

**Report**  
**based on the results of a survey of a doctoral students**  
**for 2021-2022 ac. year**  
in educational program **8D07103 (6D071800)**  
**“Power engineering”**

In 2021-2022 ac. year, the Center of Quality Management and Accreditation conducted a survey on “**Satisfaction of doctoral students with educational services**” as part of the planned complex of surveys of all the consumer groups.

**The purpose of the study** was identifying the problems that arise in the process of education and scientific work of doctoral students at Karaganda Technical University NPJSC.

**The object of the study** was the 1-3-year doctoral students of Karaganda Technical University NPJSC.

81 % of respondents from the total number of doctoral students took part in the survey.

**The subject of the study** was doctoral students' ideas regarding organization of the educational process, the degree of satisfaction with its various characteristics.

The results of the survey were processed and presented in the generalized form with a guarantee of confidentiality of the personal opinion of doctoral students.

Doctoral students can get acquainted with the results of the survey on the website of the department.

To assess the doctoral students' satisfaction with the quality of educational services, a 5-point scale was used, where **5** is excellent; **4** is very good; **3** is good; **2** is satisfactory; **1** is unsatisfactory, bad.

The form of the questionnaire consisted of evaluation criteria that determine the indicators of the doctoral students' satisfaction (Table 1).

**Table 1**

Criteria and indicators of the doctoral students' satisfaction

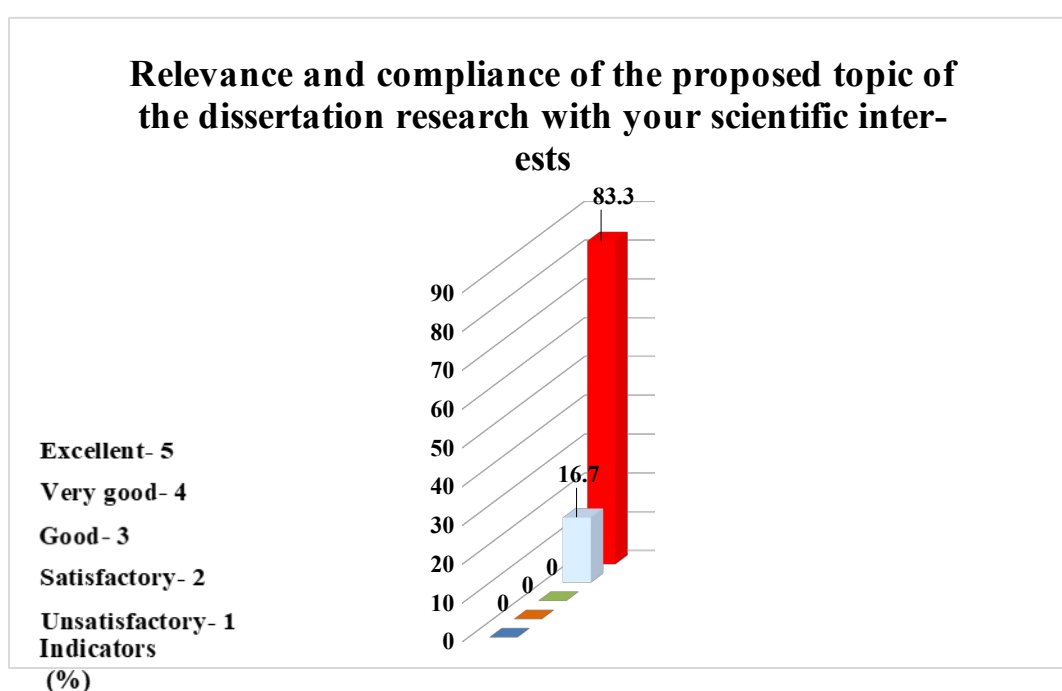
| No | Criteria of assessment   | Criterion grade |   |   |   |   |
|----|--|-----------------|---|---|---|---|
|    |  | 1               | 2 | 3 | 4 | 5 |
| 1  | Relevance and compliance of the proposed topic of the dissertation research with one's scientific interests      |                 |   |   |   |   |
| 2  | The level of organizational, methodological and information support for preparation of the dissertation research |                 |   |   |   |   |
| 3  | Professionalism and competence of the supervisor   |                 |   |   |   |   |
| 4  | Opportunities for approbation and publication of the results of the dissertation research                        |                 |   |   |   |   |
| 5  | Access to participation in departmental research projects, including funded ones                                 |                 |   |   |   |   |
| 6  | The prompt response of the University to the requests  |                 |   |   |   |   |
| 7  | Availability, completeness and reliability of information of scientific events held at the University and beyond |                 |   |   |   |   |
| 8  | The general level of organization and conducting of foreign internships  |                 |   |   |   |   |
| 9  | The effectiveness of a foreign internship  |                 |   |   |   |   |

Based on the results of the survey, the following data were obtained:

## 1. Relevance and compliance of the proposed topic of the dissertation research with one’s scientific interests

| Criteria                | Indicators (%) |
|-------------------------|----------------|
| Unsatisfactory, bad – 1 | -              |
| Satisfactory – 2        | -              |
| Good – 3                | -              |
| Very good – 4           | 16,7           |
| Excellent – 5           | 83,3           |

Table 1



The relevance of the research topic is one of the main requirements of the Higher Certification Commission for a dissertation research. The relevance of the dissertation topic is determined by the need for its scientific and practical study, and should correspond to the scientific interests of doctoral students. **83.3 %** of respondents rated this criterion as “**excellent**”, **16.7 %** as “**very good**”.

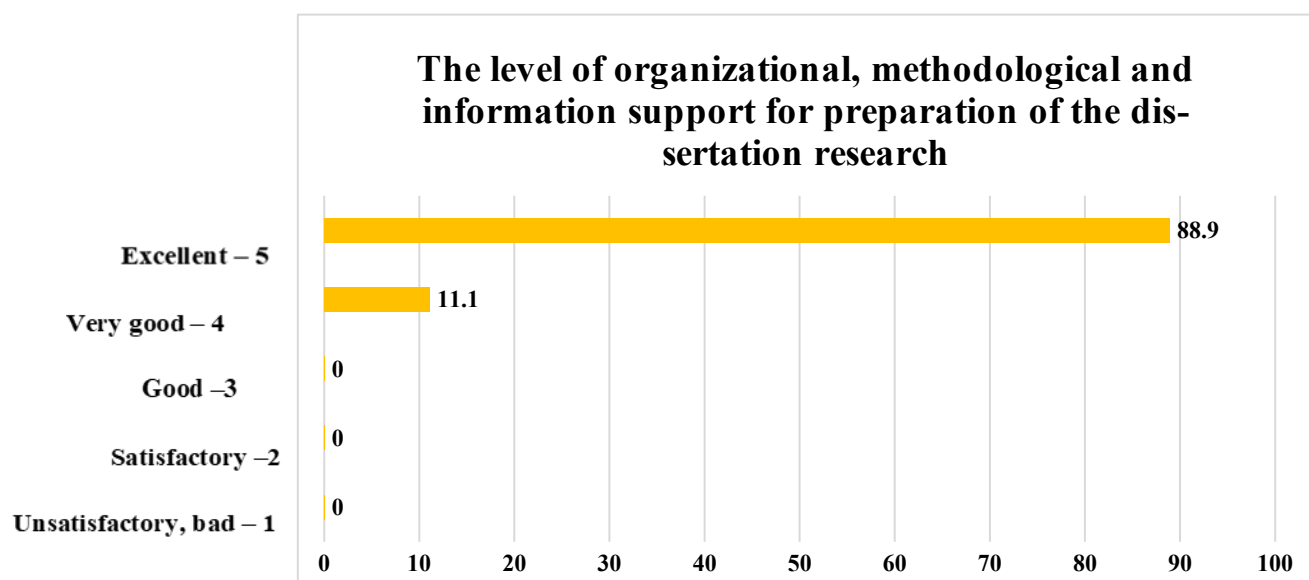
The above high percentage indicates that doctoral students clearly define the topics of their dissertation research in order to achieve their goals in solving certain problems.

## 2. The level of organizational, methodological and information support for preparation of the dissertation research

Table 2

| Criteria                | Indicators (%) |
|-------------------------|----------------|
| Unsatisfactory, bad – 1 | -              |

|                  |      |
|------------------|------|
| Satisfactory – 2 | -    |
| Good – 3         | -    |
| Very good – 4    | 11,1 |
| Excellent – 5    | 88,9 |



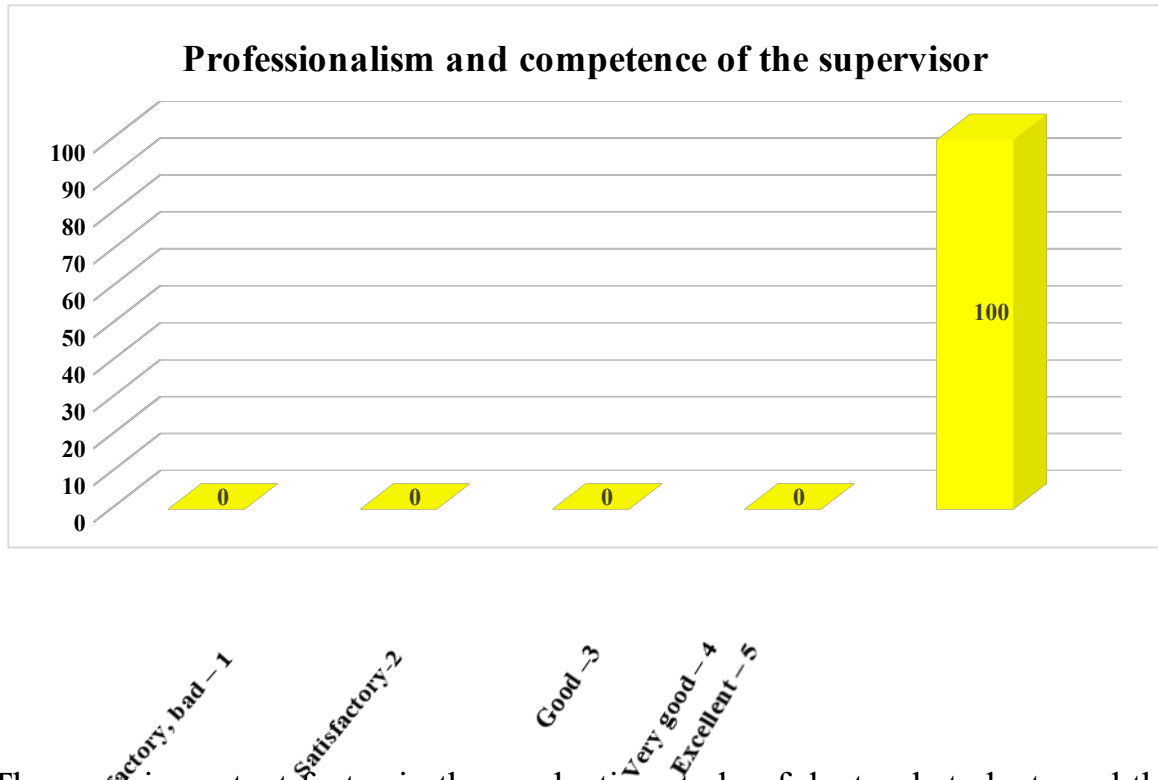
Organizational, methodological and informational support of the educational process should guarantee the possibility of high-quality completing of the doctoral educational program by doctoral students. Implementation of the educational program should be provided with free access to international information networks, electronic databases, library collections, computer technologies, educational and methodological and scientific literature. Information and educational-and-methodological support is carried out with the consistent strengthening of the emphasis on the independent work of doctoral students. The study showed that **88,9%** of respondents were completely satisfied, **11,1%** of respondents rated it as “**very good**”. The above indicators of doctoral students indicate that the information resources provided by the university in the areas of doctoral training are generally sufficient and accessible.

### 3. Professionalism and competence of the supervisor

Table 3

| Criteria                | Indicators (%) |
|-------------------------|----------------|
| Unsatisfactory, bad – 1 | -              |
| Satisfactory – 2        | -              |
| Good – 3                | -              |

|               |     |
|---------------|-----|
| Very good – 4 | -   |
| Excellent – 5 | 100 |



The most important factor in the productive study of doctoral students and the easy passage of all the stages of defense is selecting a supervisor. A lot depends on experience in managing other doctoral students, as well as high on professionalism and competence in the scientific community. Therefore, the question of selecting is the most relevant for future doctoral students.

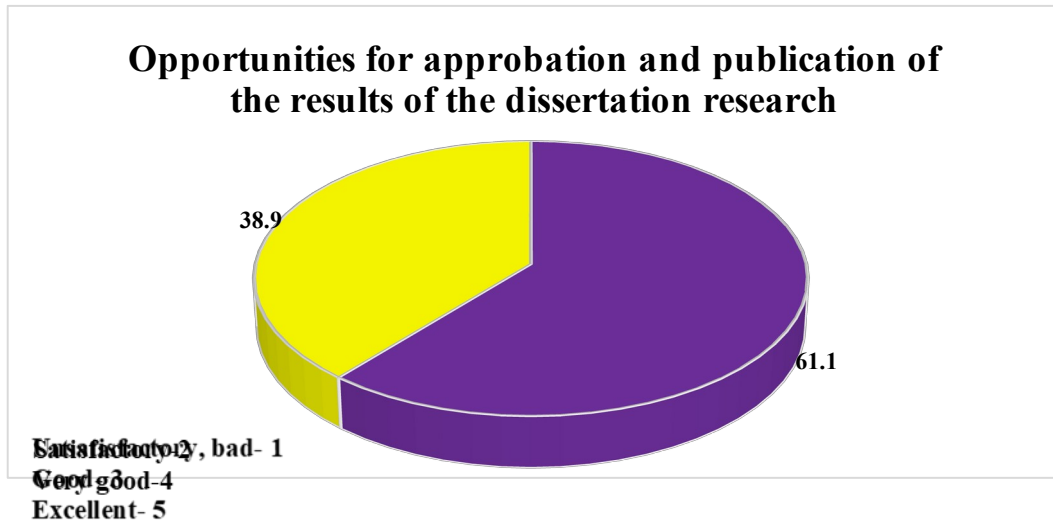
The study carried out, made it possible to reveal the level of professionalism and competence of scientific supervisors. Based on the results of the survey, it can be seen that doctoral students rated professionalism and competence of the supervisor as follows – **100%**. This indicator shows that supervisors of doctoral students at the University have such competencies as: rich experience in scientific work, its organization, deep scientific knowledge, degrees; they also know how to coordinate preparation of a doctoral candidate to obtain the necessary knowledge and skills, to advise a doctoral student on theoretical, methodological, stylistic and other issues of writing a dissertation, to form a doctoral candidate's work schedule and to monitor its implementation, etc.

#### 4. Opportunities for approbation and publication of the results of the dissertation research

Table 4

| Criteria                | Indicators (%) |
|-------------------------|----------------|
| Unsatisfactory, bad – 1 | -              |
| Satisfactory – 2        | -              |

|               |      |
|---------------|------|
| Good – 3      | -    |
| Very good – 4 | 61,1 |
| Excellent – 5 | 38,9 |



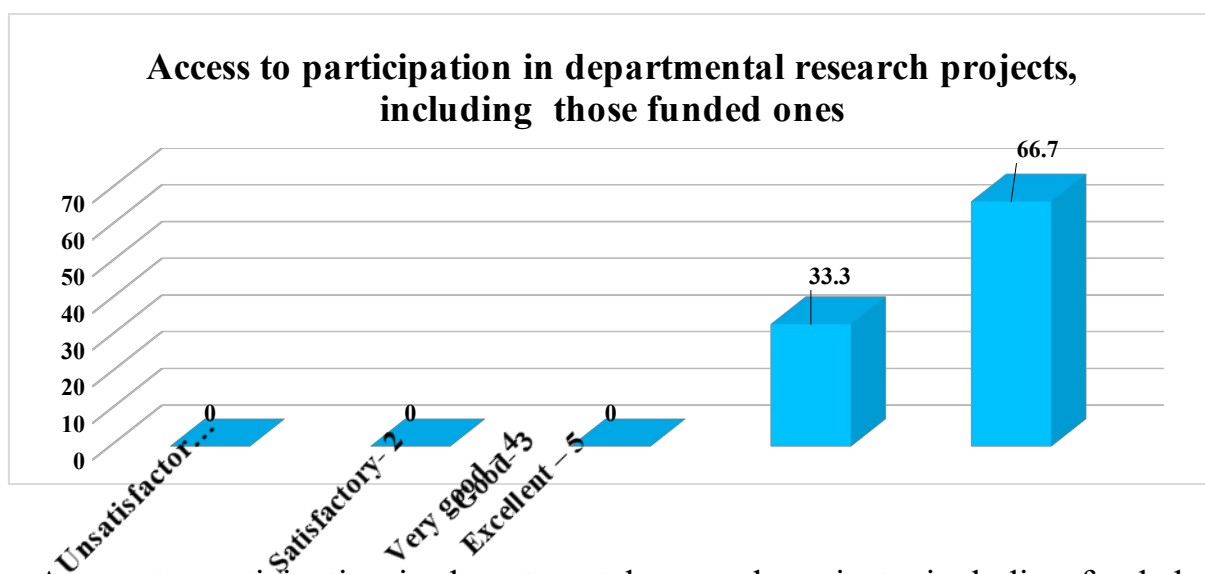
An important section of introduction to the dissertation is the so-called approbation of the research results. Approbation stimulates the doctoral student to rethink his scientific research, to improve it in depth, and helps the author to confirm or to understand the need to revise scientific provisions. **38,9%** doctoral students assessed “*Opportunities for approbation and publication of the results of dissertation research*” at the “**excellent**” level, and **61,1%** of the respondents at the “**very good**” level.

It is obvious that approbation of the work in order to timely obtain objective assessments of the stages of the ongoing research, conclusions and practical recommendations should be started from the very beginning of work at the dissertation research, immediately after the approval of the dissertation topic. It is safe to say that successful testing is the key to the success of the study itself. Unfortunately, quite often doctoral students put approbation and implementation of the results of their research at the same level although these concepts cannot be called synonyms. In the texts of abstracts and dissertations, they often write, for example, like this: “Approbation and implementation of the research results were carried out through publications, the participation of the author in the work of conferences, practical work as a teacher at schools...”. Through publications there can be performed dissemination of the results, through participation in the work of conferences, there is possible a discussion of the results and dissemination. And only through the actual practical work is it possible to test the results, but this point still needs to be substantiated. The most common ways to bring the dissertation material to the scientific community is participation of a doctoral student in scientific conferences, symposiums, speeches at department meetings, participation in various types of events of the scientific community, preparation and submission of proposals on research topics to various bodies.

## **5. Access to participation in departmental research projects, including those funded ones**

Table 5

| Criteria                | Indicators (%) |
|-------------------------|----------------|
| Unsatisfactory, bad – 1 | -              |
| Satisfactory – 2        | -              |
| Good – 3                | -              |
| Very good – 4           | 33,3           |
| Excellent – 5           | 66,7           |

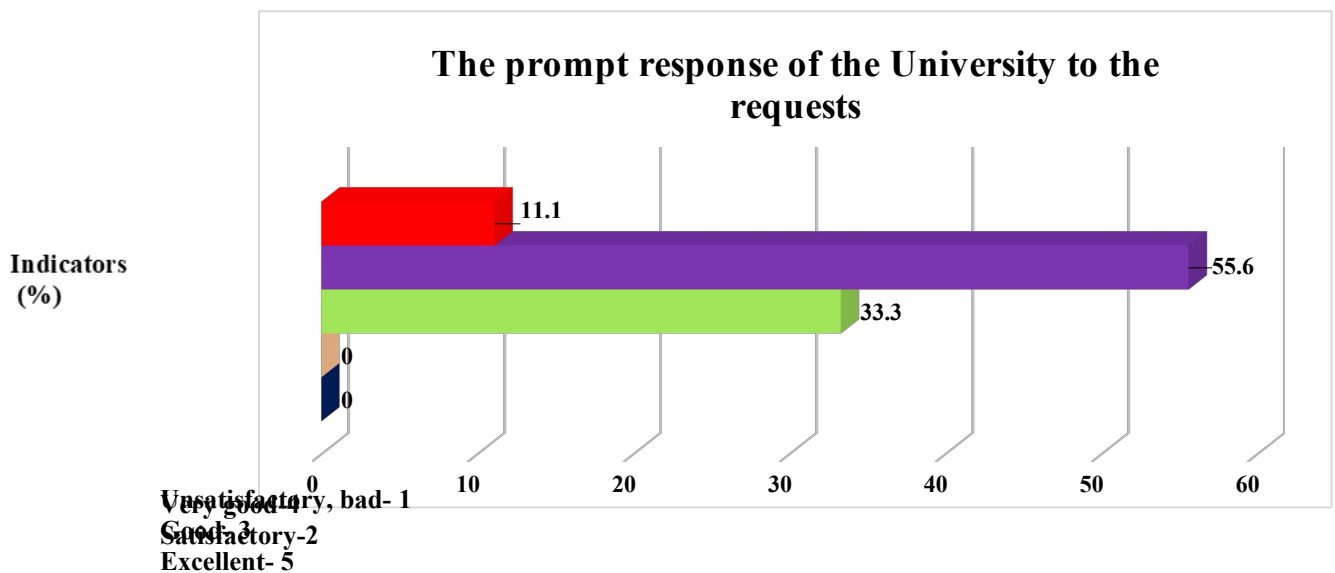


«Access to participation in departmental research projects, including funded ones»  
**66,7%** of doctoral students assessed as “**excellent**”, **33,3%** of respondents assessed it as “**very good**”.

## 6. The prompt response of the University to the requests

Table 6

| Criteria                | Indicators (%) |
|-------------------------|----------------|
| Unsatisfactory, bad – 1 | -              |
| Satisfactory – 2        | -              |
| Good – 3                | 33,3           |
| Very good – 4           | 55,6           |
| Excellent – 5           | 11,1           |

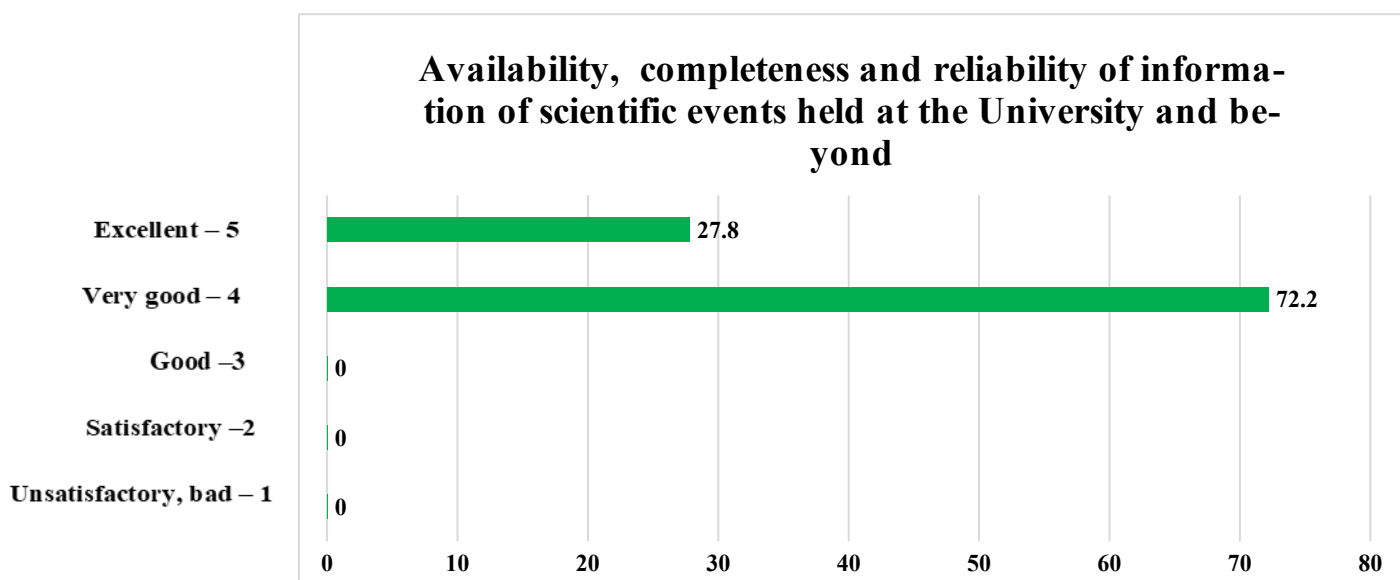


Most respondents received answers to their requests from the University “**excellent**” - **11,1%**, “**very good**” - **55,6%**. However, there is a small part of respondents (**33.3%**) who rated it “**good**”. It can be said that the University responsiveness to the requests of doctoral students is at the highest level. Actually, the requests of students, including doctoral students, are an indicator of the ways of further development of education, socio-economic and socio-cultural spheres of society. Studying requests in the learning process at the University makes it possible to analyze the subjective factors that determine the activity of the student's personality, describe the nature of the educational activity, track the formation of mechanisms that regulate the processes of functioning and developing the student's personality, both in the field of education and beyond.

### **7. Availability, completeness and reliability of information of scientific events held at the University and beyond**

Table 7

| Criteria                | Indicators (%) |
|-------------------------|----------------|
| Unsatisfactory, bad – 1 | -              |
| Satisfactory – 2        | -              |
| Good – 3                | -              |
| Very good – 4           | 72,2           |
| Excellent – 5           | 27,8           |



72.2% of respondents chose the answer “very good”. A relatively smaller number of responses were selected from the “5” - **excellent** – 27.8%. The information of scientific events held at the University and beyond, for all the students is available through the University website, and via e-mail to the address of scientific departments: to all the heads of departments and those responsible for scientific work of students. This means that an insufficiently high level of satisfaction is associated with the fact that doctoral students are inattentive to the incoming information. This assumption needs to be clarified during further research.

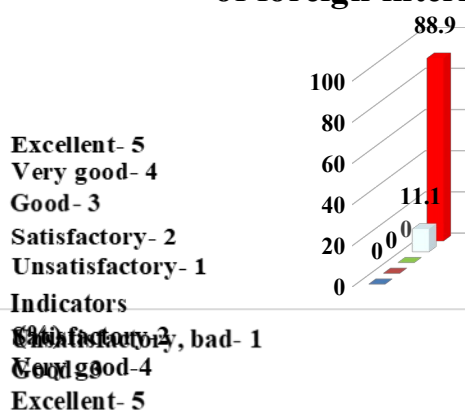
## 8. The general level of organization and conducting of foreign internships

Table 8

| Criteria                | Indicators (%) |
|-------------------------|----------------|
| Unsatisfactory, bad – 1 | -              |
| Satisfactory – 2        | -              |
| Good – 3                | -              |
| Very good – 4           | 11,1           |
| Excellent – 5           | 88,9           |



### The general level of organization and conducting of foreign internships



Foreign internship is a mandatory component of the doctoral program. More than **88,9%** of doctoral students demonstrate complete satisfaction with the level of organization and conducting of foreign internships, and **11,1%** of doctoral students demonstrate “very good” satisfaction. The data obtained prove the highest level of planning and organization of foreign internships for doctoral students at the University.

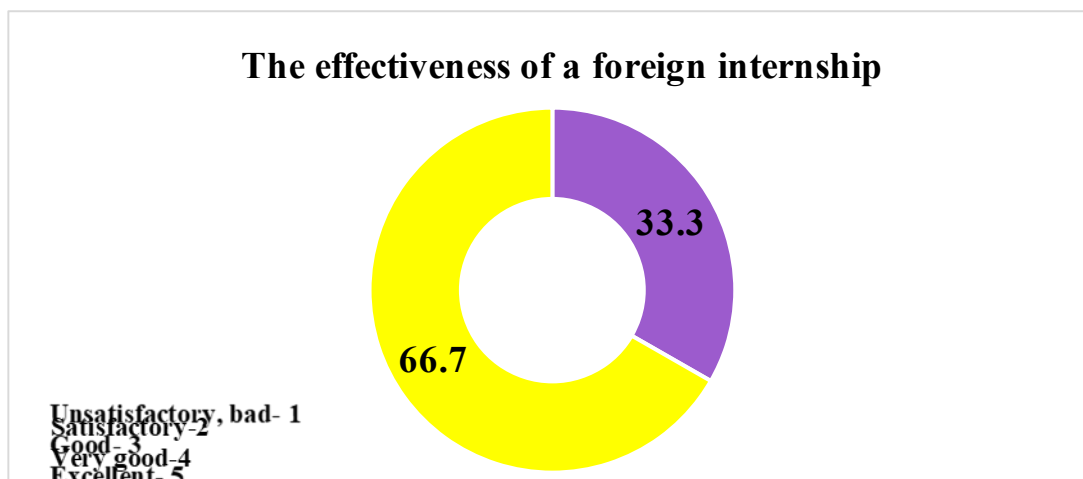
In accordance with the individual work plan of a doctoral student, in order to get acquainted with innovative technologies and new types of production, it is mandatory to undergo a scientific internship at scientific organizations and (or) organizations of relevant industries or fields of activity, including those abroad.

However, it should be noted that before introducing restrictions on foreign internships for students due to the coronavirus pandemic, doctoral students underwent scientific internships, as a rule, at the place of work of a foreign scientific consultant at a foreign university or research center. After introducing the pandemic restrictions, scientific internships for doctoral students took place at Kazakhstan scientific organizations or organizations of relevant industries or fields of activity, or online at Kazakhstan and foreign universities.

## 9. The effectiveness of a foreign internship

Table 9

| Criteria                | Indicators (%) |
|-------------------------|----------------|
| Unsatisfactory, bad – 1 | -              |
| Satisfactory – 2        | -              |
| Good – 3                | -              |
| Very good – 4           | 33,3           |
| Excellent – 5           | 66,7           |



According to the 9th criterion, a fairly high level of marks (in the predominance of “5” - 66.7%), was put by doctoral students for the effectiveness of a foreign internship for them. That is, doctoral students, upon completion of foreign practice, master the latest achievements of the world science, form practical skills of scientific, professional activities in a particular branch of science.

At the end of the questionnaire, the respondents were asked to compose questions that, in their opinion, should be added to this questionnaire to determine the assessment of the educational process organization, the quality of education and the other areas of the University activities. The following data were obtained\*:

- Self-assessment;
- On employment and practice.

\* The doctoral students' responses are presented in the original. Spelling and punctuation of the authors are preserved

## Conclusions:

1. In general, the results of the survey indicate a high degree of doctoral students' satisfaction with the educational services of the University, the scores varied between “good” - 3, with predominance of “excellent” - 5.

2. The relevance of the presented topics of the dissertation research fully corresponds to the scientific interests of doctoral students – 83,3% of respondents rated it as “excellent”, 16,7% as “good”

3. The answers of the respondents confirmed the quite expected interdependence of the assessment of the professionalism and competence of scientific supervisors and the levels of organizational, methodological and information support for preparation of a dissertation research. The information resources provided by the University in the areas of doctoral training are generally sufficient and available when preparing a dissertation research: - 88,9% rated it as “excellent” and 11,1% as “very good”. The level of professionalism and competence of supervisors: 100% satisfied and give the maximum rating to this criterion.

4. Availability to participate in departmental research projects, including those funded ones, was marked by 38,9% of respondents as “excellent”, 61,1% as very good.

5. **66.7%** of respondents are satisfied with the availability to participate in cathedral research projects, including funded ones.

6. When assessing the responsiveness of the University to the requests of doctoral students at the university, there is a noticeable discrepancy in assessments: according to **11.1%** of doctoral students at an “excellent” level, for **55.6%** - at a “very good” level, for **33.3%** - at a “good” level.

7. Availability, completeness and reliability of information of scientific events held at the University and beyond are assessed by respondents quite well: **27,8%** of respondents are completely satisfied, **72,2%** are satisfied

8. From the point of view of doctoral students, the overall level of organization and conducting of a foreign internship is at an excellent level – **88,9%**. The level of effectiveness of the foreign internship was rated as “excellent” - **66,7%**, **33,3%** as a “very good”.

9. The recommendation of doctoral students was given to improve and supplement the questionnaire to determine the organization of educational process, assess the quality of education and other areas of university's activities: the material and technical equipment of the university for research.

### **Recommendations**

1. The Center of Quality Management and Accreditation should consider the proposals of doctoral students to correct the questions of the survey.

2. The head of the department, the DS&I, should get acquainted with the results of the survey and, if needed, develop an action plan to improve the quality of educational services.