

# Fact-finding Initial Country Review Report Kazakhstan

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MoES RK

IQAA

KAZGUU UNIVERSITY

M.O. AUEZOV SOUTH KAZAKHSTAN STATE UNIVERSITY



# Content

**Methodology**

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**Admission**

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**Defense**

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**HEIs**

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**Challenges**

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# Methodology

**QUALITATIVE APPROACH**

**DOCUMENTARY ANALYSIS**

**Analysis of State regulations and internal documents of HEIs, regulating delivery of Cycle 3 programs**

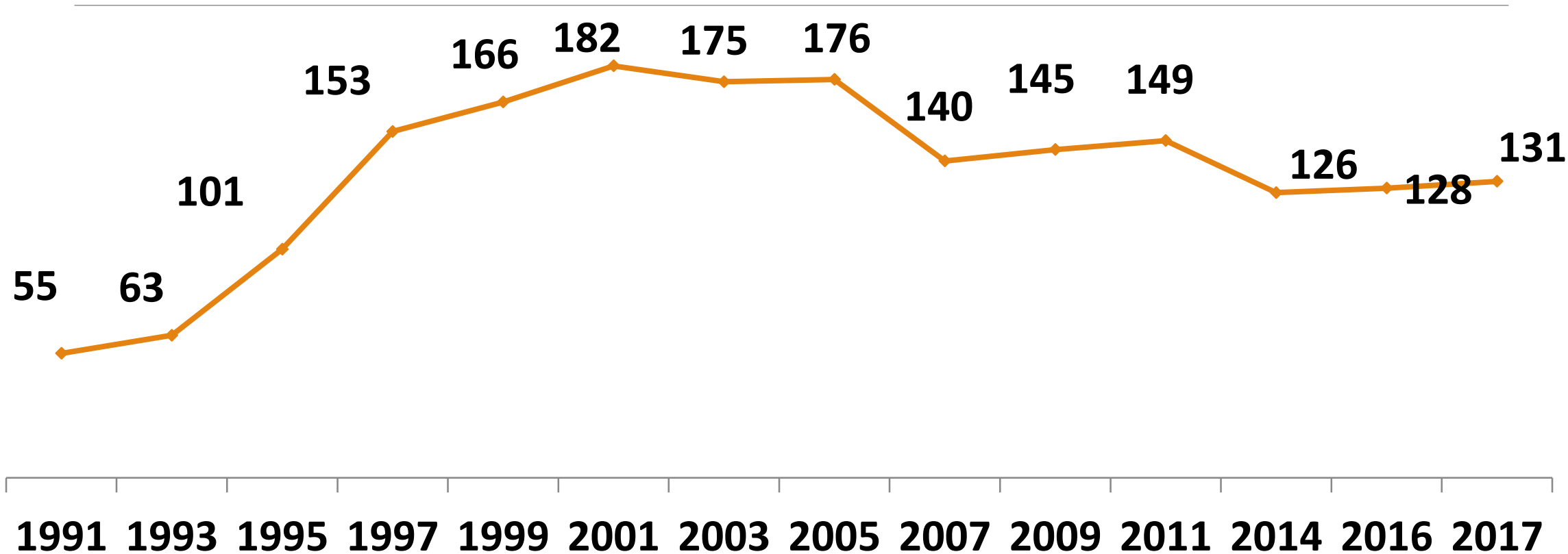
**KazGUU University**

**CASE STUDY**

**M.O. Auezov South  
Kazakhstan State  
University**

Questionnaire of Cycle 3 programs students and employers  
Interview with the staff of HEIs (heads of academic units and teaching staff)

# Changes in the number of HEIs in Kazakhstan\*

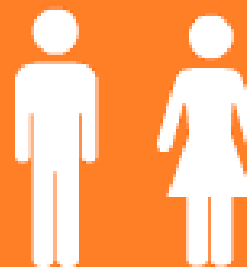
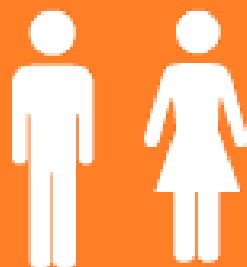


\* Source : MoES RK

# Brief presentation of the HE and research system

**17,9  
mln  
people**

**Population**



**131 HEIs**

**10 national  
HEIs**

**32 state HEIs**

**14 non-civic HEIs**

**1 international HEI**

**55 private HEIs**

**1 HEI in the authority of  
the Supreme Court**

# Students` enrollment in Kazakhstani HEIs

Level of degree	Number of students	Number of HEIs
Bachelor`s degree	477, 07 thousand people	131
Master`s degree	32, 8 thousand people	105
Doctoral degree	2, 710 thousand people	63

**48% HEIs deliver Cycle 3 programs**



# Statistics on groups study programs in Classifier of Majors in Higher and Postgraduate Education

#	The title of the specialties	Levels			
		Bachelor`s degree (4 years = 135 credits)	Specialist (5 years = 167 credits)	Master`s degree (1 year = 24 credits/ 2 years = 55 credits)	Cycle 3 degree (3 years = 75 credits)
1	Education	23	-	24	24
2	Humanities	12	-	14	14
3	Law	4	-	4	4
4	Art	22	-	22	23
5	Social sciences and business	16	-	19	19
6	Science	12	-	13	13
7	Technical sciences and technology	39	-	50	51
8	Agricultural sciences	12	-	12	12
9	Services	11	-	12	12
10	Military and security	2	-	2	2
11	Healthcare and social benefits (Medicine)	4	-	5	3
12	Veterinary science	-	2	2	2
13	Healthcare and social benefits (Medicine)	-	2	-	-
	<b>Total</b>	157	4	179	179

**The Classifier of Majors in Higher and Postgraduate Education**  
*contains 13 groups of majors - 519 study programs*

# Admission

- The admission of students is carried out on the basis of the competition
  - Applications are submitted once a year from 10 to 30 of July
- 

## EXAMS

**1. The foreign language test (English, French, German and Arab for programmes for which fluency in Arab is required)**

**Applicants are examined via tests, developed by admitting HEIs. The tests are conducted at HEIs, assigned by the MoES RK**

**Applicants can undergo such international exams as IELTS (not less than 6 scores), TOEFL (not less than 560 scores), Deutsche Sprachprüfung für den Hochschulzugang (Niveau C1/level C1), Test de Français International (not less than 400 scores). All these minimum amount of scores help to “PASS” a foreign language tests level of examination.**

**2. The professional subjects exams/test** (during the exams representatives of the MoES RK are presented as observers).



# Admission

## Eligibility criteria:

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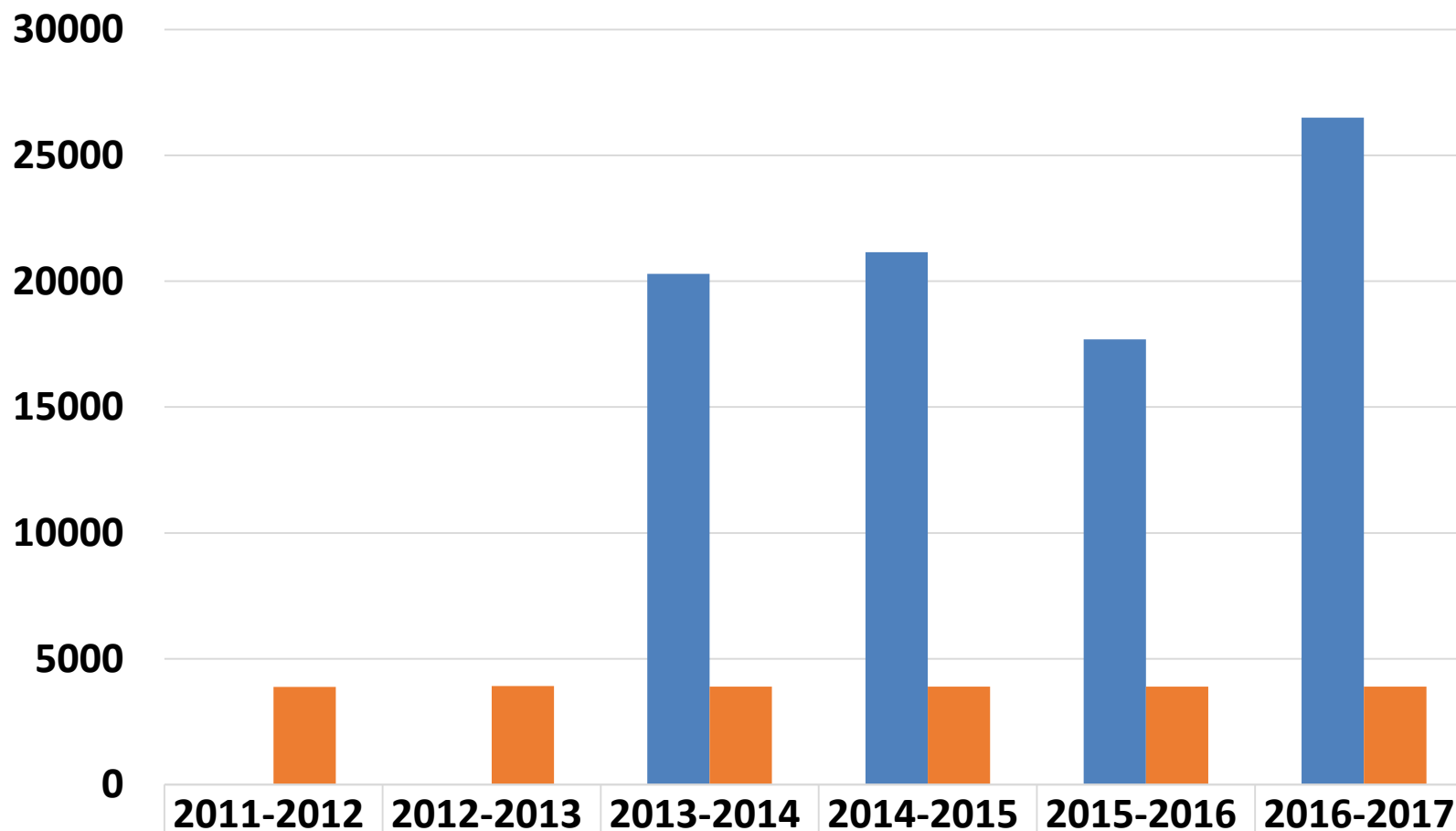
- Pass foreign language and professional subject exams.
- Obtain a Master`s degree in taught route or Master`s degree in professional route. In latter the applicants have to undergo courses on Pedagogy to be eligible to apply.
- 3 years of experience (will be required from 2018 in line with the State Education Development programme for 2016-2019, in addition from 2019 Doctoral students will have a right to choose the HEI).

# The average expenditure on training of 1 Doctoral student, 2011-2016 (in euro)



1 euro=365  
tenge

*\*only civil  
HEIs are  
considered*



■ Nazarbayev University  
■ Other HEIs

**Min**  
3 580 euro

**Max**  
4 153 euro

# The ratio of publicly funded and self-funded students, 2011-2016

**26%**

bachelor`s degree students

**41%**

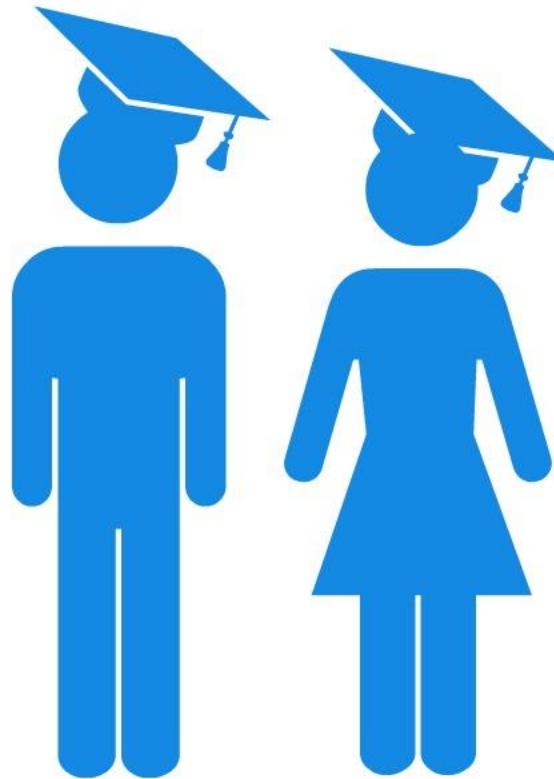
master`s degree students

**trained**

**at the expense of public funds**

**100%**

PhD students



**74 %**

bachelor`s degree students

**59 %**

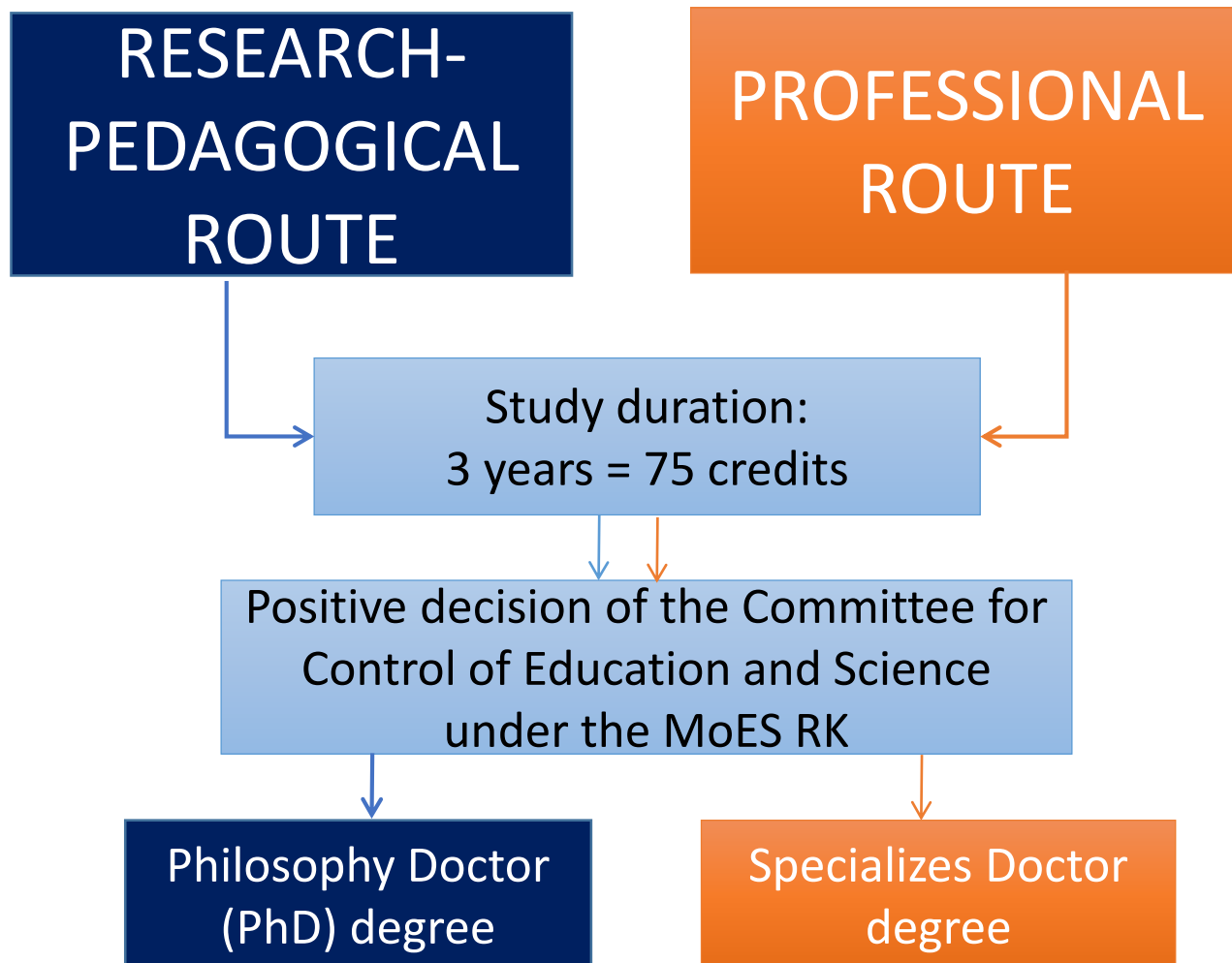
master`s degree students

**were**

**self-funded**

From 2016-2017 academic year the admission in self-funded PhD was started

# Cycle 3 programs:



**The Cycle 3 programs are delivered in line with:**

- the list of majors and qualifications that the HEIs eligible to deliver;
- state compulsory standard of postgraduate education;
- standard curriculum of specialties;
- standard and working training programs in the disciplines;
- academic calendar;
- individual working plan of the doctoral candidates.

# Supervision on doctoral theses

RESEARCH-  
PEDAGOGICAL  
ROUTE

PROFESSIONAL  
ROUTE

**2 consultants (national and foreign),** appointed by the decision of the Academic Council among the number of Candidate/Doctor of Science or PhD/Specializes Doctor and specialists in the field of scientific research of a doctoral student

## Exception

The thesis containing **state secrets** is carried out under the supervision of **2 national consultants** who have degree of Candidate/Doctor of Science or PhD/Specializes Doctor and who are specialists in the field of scientific research of a doctoral student, or have the military (special) rank not lower than colonel with experience of scientific and pedagogical work (not less than 5 years)

# Criteria for supervisor

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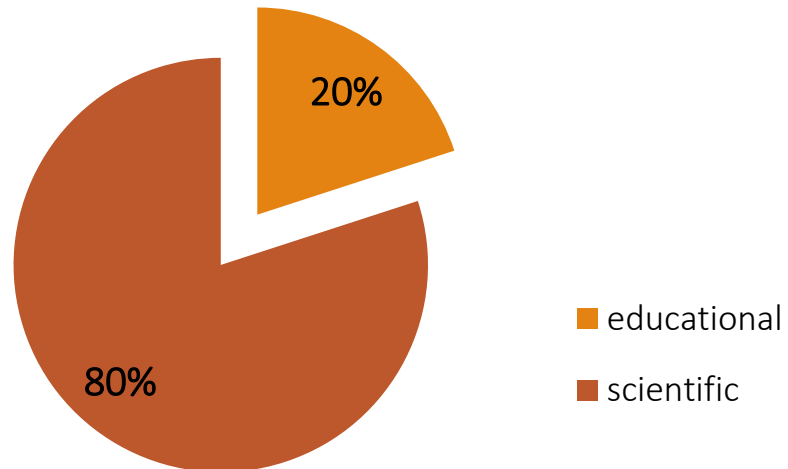
**The main criteria for choosing a research supervisor are the following:**

- a scientific degree of Candidate/Doctor of Science or PhD/Specializes Doctor;
- active work in this field of knowledge and experience in the scientific supervision of doctoral thesis;
- at least 10 publications on the doctorate direction in the rating international journals with a high impact factor.

# Nature of the Cycle 3 programs

Cycle 3 Programs are developed taking into account the **National and European qualifications frameworks** and are formed on a **modular structure**.

The structure of the Cycle 3 Programs contains  
2 components



The **educational component (20%)** of the doctoral program includes disciplines of 2 cycles:

- 1) basic disciplines (BD – 4% = 3 credits) and
- 2) major disciplines (MD – 16% = 12 credits).

Each cycle includes:

- 1) the disciplines of the compulsory component and
- 2) the elective component

The **scientific component (80%)** of the doctoral program is formed from the research (experimental) work of the doctoral candidate, scientific publications and the writing of a doctoral dissertation

# The content of a Cycle 3 Program

No	Name of disciplines and types of activity	KZ credits	ECTS credits
1	<b>Cycle of basic disciplines</b>	3	5
1)	Compulsory component	3	5
2)	Elective component	ATT	
2	<b>Cycle of major disciplines by profile</b>	12	18
1)	Compulsory component	-	
2)	Elective component	12	18
	Total theoretical training	15	23
3	<b>Additional types of training</b>	not less than 55	82
1)	Practice (educational, research or industry-based)	not less than 5	7
2)	Scientific-research (experimental-research) work	not less than 20	30
3)	Doctoral dissertation	30	45
4	<b>Final attestation</b>	5	7
1)	Complex examination	1	2
2)	Completion and defense of a doctoral dissertation	4	6
	<b>Total</b>	<b>Not less than 75</b>	<b>112</b>



# Criteria for a dissertation (thesis)

The thesis must meet one of the following requirements:

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- 1) to contain new scientifically grounded results, which solve an important scientific problem;
- 2) to contain new scientifically grounded results, the usage of which provides for solving an important applied problem;
- 3) to contain new scientifically grounded theoretical and (or) experimental results, a set of which is important for the development of specific scientific directions.

The main scientific results of the thesis are published before the defense at least **7 publications**:

- 3 publications in editions recommended by the Committee for Control in Education and Science of the MoES RK,
- 1 publication in an international edition with non-zero impact factor in Thomson Reuters Database or included in the Scopus Database, and
- 3 publications in proceedings of international conferences, including 1 publication in proceedings of a foreign conference.

## **Challenges:**

One of the deterrents to the greater publication activity is the insufficient English language proficiency.

# Defense of a doctoral dissertation

Defense of a doctoral dissertation includes the preparation of a dissertation, its design and procedure for defense.

Defense is conducted in accordance with the **approved schedule at an open meeting of the Dissertation Council** with the participation of at least 2/3 of its members, with mandatory participation in the meeting of at least 3 specialists in the specialty corresponding to the profile of the thesis to be defended.

The meeting of the Dissertation Council is held under the guidance of the Chairman of the Dissertation Council. In the Chairman absence or simultaneous absence of the Chairman and the Academic Secretary, the meeting of the Dissertation Council is not held.

Decision of the Dissertation Council is considered to be accepted as positively, if 2/3 or more members of the Dissertation Council voted positively for it. If less than 2/3 of the members of the Dissertation Council voted for a positive decision, a negative decision is made.

An appeal to a negative decision of the Dissertation Council is submitted by a doctoral candidate in informal addressed to the rector of the university within two months from the date of the Dissertation Council's decision.

## Challenges:

The decrease of the number of doctoral students graduation with defense: within the last 5 year period only 27.1% of the 2,285 graduates defended their thesis, the lowest figures are presented for 2016 - only 18.9%.

The reason is mainly connected with ineffective distribution of time for doctoral students' work on thesis, and with the insufficient involvement of foreign research supervisors.

# The procedure for doctoral thesis defense is performed in the following sequence:

- The introductory speech of the chairman on the quorum, the competence of holding the meeting, the presentation of the doctoral candidate, the specialty on which he studied and the specialty on which the thesis is defended and the thesis theme.
- Presentation of the academic secretary to announce the compliance of the doctoral candidate's documents with regulatory requirements, indicating the completeness and conformity of scientific publications;
- Report of the doctoral candidate (up to 20 minutes);
- Questions to the doctoral candidate, doctoral answers;
- Speech of scientific consultants;
- Speech of reviewers;
- Doctoral candidate reply to reviewer's comments and conclusion on their recommendations;
- Discussion of the Dissertation Council members;
- Concluding words of the doctoral candidate;
- Electing a counting commission in number of 3 Dissertation Council members, excluding the chairman;
- Conducting a ballot voting of the petition to confer a degree;
- Report of the counting commission chairman about results of a ballot voting; approval of counting commission minutes;
- Declaration of the public defense results;
- Conclusion of the Dissertation Council on the doctoral thesis defense.

# The composition of the Dissertation Council

Dissertation Councils are created by the Committee for Control in Education and Science of the MoES RK for 3 calendar years in higher education institutions, which provide doctoral programs on the basis of the state budget (state educational grants).

The Dissertation Council includes at least 3 specialists for each specialty with a scientific degree (Candidate/Doctor of Sciences, PhD/Specializes Doctor), who has at least 5 scientific publications in the relevant field of research.

Herewith at least 1/3 of the members of the Dissertation Council should be full-time employees, at least 1/3 of the members should be representatives of other HEIs, and at least 1/3 of the members should be representatives of scientific or other organizations.

The Dissertation Council consists of a Chairman, a Deputy Chairman, an Academic Secretary and members. The quantitative composition of the Dissertation Council is at least 5 persons.

The rector of the university, employees and members of the expert councils of the Committee for Control in Education and Science of the MoES RK **and supervisor are not included in the composition of the Dissertation Council.**

# QA

**External quality assurance of Cycle 3 programs is conducted by national (2 – IQAA, IAAR) and foreign (2 – ASIIN, FIBBA) accreditation bodies**, which are listed in the Register of Recognized Accreditation Bodies (Register 1) compiled by the MoES RK. A higher education institution is free to choose an accreditation agency and files an application independently. The cost of the accreditation procedure is taken by the university itself.

The accreditation procedure of Cycle 3 programs is conducted according to the standards and criteria of specialized (program) accreditation of higher and postgraduate education study programs. As a rule, **there are no separate accreditation standards for doctorate level.**

**The methodology of accreditation is consistent and follows a model generally applied in the European Higher Education Area and international practice in the field of quality assurance:**

**Self-assessment of a study program and writing a report**

**An external review (site visit) for fact-finding**

**An external review report**

**Decision-making by the independent Accreditation Council**

**Post-accreditation monitoring of accredited study programs**

**The process of program accreditation (the full cycle of all procedures) can take 1-1,5 years.**

**The composition of an expert panel includes national experts from academic field, international experts, student and employer experts.** Academic experts for assessment of PhD programs have degrees not less than a Doctor of Sciences, PhD or Professional PhD, extensive teaching experience in higher education institutions and design of PhD programs.

External review reports with the composition of an expert panel, as well as decisions on accreditation are published in an open access on the QA agency's website.

In case of a positive decision the program can be accredited for full term (5 years or 7 years (IAAR - in case of a successful re-accreditation of a study program) or conditional term (1 year, 3 years). In case of a negative decision a study program is considered as not accredited. The periodicity of accreditation is defined by the validity term of the previous accreditation.

# Main challenges and solutions

## At national policy level

- 1 A need to considerably increase quantity of state grants for PhD students
- 2 Development of separate standards for the accreditation of PhD programs
- 3 Development of a mechanism to stimulate graduates of doctoral studies for employment in research organizations and enterprises (social packages, bonuses)
- 4 Implementation of doctoral research findings in industry



## Methodology of data collection

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**A survey of university staff** responsible for definite activities (quality assurance, monitoring, evaluation)

**Studying of external and internal normative documents** (State obligatory standard of postgraduate education, Model rules, QMS Procedures, Regulations, Methodical instructions etc.)

**Interview** with the staff (31 people), PhD students (16 people, 7 degree programs) and employers (12 enterprises)

M. Auezov South Kazakhstan State University offers 14 Cycle 3 Programs (PhD)  
(scientific-pedagogical and profile direction)

6D070100 - Biotechnology (by industry)

6D072000 - Chemical Technology of Inorganic Substances

6D072100 - Chemical Technology of Organic Substances

6D072600 - Technology and Design of Light Industry Products

6D073300 - Technology and Design of Textile Materials

6D072400 - Technological Machines and Equipment (by industry)

6D073100 - Life Safety and Environmental Protection

6D073000 - Manufacture of Building Materials, Products and Structures

6D010900 – Mathematics

6D012000 - Vocational Training (by industry)

6D011100 - Computer Science

6D020500 - Philology

6D050600 - Economy

6D060100 - Mathematics



Training of doctoral students in M. Auezov South Kazakhstan State University has been conducted since 2009. At present, 25 PhD students have successfully completed their PhD programs, 21 of them have defended their PhD theses.

Nowadays total number of PhD students – 39, where

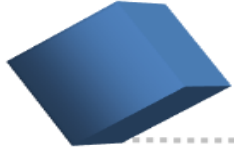
32 – state grants

7 – paid basis

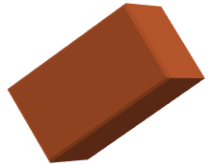


# Main challenges

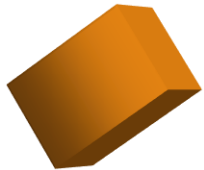
## For HEI



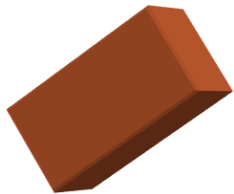
- there are no difficulties connected with enrollment of students; doctoral students, as a rule, have a corresponding basic education



- difficulties in the preparation of doctoral candidates: a small workload allocated for the teaching staff for the scientific management of doctoral students, which does not allow them to give sufficient time, insufficient time period for the scientific internship, insufficient level of professional English of doctoral students, high cost of publications in journals included in the database Scopus, Thomson Reuters, restrictions on the introduction of the results of dissertations in production



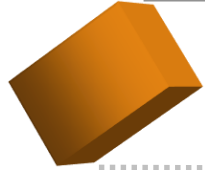
- the employment of graduates and their work is monitored by both the responsible department and the Center for Postgraduate Education of the University. The majority of doctoral students, after defending dissertations and approval in the Committee for Supervision in the Ministry of Education and Science of the Republic of Kazakhstan, stay working at the university as a research assistant or teacher



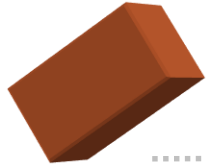
- at the end of each semester the doctoral students pass the certification, i.e. provide an extended report on the implementation of the theoretical training program and on the intermediate results of their research in the form of presentations and answers to questions. Attestation is carried out in 2 stages - first at the meeting of the department, and then at the Scientific and Technical Council

# Main challenges

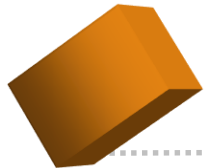
## For PhD students



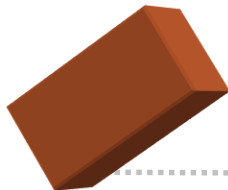
Admission to the doctoral program in most cases is aimed at acquiring new skills and competencies, and also with a degree that opens up wider career opportunities both in the professional sphere, in the university and in the public service.



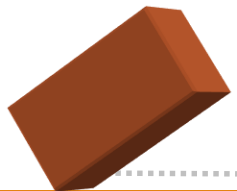
The majority of respondents noted the transparency of doctoral programs and understanding of their structure.



All doctoral students noted the high level of support provided by the university and faculty in acquiring a PhD program.



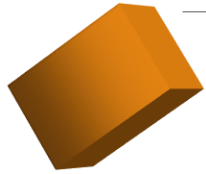
After the completion of the programs, the graduates' expectations are related to professional career growth and a higher level of wages.



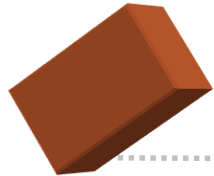
PhD students' wishes are associated with a decrease in the number of control points, equipping the laboratory base, increasing the duration of foreign internships.

# Main challenges

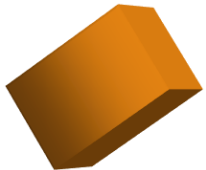
## For the socio-economic world (employers interview)



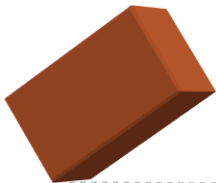
There is an imbalance in the employment of graduates of doctoral studies: most PhD doctors work at universities, and are engaged in a greater degree of educational activity. The proportion of PhD doctors working in industry is insignificant, although some businesses note the need for PhD doctors as researchers of technological development of production.



Enterprises note that doctoral programs meet their requirements, since most large enterprises participate in the development of programs and the formulation of competences. In addition, in a number of cases doctoral students conduct experiments at enterprises during research practice, which makes it possible to assess the level of knowledge obtained.



Usually enterprises participate in the implementation of educational programs, only by providing bases for practice and experimentation. Representatives of enterprises do not have the opportunity to teach, since there is a restriction that involves only teachers with a degree in teaching.



The enterprises note the following positive aspects of the programs: themes of doctoral dissertations are always relevant and always these works end with experienced tests proposed new technology or technological regimes. In a number of cases, theses have rationalization solutions that are used by enterprises.

# Good practice

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International part of Cycle 3 programs: foreign consultant and compulsory foreign internship. The state provides funding for the invitation of a scientific consultant to work with a doctoral student at the place of study, and also covers the costs of a foreign doctoral internship. Thus, doctoral students have the opportunity to undergo training in leading universities and scientific centers in the US, Japan, Germany, France, China, Malaysia and other countries.

One of the most important elements in the training of doctoral students is the academic mobility of doctoral students, which is funded by the state. During one academic period, doctoral students have the opportunity to conduct research in partner universities.

For example, in 2017-2018, M.Auezov South Kazakhstan State University plans academic mobility of doctoral students on the specialty "Mathematics" and "Computer science" with the University of Putra (Malaysia), in 2018-2019, the specialty "Technology of Processing Industries" with the University of Padova (Italy).

Special attention is paid to organizing the practice of doctoral students. In the educational programs of doctoral studies, the following types of practices are provided: pedagogical, scientific research, and also foreign internship. Results of all types of practices, results of internships are also discussed at the meeting of the department, the report is protected before commission.

In most technical universities of Kazakhstan, doctoral students are executors of scientific projects funded by the Ministry of Education and Science of the Republic of Kazakhstan (grant projects). Thus, practical implementation of research results is provided.

# Expectations for the training

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Getting experience of European partners in Cycle 3 Quality Assurance System

**Acquiring the following knowledge and skills:**

Formulation learning outcomes and competencies for a Cycle 3 student

Design of a Cycle3 program

Applying of an education and research based approach

Internationalization of a Cycle3 program

Functioning of Quality Assurance System for Cycle 3 programs

# KAZGUU University



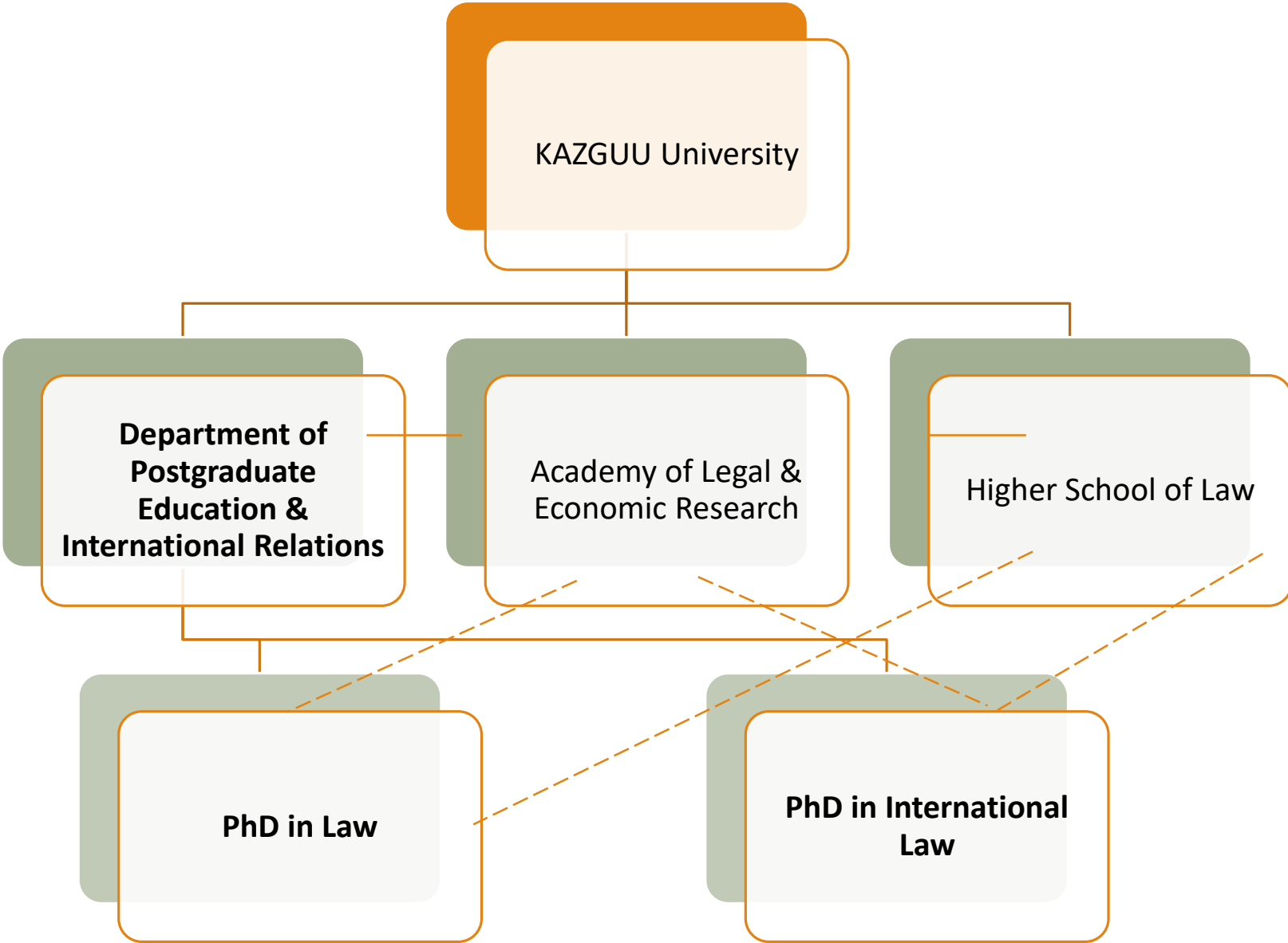
## Methodology

Qualitative data was collected due to:

- ▶ Documentary analysis
  - ▶ Interviews
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Co-funded by the  
Erasmus+ Programme  
of the European Union







## Statistics

Year	Number of PhD students	Number of PhD graduates
2012	5	3
2013	1	19
2014	3	6
2015	3	5
2016	16	3

since 2009  
PhD in Law

since 2010  
PhD in International  
Law

# Documents regulating PhD programmes

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- ▶ KAZGUU Academic Policy
- ▶ Policy of Academic Integrity
- ▶ Academic Calendar for PhD Students
- ▶ KAZGUU Examination Regulations
- ▶ Doctoral Thesis Guidelines
- ▶ Regulations on Quality Assurance Committee

# Academic Quality Assurance Mechanism

- 1) University Academic Quality Committee
- 2) School Academic Quality Committee

	1	2	3	4
IQA	Faculty evaluation by PhD students	PhD programme evaluation	PhD students' progress	GPA monitoring
	On-line survey	Course Management Form	Reports & presentations on individual research by PhD students, twice a year	Managers of the Department of Postgraduate Education
EQA	Involvement of employers	PhD programme evaluation by graduates	National & International Accreditation Agencies	
	Survey	Survey	FIBAA	

# Challenges

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- ▶ Poor database design on PhD student statistics and progression;
- ▶ Low quality research skills of newly enrolled PhD students (some PhD students expressed their interest to learn more about quantitative research methodology);
- ▶ Insufficient involvement of PhD supervisors \ co-advisors into PhD projects;
- ▶ Unclear regulations on PhD student research progression;
- ▶ Difficulties in publishing articles by PhD students in impact-factor journals in English.

# Good practice

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PhD students are involved into university research projects;

PhD students work as junior research assistants in research institutions\centers of the university;

Regular workshops developing professional skills of PhD students (writing a research paper, project management, etc.).

# Suggestions

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To elaborate a new database on PhD student progression including various criteria: attrition rate, number of publications, conference presentations, project participation, etc.

To design entrance requirements identifying PhD students' research potential

To introduce a mechanism monitoring PhD supervisors' co-advisors involvement and competence

To involve one internal expert to do independent evaluation of a research proposal to increase quality of PhD projects

To introduce PhD research project milestones (e.g. presentation and approval of a research proposal)

To increase number of English courses and courses on research methodology.





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**Thank you for  
your attention!**