

# **Language Testing at Entrance Examinations for Master's Degree and PhD in the Republic of Kazakhstan**

T.Intymakov, Deputy Director of National Testing Center of Ministry of Education and Science of the Republic of Kazakhstan,  
[t.intymakov@ncgsot.kz](mailto:t.intymakov@ncgsot.kz), [tintymakov@mail.ru](mailto:tintymakov@mail.ru)

M.Aliakparova, Head of the scientific-methodological laboratory  
A.Askerova, Senior expert of the scientific-methodological laboratory

## **Abstract**

Higher education predetermines the socio-economic role of a government at the global arena. The education system of Kazakhstan has undergone many changes in order to improve its quality and create conditions to ensure its adaptation to integration requirements into the Bologna process, as well as changes in the world economy, culture, and social society on the whole.

The article represents the entrance exam technology for the master's degree and doctorate in the form of testing. Entrance exam on foreign language is an important criterion for selection of candidates. It reveals the importance of foreign language skills at a country scale and the need to modernize the principles of creating tests, taking into account the international language certification.

A comparative analysis was made based on test results of 2012 and 2013, using of statistical processing by the Rasch model for dichotomous ratings "a correct answer - a wrong answer". This analysis allows determining the quality of functioning distracters, as well as compliance with the difficulty level of the test to the readiness level of applicants. Statistical analysis shows the advantages and disadvantages of testing tasks and as a consequence the practicability of modification of their structure and specifications.

## **Keywords**

Language certification, the entrance exam to master's degree and doctorate, analysis of the quality of tests.

The education system of Kazakhstan has undergone many changes in order to improve its quality as well as access to the worldwide educational arena. One of the most important changes was the transition to a three-level system (secondary- higher - postgraduate), carried out as one of the parameters of the Bologna process. Postgraduate education in Kazakhstan is becoming increasingly necessary, as a result of socioeconomic and general cultural progress of society.

A key component of the lexical capital of Kazakh people is the knowledge of foreign languages as means of business international communication. Master's educational program includes training abroad, participation in international conferences, which determines the need of foreign language skills at a certain level.

Thus, the priority way of selection of candidates for admission to master's degree program became the foreign language skills. The entrance examination on foreign language is carried out centrally in the form of testing since 2004 by the National Testing Center (NTC).

The purpose of testing is to evaluate the level of language proficiency, determine the level of communicative skills of listening and reading comprehension as well as speaking skills.

Level of foreign language knowledge among applicants increases each year in order to meet the modern needs of admission to master's degree program. The system is developed, updated and improved, taking into account the particularities of educational system of the country and the international system as a whole.

The first step towards the integration of Kazakhstan with international language certification was the approbation which was held in November, 2012 in accordance with procedure adopted in the world educational system.

Master's students from national universities with different levels of English who had been involved at the entrance examination in accordance with the NTC procedure in 2012 took part in the testing (Table 1).

Table 1

**Comparative Table of Testing Results**

<b>Traditional Mark</b>	<b>Credit System Marks</b>	<b>Number of Applicants</b>	<b>Without Skills, A1 &lt;337</b>	<b>A2 337-459</b>	<b>B1 460-542</b>	<b>B2 543-627</b>	<b>C1 &gt;627</b>
"2"	F (<0-49)	<b>0</b>	0	0	0	0	0
"3"	D (50-54)	<b>0</b>	0	0	0	0	0
	D+ (55-59)	<b>4</b>	0	4	0	0	0
	C- (60-64)	<b>2</b>	0	2	0	0	0
	C (65-69)	<b>3</b>	0	3	0	0	0
	C+ (70-74)	<b>11</b>	1	9	1	0	0
"4"	B- (75-79)	<b>11</b>	0	9	2	0	0
	B (80-84)	<b>21</b>	1	13	7	0	0
	B+ (85-89)	<b>13</b>	2	4	4	3	0

"5"	A- (90-94)	<b>19</b>	0	7	11	1	0
	A (95-100)	<b>4</b>	0	0	2	2	0
<b>Total</b>		<b>88</b>	<b>4</b>	<b>51</b>	<b>27</b>	<b>6</b>	<b>0</b>

Comparative analysis of the testing showed that the language testing of NTC procedure allows determining applicants who know the language by minimum requirements of foreign language skills, as 84 (95.4 %) of applicants confirmed their entrance examination results.

However, NTC tests don't differentiate applicants by the level of language proficiency, results of master's students in NTC tests show overestimation, possibly due to differences of test structures.

The analysis showed the need in changing of test structure and specifications taking into account the requirements of international standards in accordance with level ranking of languages.

Therefore, for improving the efficiency of evaluation level of applicants and ensuring equivalence in difficulty of test variants, the NTC changed the structure of the test and its completion time (Table 2).

Table 2

### Test Format on Foreign Language in 2013

Section	Testing tasks	Number of texts	Number of taskstotexts	Time of the fulfillment of testing
Listening	30	4	7-8	50 minutes
Lexical-grammatical	40			45 minutes
Reading	30	3	10	60 minutes
<b>Total</b>	<b>100</b>			<b>155 minutes</b>

Also the requirements for testing tasks formation are changed, with statement of more specific assignment facing developers and inclusion of tasks on comprehension (understanding) of the text with examples of usage of grammatical structures (in accordance with international language standards).

The experimental innovation became a linking of test results estimation for international language standards (CEFR): A1 - elementary, A2 –pre-intermediate, B1 - intermediate, B2 - upper-intermediate, C - advanced.

The technology to hold entrance examination is to hold the centralized testing of applicants throughout Kazakhstan having the NTC as a controlling center.

So in 2013 entrance language examination was held in 5 classes due to the large number of applicants. Number of applicants who didn't get the threshold score was 25.42%.

Entrance examination holding technology allows conducting statistical analysis according to classification of applicants on training forms, the status of educational organization, as well as the language examination.

For example statistics of entrance examination of 2013, show that over 95% of test participants are taken an examination on English language, about 3% of applicants on German language and less than 0.5% of applicants on other languages (Table3).

Table 3

**Distribution of Applicants According to Their Entrance Examination Results to Master's Degree, Residency, Postgraduate Military and PhD Programs in 2013 in the Context of Language Exams**

№	Language	Number of applicants			Scores							
		Applied	Participated	%	0 – 49 «2»		50 -74 «3»		75-89 «4»		90-100 «5»	
					per.	%	per.	%	per.	%	per.	%
1	Kazakh	116	115	0,4	0	0,0	13	11,3	57	49,6	45	39,1
2	Russian	84	71	0,2	3	4,2	10	14,1	25	35,2	33	46,5
3	English	31 618	29 541	95,6	7 582	25,7	13 531	45,8	6 787	23,0	1 641	5,6
4	German	1 140	1 073	3,5	247	23,0	378	35,2	332	30,9	116	10,8
5	French	110	97	0,3	21	21,6	39	40,2	34	35,1	3	3,1
<b>Total</b>		<b>33068</b>	<b>30897</b>		<b>7 853</b>	<b>25,4</b>	<b>13 971</b>	<b>45,2</b>	<b>7 235</b>	<b>23,4</b>	<b>1 838</b>	<b>5,9</b>
					<b>21 824</b>		<b>70,6%</b>					

In accordance with the Rules, Kazakh and Russian language exams are taken by non-residents of Kazakhstan.

For improving testing tasks and bringing them in linewith international language certification the test results are processed and analyzed.

For example, statistical data of the test results in 2013 compared to 2012 is used to determine the influence level of changes in test structure and specifications (Figure 1).

**The Distribution of Applicants  
According to Scale of Credit Evaluation System for Years 2012 and 2013**

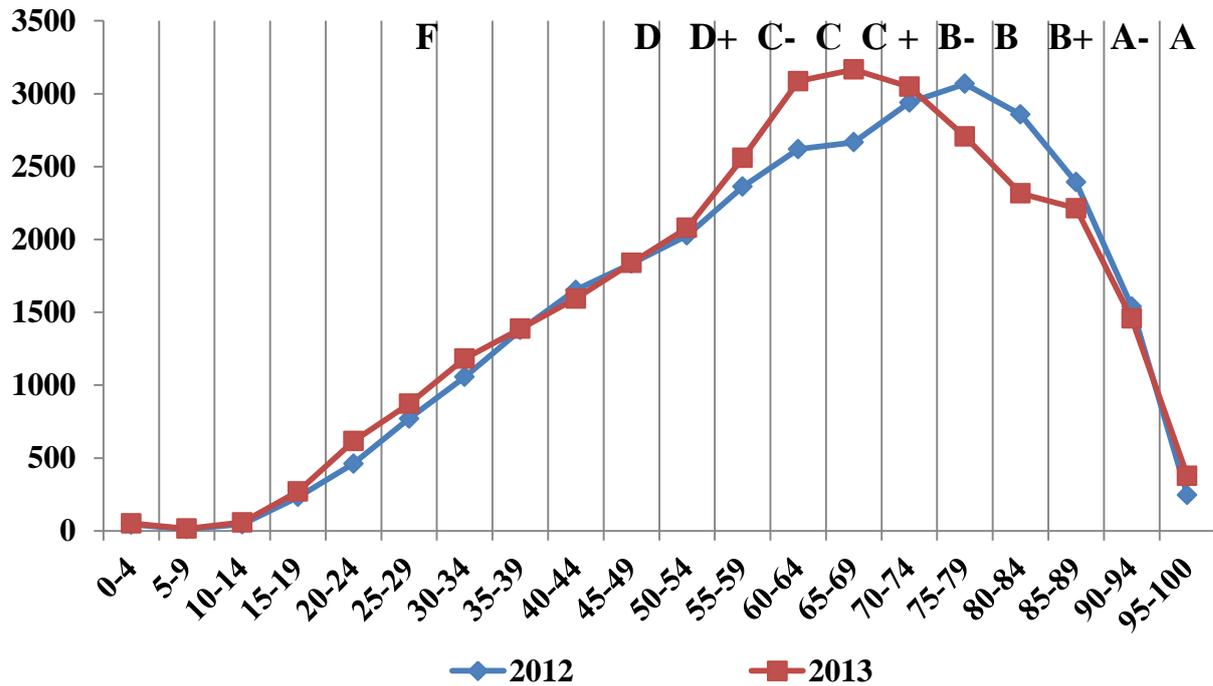


Figure 1

According to the comparative data in figure 1 one can say that the amendments have been smooth. Percentages of applicants failing to pass (50 points) in the previous and current year are relatively equal, while the number of applicants who have got in the limit of 75-89 points has decreased, which indicates more reliable evaluation of the knowledge level of applicants.

Figure 2 shows the distribution data of the number of applicants according to the score in corresponding category in CEFR system in parallel with the credit evaluation system for 2013.

### The Distribution of Applicants According to Language Skills Based on the Data in 2013

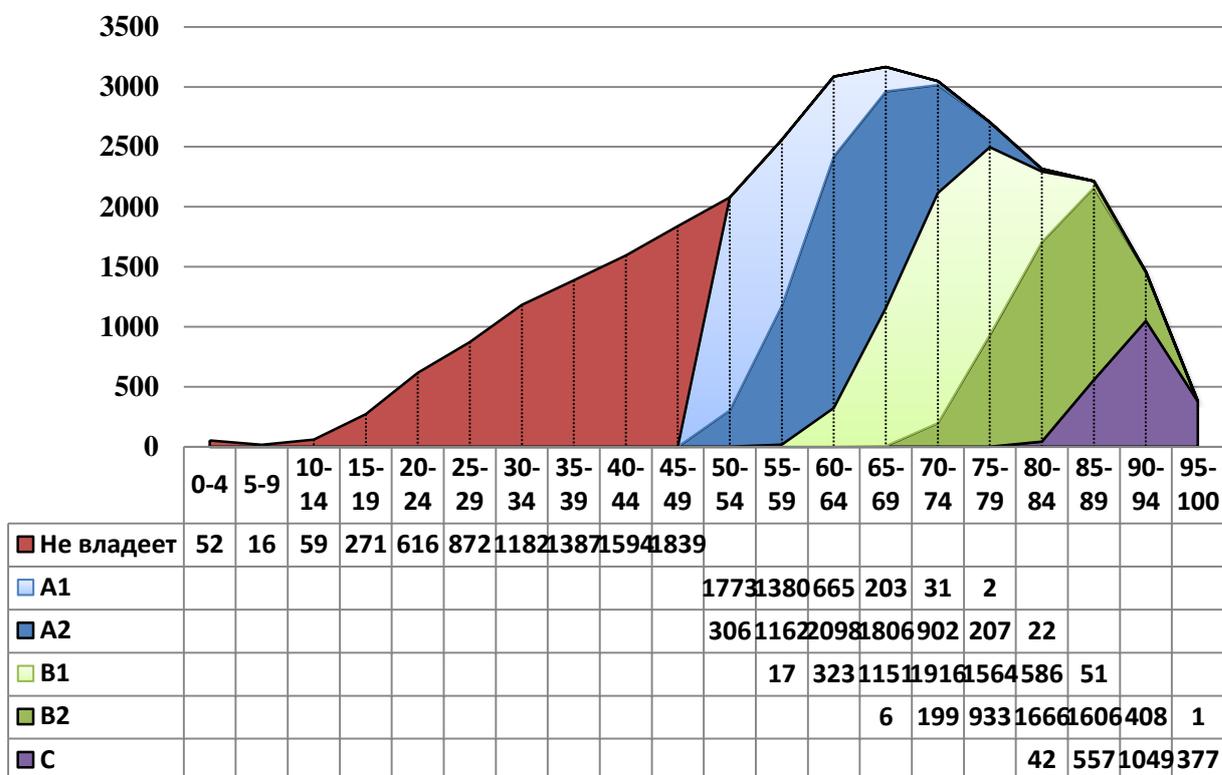


Figure 2

Referring to the diagram the applicants who gained the lowest threshold score were assigned A1-A2 levels, and applicants who gained the highest number of scores were assigned C level. Consequently, this distribution is another indicator of the objectivity of results.

Test quality is considered in measurement model of the readiness of applicants and items difficulty level which is necessary, first of all to assess the suitability of the test as a measuring tool.

The software RUMM 2020 (Rasch Unidimensional Measurement Models) is selected as the analyzing tool.

The purpose of the analysis is to determine the necessity:

- in correcting the selection of tests;
- in correcting the selection of distractors.

The main characteristics of variants are given as an example, used in one of the universities of the country in 2013 (Table 4).

Table 4

Characteristics	Indicators
The separability index	0,95
Cronbach's alpha	0,951
Chi-square of all tasks	229,75
Freedom degrees	200

Chi-square probability	0,07316
The range variation of test preparedness	-1,758.. +3,356
The range of variation of the tasks difficulty level	-3,982.. +2,434
Intermediate level of applicants level	0,611

According to table 4, the diagram of compliance is given between the preparedness level of students and the difficulty of test items. The compliance degree of testing data of the Rush model is determined on basis of Chi-square statistics (Figure 3).

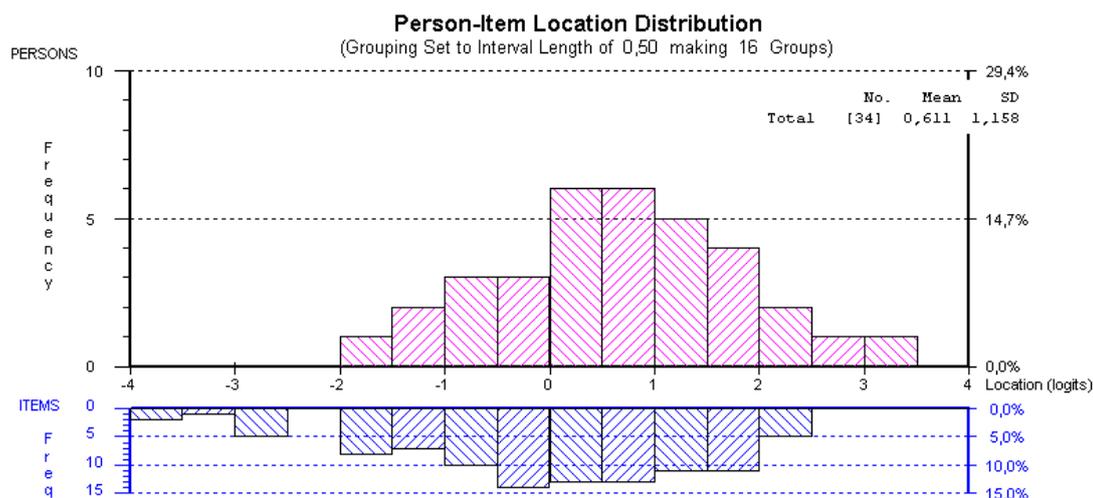


Figure 3

Conducted analysis reveals:

- test reliability;
- compatibility of test items selection;
- variation of item ratings difficulty;
- equability of distribution of test items according to difficulty;
- compliance of the difficulty of the set of test items with the preparedness level of students taking the tests.

Thus, results can be judged according to the statistical analysis conducted after the language testing, which showed that systematization on difficulty levels of test items had a positive impact on increasing the reliability and objectivity of assessing the knowledge level of applicants.

The statistical analysis showed the objective data by applicants distribution according to language proficiency level (A1, A2, B1, B2), which confirms the appropriateness and quality of the transition to the international language standards.

The republican workshop-session on the international language certification in conditions of Kazakhstan was held in November 2013, with participation of educational-methodical board representatives from all of the higher educational institutions of the country and experts in the field of world language testing. At the NTC session it was offered to continue work on transition to the international language certification by means of bringing in changes into structure and test specifications.

Conformity to plan of innovations introduction into the language testing stipulates the necessity of conducting training seminars for test developers and experts, attracting foreign specialists directly involved in language tests internationally.

### **References:**

1. President's State of the Nation of the Republic of Kazakhstan Nazarbayev N.A., to the people of Kazakhstan from January 28, 2011 // zakon.kz
2. Hasanuly B. Languages of the Nations of Kazakhstan: from silence to strategy development (sociopsycholinguistic aspects). - Almaty: Arda , 2007 .
3. Model rules of admission to educational organization, implementing professional curricula of postgraduate education, approved by the Decree of the Government of the Republic of Kazakhstan, January 19, 2012 № 109
4. Analysis of the quality of tests's with choice of one correct answer. Guidelines. A.A.Maslak, SA Pozdnyakov. Slavyansk-Kuban, 2009