;
- Management of joint actions and collaboration activities;
- Use of the institutional estate.

4.2. GOVERNANCE

The State creates the legal basis for all activities performed by higher education institutions. It adopts higher education standards, organizes licencing and accreditation processes; guarantees employment and remuneration of teaching staff and researchers, and allocates corresponding budget funds (applicable to State-owned institutions only).

The elected rector, president, or director of a Ukrainian higher education institution fulfils the corresponding duties over a term of five to seven years. The Rector signs a contract with the owner/founder of the institution in question (the Ministry of Education and Science, in the case of State-owned

institutions), according to which he or she receives significant governing authority.

The Rector of a higher education institution is accountable for the development of educational activities, financial management, and maintenance. In exercising these activities, the Rector relies on a Governing Board or an Academic Council, which consists of the heads of the institutional subdivisions, outstanding members of its teaching and research staff, and representatives of the student community.

The Academic Council elects the deans of each Faculty (*Fakultet*, i.e. School or College devoted to a branch of studies), and the chairs of each *kafedra* (teaching department) on a competitive basis, for a term of five to seven years. The elected person signs an employment contract in accordance with State legislation and internal institutional rules and regulations.

The dean of a Faculty is responsible for all its activities and the activities of all faculty members. Candidates for the position of dean, selected from among the faculty members, should hold the academic title of Docent or Professor and be under sixty years of age. The President/Rector of the institution appoints the dean for a term of five to seven years.

The Academic Council has the authority to revoke the dean after having submitted a motion signed by at least half of its members. The dismissal of a dean requires the endorsement of at least two thirds of the members of the governing body of the institution (the Academic Council).

The Academic Council is the collective governing body of a higher education institution of the third or fourth accreditation level. The Council, set up for a five-year term (seven years for 'national' institutions), has a series of prerogatives, among which: the submission of draft amendments to the institutional rules and regulations, financial plans, and reports forwarded to the governing body; proposals on recruitment or dismissal of senior management members; election of department chairs and professors; approval of new educational and research programmes; awarding of institutional academic titles and submission of applications for State-awarded academic titles for the benefit of the research and teaching staff.

The Academic Council is headed by the Rector of the institution and composed of vice-rectors, deans, leaders of governing bodies (including student associations), and elected members representing the teaching and research staff, who constitute no less than 75 percent of the total membership. The Rector should implement the decisions of the Academic Council.

Teaching subdivisions and other structural units at higher education institutions of the third and fourth accreditation levels may also have their Academic Councils operating in a similar manner.

National higher education institutions must have a Supervisory Board. The Supervisory Board oversees the future development of the institution, assists the administration in implementing State policy, controls the institutional administration, and ensures efficient interaction with State governance bodies, the academic community, public, political, and commercial stakeholders.

The Cabinet of Ministers of Ukraine approves the composition of the Supervisory Boards of national higher education institutions. The President of the Supervisory Board and the Ministry of Education and Science should reach an agreement regarding the regulations that determine the Board's activities. The Board members are appointed for a term of three to five years. The Rector's office, deans' offices, and admissions commissions at higher education institutions have their own administrative staff.

The Academic Council, at higher education institutions of the third and fourth accreditation levels, and the Pedagogical Council, at higher education institutions of the first and second accreditation levels, are deliberative bodies with no direct administrative authority.

4.2.1. *Public Bodies*

The highest collective governing body at institutions of the third and fourth accreditation levels is the General Conference of Employees, which convenes at least once a year. Teaching and research staff members should constitute no less than 75 percent of the Conference.

The competence of the General Conference includes:

- Adoption of the statute and by-laws of the higher education institution and subsequent amendments to them;
- Election of the Rector of the institution, and evaluation of the Rector's performance;
- Election of the commission on labour conflicts according to the *Labour Code of Ukraine* (2003).

In institutions of the third and fourth accreditation level, the General Conference of Employees may also function at the level of teaching subdivisions.

4.2.2. Student Participation

Student participation in decision-making is mandatory at all levels of the higher education system and takes the form of representative bodies known as student associations.

In accordance with the Law of Ukraine *On Higher Education* (VRU, 2002a), student associations may function at various levels of a higher education institution, *e.g.*, student cohort(s), specialism, campus, etc. Student bodies represent students' interests, and their leaders are members of corresponding Academic Councils. The Ministry of Education and Science of Ukraine systematically co-operates with the National Students' Union of Ukraine (the Ukrainian association of student self-governance). This co-operation includes consultations, the preparation of higher education rules and regulations, and the organization of conferences and seminars. Based on the results of two such conferences, in 2002 and 2003, *Verkhovna Rada* adopted amendments to the Law *On Higher Education* (*id.*). The amendments strengthened the legal status of students and their representative bodies. Representatives of the European Student Information Bureau (ESIB) and of the students' unions of Austria, Hungary, and Slovakia assisted Ukrainian students in the development of these amendments.

4.3. PUBLIC ORGANIZATIONS

4.3.1. National Congresses

Strategic issues influencing the development of Ukrainian education are open for debate by the academic community and the national congresses of educators. The first such congress took place in 1993 and focused on the draft of the national programme, *Education: Ukraine in the Twenty-First Century*, adopted later by the President of Ukraine. The second all-Ukrainian congress of educators held in 2001 marked the large participation of about 2,500 academics, State officials, and administrators. Having discussed the education reforms and their impact during ten years of Ukrainian independence, the Congress adopted the national doctrine on the development of education for the next twenty-five years.

4.3.2. Associations and Unions

Public unions (associations, confederations) of higher education institutions and/or of their CEOs (rectors and/or presidents) play an important role in the development of State educational policy.

In the 1990's, the Rectors' Union of Ukraine emerged in response to social, political, and economic changes. It represented a first step towards preventing the brain drain of the country's academic and cultural elite. The institutional initiator of the Union was the Kyiv Shevchenko National University. Since 1993, the Union has been bringing together CEOs (rectors, presidents) of higher education institutions, in order to meet a series of objectives:

- Protection of national interests in education, research, and culture;
- Discussion of general approaches to higher education policy;
- Provision for consulting and information services on higher education to Ukrainian and foreign organizations.

The Association of Rectors of Technical Higher Education Institutions, created with similar purposes in 1998, is headed by a Council elected by the Constituent Assembly. The Association protects the legal rights and interests of its members, promotes the development of technical education, and advances Ukraine's position in traditional and emerging areas of Engineering and Fundamental Sciences. The Association collaborates with the National Academy of Sciences of Ukraine, the Academies of Sciences in other countries, and with public organizations. The Association is closely involved in the implementation of the goals of the Bologna Process.

The Association of Private Educational Institutions of Ukraine, set up in 1993, unites more than 100 educational institutions. Its activities focus on higher education, secondary, and primary education, international co-operation, employment, and student initiatives. The Council of the Association has an active role in the development of legal documents regulating private higher education: the Law of Ukraine *On Value-Added Tax* (VRU, 1997), the Law of Ukraine *On Higher Education* (2002a), and *Regulations for the Accreditation of Higher Education Institutions and Specialisms* (CMU, 2001b).

One of the central activities of the Association is the provision of services related to licencing and accreditation. The majority of the Association's members have successfully passed State accreditation. The Centre for International Co-operation of the Association is active in sending

students for study abroad to the United Kingdom, Germany, and Poland. The Centre for Student Initiatives coordinates various services, research, and international opportunities for the students of member institutions.

The Confederation of Private Higher Education Institutions of Ukraine, established in December 1999, unites 28 members, representing almost all regions of Ukraine. The Confederation aims at fusing the efforts to secure the efficient development of the private education sector. The members of the Confederation are private higher education institutions licenced and/or accredited by the Ministry of Education and Science of Ukraine.

Currently, there are 57 public educational organizations in Ukraine. More than a half of them relate to higher education, including the Knowledge of Ukraine Society [*Znann'a Ukraini*], the All-Ukrainian Society *Prosvita*, and the All-Ukrainian Pedagogic Society. Other associations have primarily focused on professional development: the Personnel in Construction Association, the Association of Social Teachers and Workers, the Ukrainian associations of teachers of Law, Foreign Literature, and Economics, the Centre of International Education and Research, the Association of Tourism and Hotel Management Schools, and others.

4.3.3. Regional Rectors' Councils

Regional Rectors' Councils exist in 24 regional centres of Ukraine. They are permanent self-governing public bodies, managing and coordinating education and research activities at institutional level. The decision to organize a regional council rests with the Ministry of Education and Science. A regional Rectors' Councils may adopt recommendations within its area of competence. Its main objectives include:

- Improvement of legal documents regulating educational issues;
- Identification of training priorities according to labour market changes;
- Analysis of the demand for new higher education institutions in a given region;
- Recommendations on improving the social protection of employees and students.

The members of Regional Rectors' Councils are CEOs (rectors, presidents) of accredited State-owned higher education institutions. The Councils may also include some representatives of private higher education

institutions, student organizations, local education administrations, regional trade unions of educators and researchers, etc. The President and Vice-President(s) of a Council are subject to election by a simple majority of the members present at the Council meeting. The President of the regional Council coordinates its activities according to the plan adopted by the Council.

4.3.4. *Student Associations (Unions)*

About 12 percent of all public organizations in Ukraine are youth organizations, including associations of young professionals, religious organizations, student trade unions, charitable foundations, and political organizations.

Although youth organizations are numerous and conduct diverse activities, they have not been very popular until recently and have had little influence on young people. Only 5 percent of the Ukrainian youth are members of youth organizations. The Ukrainian Students' Union, for example, has 11,000 members out of 1.8 million students. The legislative basis of activities developed by youth organizations is the Law of Ukraine *On Youth and Children's Public Organizations* (VRU, 1998). In recent years, the number of youth and students associations has grown, and their credibility with young people appears also to be growing.

4.3.5. *Mass Media in Higher Education.*

Ukraine's newspapers, magazines, radio, and television offer wide coverage of activities developed by higher education institutions and trends in the field. The Ministry of Education and Science publishes two newspapers: Education of Ukraine [*Osvita Ukrainy*] and Education [*Osvita*], which provide information received directly from higher education institutions.

National radio and television stations broadcast special education programmes that involve teaching and research staff and administrators. The Ministry publishes several specialized informational and methodological periodicals, including Informational Herald [*Informatsionnyj Visnik*], Higher School [*Vyscha Shkola*], and Education, Technical Schools, Colleges [*Osvita, Tekhnikumi, Koledzhi*].

The Ministry also maintains a widely accessed website.

4.4. MANAGEMENT OF THE HIGHER EDUCATION SYSTEM

4.4.1. Administration at the System Level

The Ministry of Education and Science of Ukraine ensures the implementation of State policy in the fields of education, research, and intellectual property rights, in compliance with the legislation in force. It is also empowered to submit legislative proposals to the President of Ukraine and the Cabinet of Ministers.

The President of Ukraine appoints/dismisses the Minister of Education and Science as the head of the corresponding Ministry. The Minister controls the development and implementation of State policy in the field of education. The Ministry includes various administrative structures, *e.g.*, departments, agencies, inspection services, etc. There are also consultative bodies that may develop specific technical questions or proposals, which are subject to approval by the Minister of Education and Science of Ukraine. The Minister also heads the Attestation Collegium, which awards State-recognized academic titles of Docent and Professor.

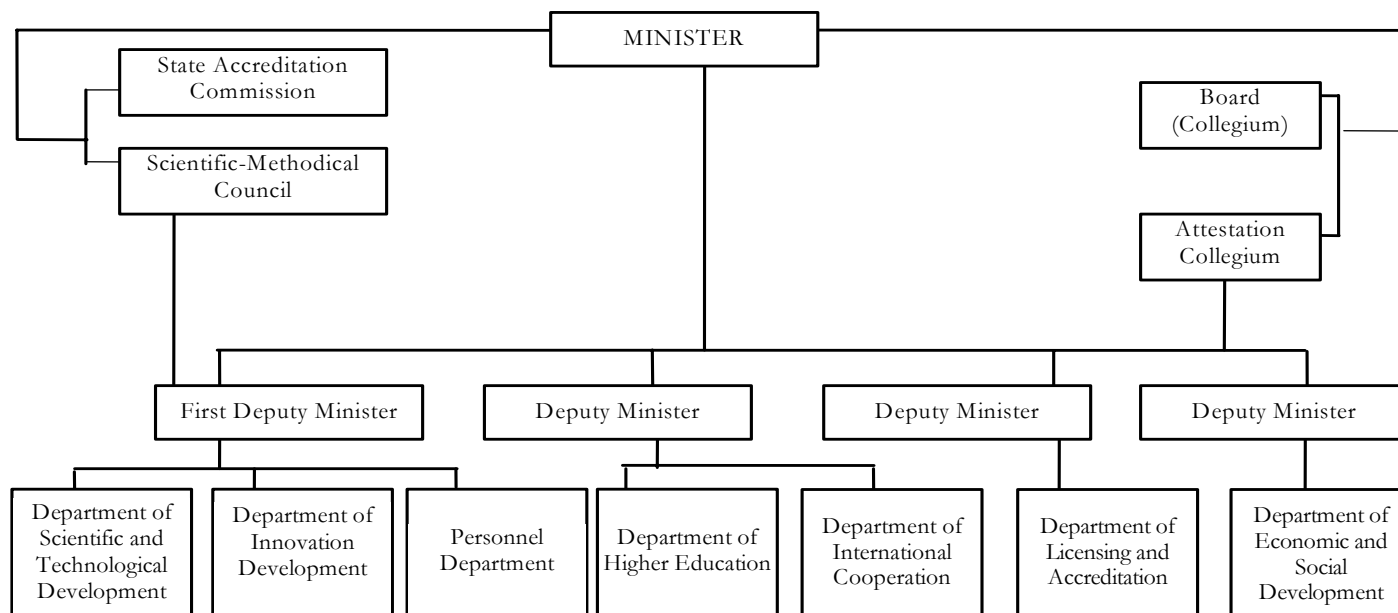
Figure 13 displays the organizational structure of the Ministry of Education and Science of Ukraine.

4.4.2. Corporate and Advisory Bodies

The Board (Collegium) of the Ministry of Education and Science, fosters dialogue regarding Ministry activities. The Minister is the head of the Collegium *ex officio*. Heads of other central executive bodies and representatives of private higher education institutions may also become Collegium members. The decisions of the Board are implemented via orders of the Minister.

The Attestation Collegium awards academic titles. The Minister heads this Collegium also *ex officio*. Its members include Ministry representatives, representatives of research institutions, leading scientists and researchers, etc. The Ministry of Education and Science implements the decisions of the Attestation Collegium and disseminates information on the activities of the Collegium.

FIGURE 13. The Ministry of Education and Science of Ukraine – Organizational structure



Source: The Ministry of Education and Science of Ukraine.

The Scientific-Methodical Council on Education promotes the implementation of the State policy in the fields of education and science. The main objective of the Scientific-Methodical Council is to define strategic directions in the field of education and to ensure compliance of current educational practices with State standards. The Council also helps the Ministry by providing its expertise on educational technologies, software, and other education-related materials. The members of the Council represent the Ministry of Education and Science, the National Academy of Sciences, the Academy of Pedagogical Sciences, and some leading higher education institutions.

The Scientific-Methodical Council advises the Minister with regard to the educational content and structure at various education-qualification levels, as well as the introduction of new educational technologies and/or teaching methods. The Scientific-Methodical Council has its own governing body, the Presidium, also headed by the Minister of Education and Science.

The Scientific-Methodical Council may establish commissions dealing with certain fields or disciplines. The commissions may include sub-commissions or sections. Thus, the Scientific-Methodical Commission on Higher Education is a task group of the Department of Higher Education in the Ministry and of the Scientific-Methodical Council's Centre of Higher Education. The main goal of this task group is the identification of higher education standards, promotion of innovative teaching methods, and the development of teaching and research staff.

4.5. FUNDING OF HIGHER EDUCATION

4.5.1. *Institutional Funding*

Funding of higher education institutions complies with the Budgetary Code of Ukraine, the Laws of Ukraine *On Education* (VRU, 1996) and *On Higher Education* (VRU, 2002), and the laws on the State budget of Ukraine for each given year. Additional funds derived from external resources include tuition fees and income from research activities.

The Autonomous Republic of Crimea finances its public higher education institutions from its own budget. Private higher education institutions should rely solely on their own funding resources. Funds allocated for educational activities are spent according to national legislation.

Each higher education institution establishes its tuition fees in the national currency, and adjusts the fees according to the official inflation

levels for the previous calendar year. Every contract between a higher education institution and a fee-paying student must indicate the full amount of tuition fees paid for the course of studies or additional educational services. Typically, the sample contract developed at each institution needs the approval of the Ministry of Education and Science. Fees paid to higher education institutions are exempt from taxation and left in full at the disposal of those institutions.¹¹

To ensure the further professional development of teaching staff, the State guarantees increased salaries to holders of research degrees, academic titles, and honorary titles/degrees employed in State-owned institutions. Private institutions usually provide similar benefits to their staff.

Generally, the amount of budget funds allocated for teaching staff salaries depends on the total number of students. The salaries of teaching staff at State-owned institutions (of all types) have increased twice since 2001, by 25 and 15 percent, respectively. In the budgetary sector, university staff salaries have increased even higher, by 42 percent over the same period. In January 2003, State-owned institutions introduced long-service bonuses and supplementary annual leave benefits.

4.5.2. *Student Financial Support*

Students enrolled in public higher education institutions on a full-time, budget-financed basis, are entitled to scholarships equal to double the amount of the legally established minimum wage income. This type of scholarship is exempt from taxation. The scheme of such scholarships ensures that Ukrainian citizens have access to higher education and adequate means to pursue it, even in the case of the most financially vulnerable students. The amount of the scholarship depends on the type of higher education institution, specialism, student progress, and possible additional State subsidies (in the case of social groups with special needs).

Scholarship award procedures observe the Cabinet of Ministries resolution *On the Adoption of the Order of Award, Payment, and Amount of Scholarship Support for Pupils, Students, Cadets, Listeners, Clinical Ordinators, Postgraduates and Doctoral Students* (CMU, 2001c). In April 2003, the size of scholarships increased by 15 percent on-average and by 30 percent for some

¹¹ Applicable to budget-financed institutions only; private institutions do not enjoy a tax exemption status unless they are budget-financed or registered as research institutions, according to special criteria developed by the Ministry of Education and Science.

special categories of students (*e.g.*, orphans). There are also special personally awarded scholarships granted by the President of Ukraine, the *Verkhovna Rada* of Ukraine, and the Cabinet of Ministers of Ukraine.

Chapter 5

Institutional and Academic Structures

5.1. INTERNAL STRUCTURE OF HIGHER EDUCATION INSTITUTIONS

The Law of Ukraine *On Higher Education* (VRU, 2002a) outlines the structure of higher education institutions in Ukraine. A higher education institution of the third and fourth accreditation level consists of schools or colleges (*fakultet*), teaching departments (*kafedra*), teaching and research institutes, branch subdivisions, libraries etc. It may also include research centres, innovation centres, and laboratories, which may operate under the aegis of a single department or several departments of a kindred academic profile.

In the Ukrainian context, a branch subdivision of an educational institution is a separate structural unit organized outside of the main campus, aimed at meeting local demands of the labour and educational markets.

An institute, as a subdivision of a larger higher education institution (usually a university) unites several kindred directions of training (usually larger than a single *Fakultet*). By legal definition, an institute as a subdivision of a higher education institution is oriented towards either research only or research and teaching taken together.

Fakultet is the principal structural unit of a higher education institution at the third and fourth levels of accreditation. It includes at least three teaching departments and enrolls no fewer than two hundred full-time students.

Kafedra is responsible for teaching and research within a single academic field or several kindred fields. It may also be responsible for overall training in one or several related specialisms.

The Law of Ukraine *On Higher Education* (VRU, 2002a), stipulates that each higher education institution must have a library available for its students.

5.2. STAFF

5.2.1. *Teaching Staff*

Those who teach at higher education institutions of the first and second levels of accreditation are members of the teaching staff. Teaching staff positions are open to graduates of higher education institutions with special pedagogical training and include the positions of teacher, senior teacher, head of the cycle (subject area), department chair, deputy director, and director. Employed by the rector (director) of a higher education institution, teaching staff members undergo professional examination (attestation) every five years. A positive decision of the attestation commission may entail promotion, whereas a negative decision may result in dismissal. At every institution, there are labour commissions that settle possible labour disputes; if this procedure fails, a court of law may settle the dispute in question.

5.2.2. *Teaching and Research Staff*

The teaching and research staff consists of those who teach at higher education institutions of the third and fourth levels of accreditation. For the most part, they are higher education graduates with special pedagogical training. The main positions of teaching and research staff are assistant, lecturer, docent, professor, library director, library researcher, department chair, dean, vice-rector, and rector. As a rule, academic staff members hold research degrees and/or academic titles; alternatively, they are encouraged to pursue one. Figure 14 displays the numbers of teaching and research staff members with various degrees or titles (for Ukrainian higher education in general).

5.3. ACADEMIC WORK: TEACHING AND RESEARCH

5.3.1. *Teaching*

The *Labour Code of Ukraine* (2003) specifies that the research staff workload should not exceed 900 hours per academic year, while that of the teaching staff should not exceed 720 hours per academic year.

Academic staff members enjoy a series of rights, such as protection of professional status and dignity; free choice of methods and means of teaching; the right to conduct research activities, participate in public governance and associations; eligibility for financial assistance, State

scholarships, and research funding. Higher education institutions may also confer other rights to their teaching and research staff.

Staff development initiatives are underway, *e.g.*, via increasing staff exchanges among institutions at home and abroad. Staff members are entitled to adequate conditions for career development, to rest and health coverage, and to financial compensation in the case of dismissal, as stipulated by the Law of Ukraine *On Employment of the Population* (VRU, 1991c). Higher education institutions may also establish additional payments, bonuses, and material incentives for their personnel.

5.3.2. Research

Research is an integral part of the mission of higher education institutions of the third and fourth accreditation levels. Integration of education and research is also a guiding principle of the Bologna Process. Academics employed in higher education institutions, as well as in the research institutions under the Ukrainian National Academy of Sciences, take an active part in fundamental and applied research in all fields. Research is especially important, not only for the modernization of the educational system, but also for Ukraine's overall social and economic development.

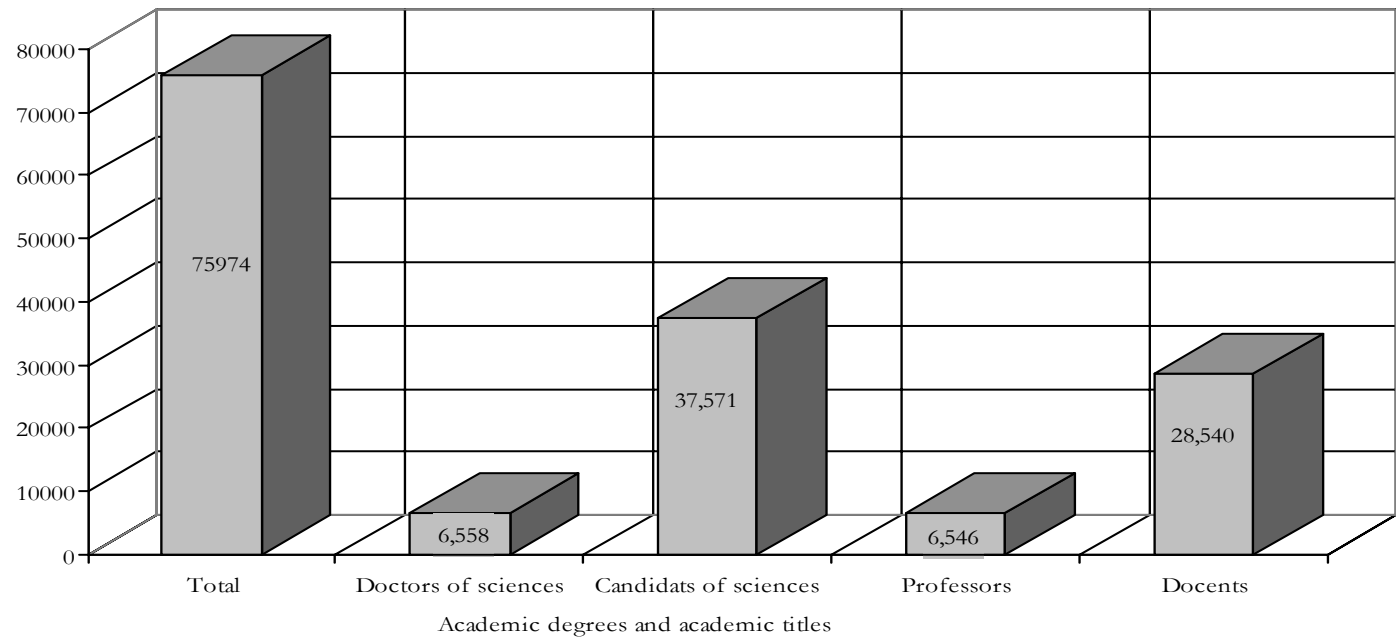
Research activities of Ukrainian academics comply with the Laws of Ukraine *On Scientific Research and Scientific Research-Technical Activities* (VRU, 1991a), *On Innovation Activity* (VRU, 2002c), and *On Higher Education* (VRU, 2002a). The Ministry of Education and Science of Ukraine is the main body that implements State policy in the fields of research and scientific innovation.

Certain laws of Ukraine (*e.g.*, *On the Priority Directions of the Development of Science and Engineering* (VRU, 2001) and *On the Priority Directions of Innovation Activity in Ukraine* (VRU, 2003)) may give priority to certain directions of research in various fields. In Science and Technology, priorities are defined on a five-year basis, according to forecasts of social and economic development.

For the 2002-2006 period, the research priorities include:

- Fundamental research;
- Demography, human development, and civil society;
- Environmental protection;

FIGURE 14. Teaching and research staff by academic degree/title (in numbers)



Source: Ministry of Education and Science of Ukraine.

- Biotechnology;
- Information and Communication Technologies;
- Efficient technologies in the sectors of Energy and Agriculture;
- New compounds and materials.

The Ukrainian government also supports fundamental research via the State Foundation of Fundamental Research, which awards grants to Ukrainian researchers on a competitive basis. The Council heading the Foundation consists of twenty-six well-known Ukrainian academics.

5.4. RESEARCH INSTITUTES

5.4.1. Scientific-Methodical Centres

The mission of higher education institutions in Ukraine is to preserve the unity of education and research activities. There are almost 1,000 scientific schools, and 42 research institutions, organizations, and State enterprises subordinated to the Ministry of Education and Science of Ukraine.

Over 43,000 researchers and teaching staff are regularly involved in research activities. Almost two thirds (63.4 percent) of Ukraine's Candidate or Doctoral degree holders work in higher education institutions, research institutes, or Ministries and other central executive bodies.

Informational centres – subordinated to Ministry of Education and Science – provide support for educational and research activities. There are eighteen regional information centres, coordinated by the Ukrainian Institute for Scientific, Technical, and Economic Information, tasked with the following:

- Integration of education and research;
- Support for innovative structures;
- Support for new technologies and means of knowledge transfer;
- Monitoring emerging needs of public and private IT enterprises.

Scientific-methodical centres, subordinated to the Ministry of Education and Science, provide methodological support to higher education institutions. These centres include the National Methodical Centre of Secondary Education, the National Methodical Centre of Vocational Education, the

National Centre of Higher Education, and the National Centre for Teaching Development.

The State Register of Research Institutes currently lists thirty-two institutes that enjoy taxation and customs privileges, particularly related to the purchase of research equipment and materials.

5.4.2. Academy of Pedagogical Sciences of Ukraine

Established in 1992, the Academy of Pedagogical Sciences of Ukraine focuses on the development of the national higher education system in the areas of pedagogy and pedagogical research. The Academy manages the activities of its own research institutes, conducts research on issues related to pedagogy and educational psychology, makes recommendations and proposals concerning higher education, promotes innovations in pedagogy and educational psychology, coordinates various activities directed at solving educational problems, and organizes training and competence development in its areas of expertise. The Academy has about 130 members. Its structure includes five inter-disciplinary departments:

- Theory and History of Pedagogy;
- Teaching Methodology and the use of Information Technology;
- Psychology and Physiology;
- Pedagogy and Psychology in Higher Education;
- Pedagogy and Psychology in Vocational Education.

The department of Pedagogy and Psychology in Higher Education includes thirty-seven members whose activity relates to the development of Ukraine's higher education system, including:

- Philosophical basis for modernization in higher education;
- Economic and managerial aspects of higher education development;
- Pedagogical fundamentals for improvement in higher education;
- Quality improvement and assessment in higher education;
- Structure of teaching and research activities.

In 1999, the Academy of Pedagogical Sciences of Ukraine established the special UNESCO Department for Preventive Education and Social Policy. The main goal of the Department is prevention of HIV/AIDS and drug

abuse and promotion of an adequate social policy, especially towards young people. The Department also provides training courses, educational activities, pedagogical documents, and networking for the exchange of information.

5.5. THE NATIONAL ACADEMY OF SCIENCES OF UKRAINE¹²

The research institutes subordinated to the National Academy of Sciences of Ukraine undertake a considerable range of research, technological, and laboratory activities. The development of higher education depends to a considerable degree on the integration of higher education institutions and academic research institutes. The Ministry of Education and Science collaborates closely with the National Academy of Sciences of Ukraine, and the two parties have concluded a collaboration agreement for the 2002-2007 period. Their joint efforts influence the quality of both research activities and student training. Over 1,200 highly qualified researchers with the research institutes of the Academy teach at higher education institutions part-time. Involvement of research personnel in teaching activities has also helped prevent the expansion of brain drain by providing an additional source of personal income. Seven research institutes have double administrative subordination, *i.e.*, both to the Ministry of Education and to the Science and the Academy.

The collaboration between the Ministry of Education and Science and the National Academy of Sciences is multi-directional. Over thirty-five academicians and corresponding members of the National Academy of Sciences of Ukraine are currently involved in fundamental and applied research in higher education institutions and their research subdivisions. In many cases, joint research and technology centres, research departments, and laboratories explore new trends in science and technology. Below are some examples:

- The National Technical University Lvovska Politekhnic, in collaboration with research institutions in Lvov, has established the Yavoriv Scientific Park and six academic departments associated with its activities.
- The Kharkiv National University has created fifteen academic departments in collaboration with research institutions of the Academy.

¹² Details available at www.nas.gov.ua/En/main.html.

- The National Aviation University in Kyiv has established fifteen academic departments and institutes of innovative technologies, focused on both education and research, in collaboration with research institutions of the Academy (in Kyiv).
- Some academic departments of the National Technical University in Kyiv (the former Kyiv Polytechnic Institute) develop activities in collaboration with the research institutions of the Academy, such as the Institute of Metals and Physics, the Institute of Materials and Compounds, and the Technological Institute of Metals and Alloys.
- The Institute of Endo-Ecology of the National Academy of Sciences of Ukraine and the Faculty of Chemistry of the National Technical University in Kyiv have established an educational and research complex (contractual union with its own administrative structures).
- The Institute of Materials of the Academy has opened an educational-and-research centre for training young scientists.
- The Institute of Metallurgy of the National Academy of Sciences and the National Metallurgical Academy of Ukraine have created a joint teaching structure (Fakultet) for the training of research and teaching personnel.
- The Institute of Mechanical Engineering of the Academy, together with eight leading higher education institutions, has established Resource, as a research and educational centre.

Research and production facilities of the National Academy of Sciences and its research institutes are available for training students of higher education institutes. Leading Academicians are also regularly involved in teaching programmes for Master's and Doctoral studies. In addition, members and corresponding members of the National Academy of Sciences collaborate in eighty-seven scientific commissions of the Ministry of Education and Science, providing expertise with regard to academic standards, curricula, programmes, and research textbooks. The Ministry of Education and Science of Ukraine and National Academy of Sciences jointly organize all-Ukrainian and international conferences and seminars, etc.

Chapter 6

Students and Graduates

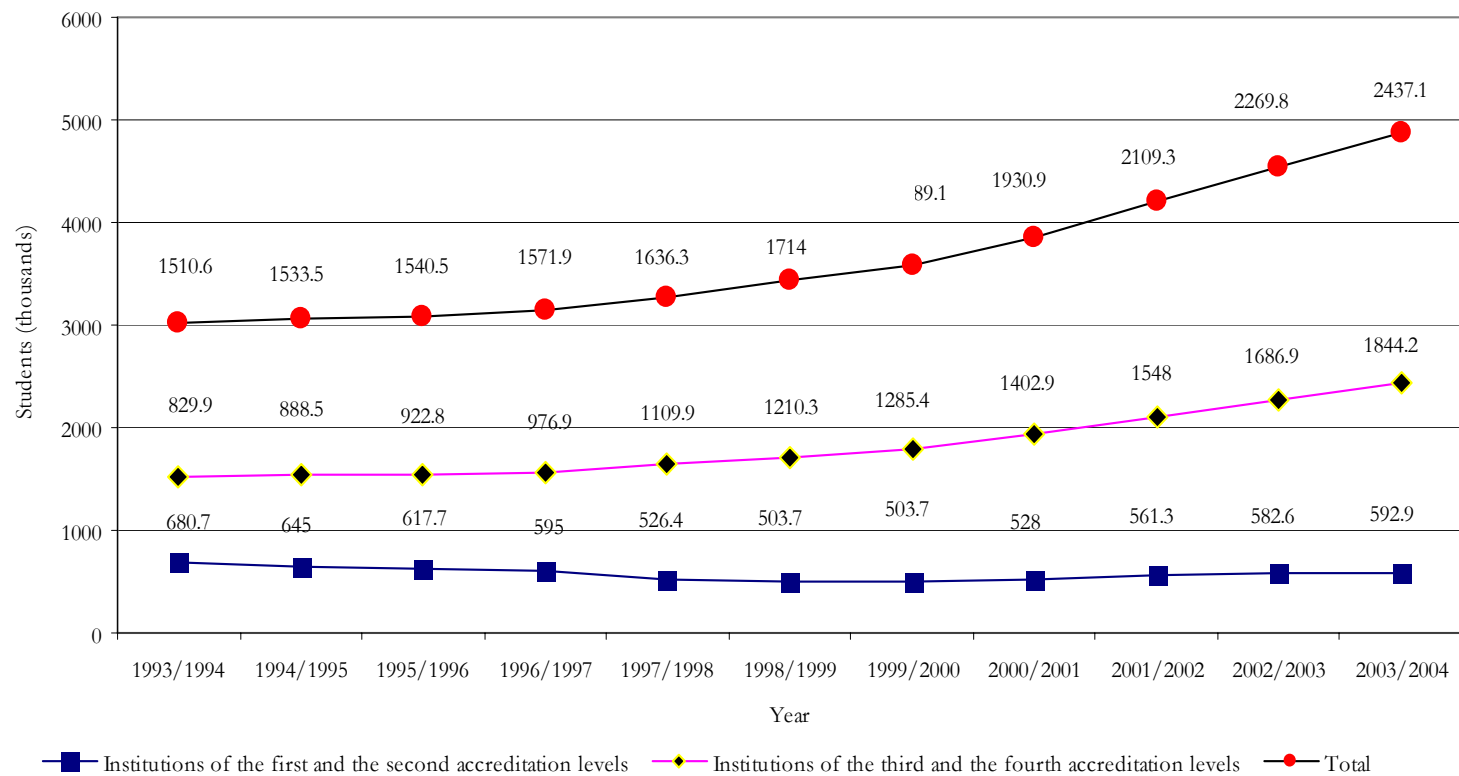
6.1. STUDENTS

In accordance with the laws of Ukraine, students in higher education institutions are classified as follows:

- *Full-time students* – secondary school graduates enrolled in a higher education institution in pursuit of a professional qualification, confirmed by a corresponding degree;
- *Cadets* – persons enrolled in a military higher education institution;
- *External students* – students enrolled in distance-education studies;
- *Assistant-probationers* – Master’s or Specialist’s degree holders enrolled in higher education institutions of Art aiming to refine their artistic skills;
- *Interns* – graduates of Medical higher education institutions and holders of a Specialist’s degree spending a probation period of practical professional work before the receipt of a Doctor’s or Pharmacist’s licence;
- *Clinical fellows* – Specialist’s or Master’s degree holders in Medicine enrolled in higher education institutions for professional development purposes.

As shown in Figure 15, student enrolment has been steadily growing in higher education institutions at all accreditation levels.

FIGURE 15. Evolution of student numbers, by institutional accreditation level



Source: Ministry of Education and Science of Ukraine.

6.2. STUDIES AT DOCTORAL LEVEL

Specialist's and Master's degree holders who have no higher research degree may continue their studies with special Doctoral level courses (*aspirantura*, similar to PhD programmes). Admission to such courses depends on the results of a competitive entrance examination. As for PhD programmes, such courses, designed for three years of study, are based on a combination of study and research and require students to prepare a public defence of their research thesis. If successful, the defence leads to the award of Candidate of Sciences' degree (awarded by the Higher Attestation Commission of Ukraine upon the request of the corresponding defence council). Candidates of Sciences degree-holders seeking a Doctor of Sciences' degree may prepare and defend a second, expanded, dissertation.

Higher education institutions specializing in Arts offer assistant-probationer courses as the main form of training for researchers, teachers, and performers in artistic disciplines.

According to Ukrainian legislation, the titles applied to researcher and teaching staff involved in further professional training are:

- *Aspirant* – a person who pursues the degree of Candidate of Sciences via the *aspirantura* programme;
- *Doktorant* (Doctoral Candidate) – a Candidate of Sciences degree holder who pursues the Doctor of Sciences degree via the procedure of *Doktorantura* (a three-year leave with regular allowance at the pre-leave level and the obligation to write and defend the corresponding dissertation);
- *Soiskatel* (competitor) – a person seeking to obtain a Candidate of Sciences' degree, while not enrolled in an *aspirantura* or Doctoral programme and without enjoying the privileges of *Doktorantura*.

Candidates and Doctors of Sciences train in higher education institutions of the third and fourth levels of accreditation or in research institutes and their branches. To enrol in an *aspirantura* programme, Specialist's or Master's degree holders should take competitive entrance examinations. Applicants for *Doktorantura* must hold a Candidate of Sciences' degree and offer proof of research productivity and publications in their field of activity.

The estimates are that, annually, about 9,000 Ukrainian students enroll in *aspirantura* programmes and about 400 Candidates of Sciences enroll in

Doctoral programmes. Studies in *aspirantura* require both coursework related to the theoretical background of the chosen field and a thesis defence.

Academic titles used in the Ukrainian higher education system are Senior Researcher, Docent, and Professor. The Highest Attestation Commission of Ukraine may award the title of Senior Researcher based on the decision of the corresponding Academic Council, where the latter acts on behalf of the Ministry or another central executive body (applicable to State-owned institutions only).

The Academic Councils of higher education institutions adopt decisions on the awarding of the academic titles of Docent and Professor to their teaching and research staff. Such decisions are submitted for approval to the authorized central executive body in the Ministry of Education and Science, which has the sole authority to award these state-recognized degrees (in compliance with the procedures adopted by the Cabinet of Ministers). Usually, holders of a Candidate of Sciences degree accept the title of Docent; holders of the Doctor of Sciences degree receive the title of Professor. The award of an academic degree or title confers formal recognition of the individual's level of research qualification.

The organization of specialized councils for the defence of Candidate and Doctor of Sciences dissertations in higher education institutions and research institutions is subject to approval by the Higher Attestation Commission of Ukraine. The Commission also approves all degree-granting decisions adopted by these specialized councils.

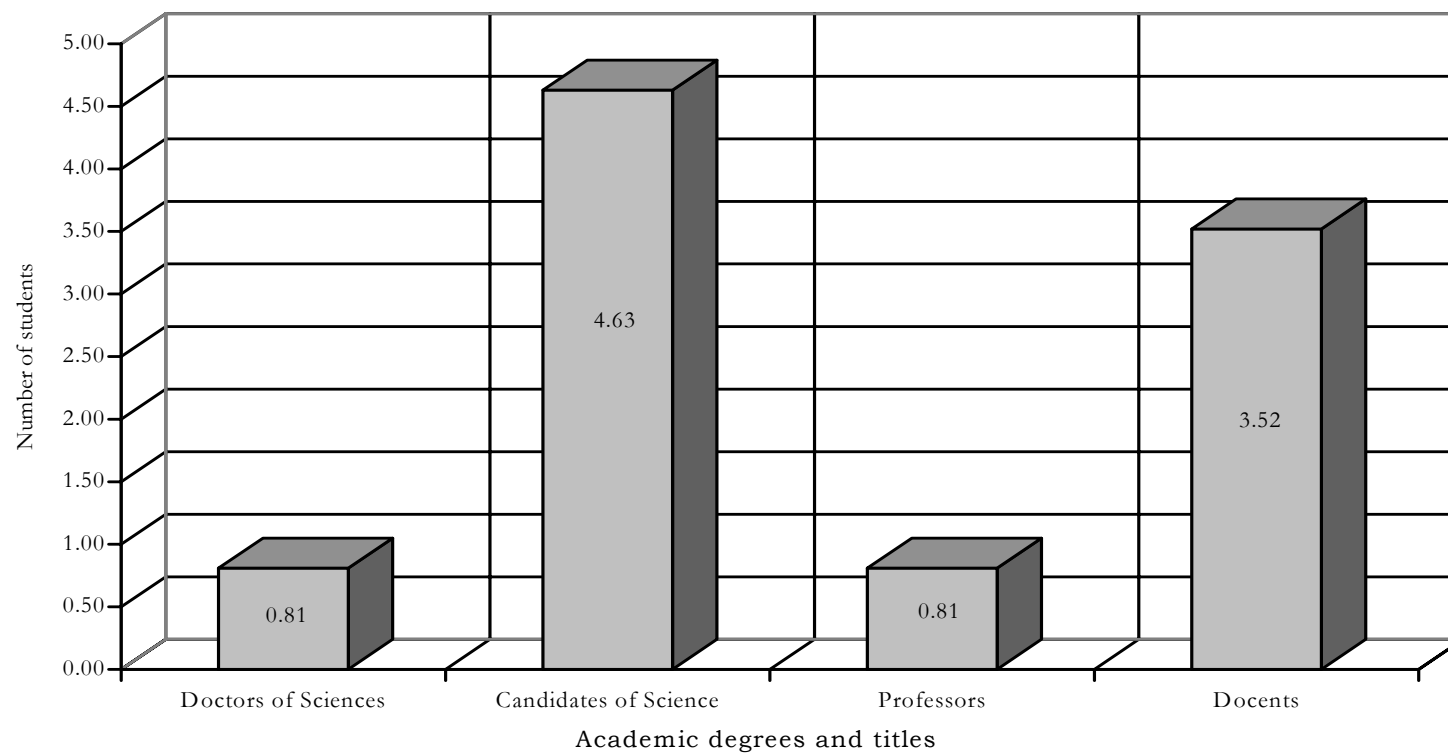
Currently, more than 7,500 Doctors of Sciences – about 60 percent of the total number of such degree holders – work full-time in Ukrainian higher education institutions. Many Doctors of Sciences working in research institutes under the National Academy of Sciences of Ukraine are also involved in part-time teaching activities. Figure 16 indicates the current numbers of Doctors of Sciences, Candidates of Sciences, Professors, and Docents per 100 full-time students in Ukrainian higher education.

6.3. STUDENT SUPPORT

In accordance with Ukrainian legislation, students in higher education institutions enjoy a series of rights, including the right(s) to:

- Free choice of subject study;
- Adequate conditions for study and support in job placement;
- Seek paid employment adjusted with study schedule;

FIGURE 16. Doctors of Sciences, Candidates of Sciences, Professors, and Docents, per 100 students



Source: Ministry of Education and Science of Ukraine.

- Paid leave related to work schedule (for students who combine work and study);
- Free access to educational, research, athletic, and medical facilities of a higher education institution;
- Participation in joint/group research, conferences, symposia, exhibitions, competitions, and publications;
- Participation in discussions regarding the future development of education, research, scholarship awards, and community services;
- Make recommendations on the amendment of tuition fees;
- Free access to a university library, databases, other information and documentation services provided by their higher education institution;
- Vacation time;
- Freedom to organize student self-governing bodies.

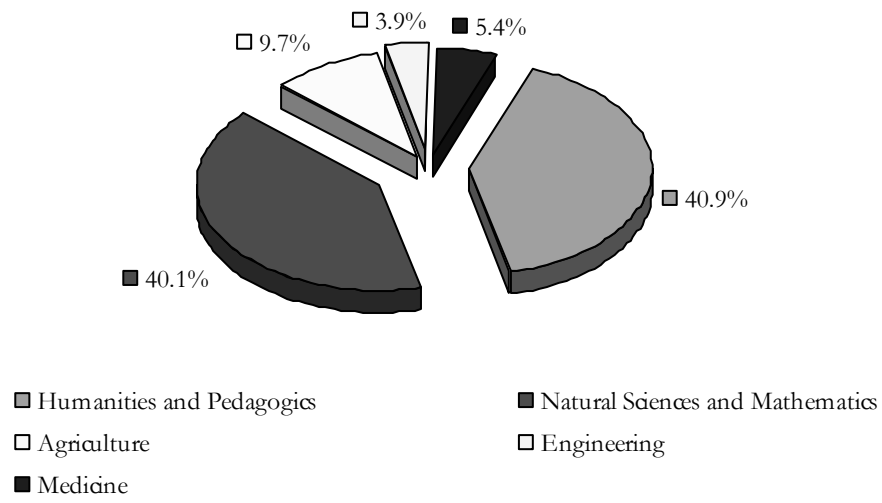
Full-time students enjoy further privileges, such as reduced public transportation and hostel accommodation fees, in accordance with established procedures. Students also have the right to receive scholarships from legal entities and private persons, in accordance with the existing legislation.

6.4. EMPLOYMENT OF STUDENTS AND GRADUATES

Higher education graduates are entitled to the free choice of their future employer. However, graduates initially admitted on a State-planning basis, have to accept temporary employment (for up to three years) assigned to them by the State assignment commission at the time of graduation. The alternative is to reject the assignment and reimburse the State with the full cost of the education received. Employment upon graduation may also be preset by a contract signed by the future employer who pays for the student's higher education.

An authorized central executive body determines the demand for specialists through State planning. This usually entails submission of a proposal by the Ministry of Education and Science to the Cabinet of Ministries with regard to the budget-financed State 'order' for training specialists of all kinds for the next financial period. The details of planned training of specialists distributed by the main economic sectors are provided in Figure 17.

FIGURE 17. Planned training of specialists by main economic sectors



Source: Ministry of Education and Science of Ukraine.

Chapter 7

Prospects for Ukrainian Higher Education

Ukraine's aspiration for integration into European structures is evident in all aspects of its social, economic, and cultural life. With the ultimate objective of joining the European Higher Education Area, the country's system of higher education has undertaken a process of modernization in line with the Bologna Process goals.

Accordingly, amendments to the Law of Ukraine *On Higher Education* (VRU, 2002a) adopted in 2004 have further stimulated a shift towards the three-cycle system of higher education (Junior Specialist's, Bachelor's, and Specialist's/Master's education-qualification levels) to replace the older, Soviet-style, two-cycle system (Junior Specialist's and Specialist's).

Special attention to quality enhancement and assurance in higher education is further evidence of Ukraine's commitment to modernization. This process includes higher responsibilities of the higher education institutions, transparent internal and external evaluation of educational programmes, an enhanced system of attestation, certification, and follow-up control procedures, increased participation in, and co-operation with, international quality assessment bodies.

Following the Bologna Declaration goals (Bologna Process Committee, 1999), Ukraine has paid special attention to the fundamental values of civil society: parliamentary mechanisms, human rights, minority rights, liberalization, and freedom of movement and access to education.

The progress of democracy in Ukrainian society relates to the introduction of European norms and standards in Ukrainian education, science, and technology. On the other hand, the country's openness to Europe fosters dissemination of Ukraine's own cultural values, scientific, and technological achievements. Integration into the European structures is seen as a pathway to highlight the country's European identity and to help enhance its regional visibility.

Another task for Ukraine is the development of standards in higher education through a modular system of credits, similar to the European Credit Transfer System (ECTS), and in accordance with the Bologna

Declaration. The implementation of the ECTS system or of a similar system will allow for greater student and academic staff mobility. The Ministry of Education and Science has already begun experimenting with a credit transfer system in over one hundred Ukrainian universities.

It is also necessary to create both internal and external systems of quality assessment and control in both State-owned (public) and private sectors of higher education. The introduction of course modules and of a system of credit units should be most effective in the context of specific higher education standards, as envisaged by Ukrainian legislation currently in force.

In the immediate future, the current credit module experiment will involve more higher education institutions under the guidance of the Ministry of Education and Science. The Ministry is also supervising and controlling the development and introduction of a standards system.

The participating higher education institutions have started the experiment by transforming profession-centred training programmes into education-centred programmes, mirroring the practice of European universities. The next task of the higher education institutions is to develop norms and procedures for defining credit units in the context of the Ukrainian higher education system.

The anticipated results will ensure measurable quality improvement and an increased international competitiveness of Ukrainian higher education graduates. The introduction of credit transfer modules should meet student needs and support an evaluation system consistent with the Bologna Declaration goals. Furthermore, the implementation of a higher quality, credit transfer system will enhance student and academic staff mobility and support mutual recognition of qualifications and diplomas between Ukraine and other European countries.

As stated in Chapter 3, one of the fundamental indices of international competitiveness in the provision of higher education is the introduction of modern information and communication technologies (ICTs). ICTs make possible the sustained improvement of the educational process, its enhanced openness, efficiency, and ensure lifelong education in an information society. The Ministry of Education and Science of Ukraine has promoted the introduction of ICTs at different levels of education:

- At user level – supplying all educational units with ICT equipment;
- At the level of information and learning networks – by fostering the development of distance education and network libraries;

- At curriculum level – by initiating modular education programmes, which can be configured according to various levels of complexity.

At the macroeconomic level, a modern education sector is an essential driver of international economic competitiveness. Ukraine supports the introduction of ICTs in education, as this would be the leading factor in securing enhanced educational opportunities, expanded information networks, and reliable quality monitoring at all levels of higher education.

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