ISSN 2518-1467 (Online),
ISSN 1991-3494 (Print)

ҚАЗАҚСТАН РЕСПУБЛИКАСЫ
ҰЛТТЫҚ ҒЫЛЫМ АКАДЕМИЯСЫНЫҢ
Абай атындағы Қазақ ұлттық педагогикалық университетінің

Х А Б А Р Ш Ы С Ы

ВЕСТНИК

НАЦИОНАЛЬНОЙ АКАДЕМИИ НАУК РЕСПУБЛИКИ КАЗАХСТАН
Казахский национальный педагогический университет имени Абая

THE BULLETIN

THE NATIONAL ACADEMY OF SCIENCES OF THE REPUBLIC OF KAZAKHSTAN
Abai Kazakh National Pedagogical University

PUBLISHED SINCE 1944

1 (401)

JANUARY – FEBRUARY 2023

ALMATY, NAS RK

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ISSN 2518-1467 (Online),
ISSN 1991-3494 (Print).
Меншіктенуші: «Қазақстан Республикасының Ұлттық ғылым академиясы» РҚБ (Алматы қ.).
Қазақстан Республикасының Ақпарат және коммуникациялар министрлігінің Ақпарат комитетінде 12.02.2018 ж. берілген
№ 16895-Ж мерзімдік басылым тіркеуіне қойылу туралы куәлік.
Тақырыптық бағыты: *әлеуметтік ғылымдар саласындағы зерттеулерге арналған.*
Мерзімділігі: жылына 6 рет.
Тиражы: 300 дана.
Редакцияның мекен-жайы: 050010, Алматы қ., Шевченко көш., 28, 219 бөл., тел.: 272-13-19
http://www.bulletin-science.kz/index.php/en/

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Типографияның мекен-жайы: «Аруна» ЖК, Алматы қ., Мұратбаев көш., 75.

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«Вестник Национальной академии наук Республики Казахстан».
ISSN 2518-1467 (Online),
ISSN 1991-3494 (Print).
Собственник: РОО «Национальная академия наук Республики Казахстан» (г. Алматы). Свидетельство о постановке на учет периодического печатного издания в Комитете информации Министерства информации и коммуникаций и Республики Казахстан **№ 16895-Ж,** выданное 12.02.2018 г.
Тематическая направленность: *посвящен исследованиям в области социальных наук.*
Периодичность: 6 раз в год.
Тираж: 300 экземпляров.
Адрес редакции: 050010, г. Алматы, ул. Шевченко, 28, ком. 219, тел. 272-13-19
http://www.bulletin-science.kz/index.php/en/

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Bulletin of the National Academy of Sciences of the Republic of Kazakhstan.
ISSN 2518-1467 (Online),
ISSN 1991-3494 (Print).
Owner: RPA «National Academy of Sciences of the Republic of Kazakhstan» (Almaty). The certificate of registration of
a periodical printed publication in the Committee of information of the Ministry of Information and Communications
of the Republic of Kazakhstan **No. 16895-Ж,** issued on 12.02.2018.
Thematic focus: *it is dedicated to research in the field of social sciences.*
Periodicity: 6 times a year.
Circulation: 300 copies.
Editorial address: 28, Shevchenko str., of. 220, Almaty, 050010, tel. 272-13-19
http://www.bulletin-science.kz/index.php/en/

© National Academy of Sciences of the Republic of Kazakhstan, 2023

Address of printing house: ST «Aruna», 75, Muratbayev str, Almaty.

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BULLETIN OF NATIONAL ACADEMY OF SCIENCES OF THE
REPUBLIC OF KAZAKHSTAN
ISSN 1991-3494
Volume 1, Number 401 (2023), 104-121
https://doi.org/10.32014/2023.2518-1467.425
UDC 378.4

© Ye. Buribayev*[1], Zh. Khamzina[1], L. Safronova[1], T. Kilybayev[1], T. Apendiyev[1], 2023

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EVALUATION OF THE EFFECTIVENESS OF SCIENTIFIC RESEARCH AT THE PEDAGOGICAL UNIVERSITY OF KAZAKHSTAN

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Abstract. The priority of transformation into a research university, as well as promotion in the world rankings of universities was put forward in accordance with the strategy adopted and implemented by Abai KazNPU. From the position of state attention, during recent years, science has received significant material and

organizational support. However, the issue of university science development is not put as a separate growth priority at the state level, where the greatest attention is paid to the activities of research institutes. At the same time, our university implements its own program of support and development of scientific activity, including professors-researchers, post-doc program, intramural financing of projects and many others. Nevertheless, we do not get a significant breakthrough in the scientific achievements of the university, moreover, in some positions of assessment of scientific activity there is a decline. There is a paradox: state support of science increases every year, intramural support increases, but the number of implemented research projects decreases, scientists are less interested in applying for grant and program-targeted funding, there is no growth in the quality and number of ranking publications. A group of research professors, postdocs was asked a number of research questions to be answered by the analysis. For example: What potential does KazNPU science have? How ready is it to meet modern international requirements? What is the human resource potential of science at Abai KazNPU? What is the involvement of the teaching staff in research projects? What are the problems for the preparation and publication of scientific articles and participation in grant projects? The pilot research about the state and prospects of scientific activity development of the university teaching staff was conducted by the project group of professors-researchers and postdocs, Abai KazNPU. As a result, the main advantages and weaknesses of scientific research at the university in terms of human resource potential of science, the quality and quantity of research projects and scientific publications were identified. The findings and conclusions obtained by the research team allowed to recommend a number of measures to improve research activity, as well as specific measures due to the sector profile of the university.

Keywords: scientific research in university, scientific publications, scientific projects, human resource potential of science, sociological analysis.

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ҚАЗАҚСТАННЫҢ ПЕДАГОГИКАЛЫҚ УНИВЕРСИТЕТІНДЕ ҒЫЛЫМИ ЗЕРТТЕУЛЕРДІҢ ТИІМДІЛІГІН БАҒАЛАУ

Аннотация. ҚазҰПУ қабылдаған және жүзеге асырып отырған стратегияға сәйкес зерттеу университетіне айналу, сондай-ақ университеттердің әлемдік рейтингтерінде ілгерілеу басымдығы алға қойылды. Соңғы жылдары мемлекет тарапынан ғылым айтарлықтай материалдық және ұйымдастырушылық қолдауға ие болды. Алайда, университеттің ғылымын дамыту мәселесі

ғылыми-зерттеу институттардағыдай мемлекеттік деңгейде жеке басымдыққа ие болмай отыр. Сонымен қатар, біздің университет ғылыми қызметті қолдау мен дамытудың өзіндік (университетішілік) бағдарламаларын жүзеге асырады. Соның ішінде зерттеуші профессорлар, постдокторлық бағдарлама, жобаларды тікелей қаржыландыру және т.б. Дегенмен, біз университеттің ғылыми жетістіктерінде айтарлықтай серпіліс алмаймыз, сонымен қатар ғылыми қызметті бағалаудың кейбір ұстанымдары бойынша құлдырау байқалады. Осы орайда парадокс туындайды: ғылымды мемлекеттік қолдау үрдісі жыл сайын артып келеді, тікелей қолдау артып келеді, бірақ іске асырылған зерттеу жобаларының саны азайып келеді, ал ғалымдар гранттық және бағдарламалық-мақсатты қаржыландыруға өтініш беруге аз қызығушылық танытуда. Рейтингтік жарияланымдардың сапасы мен санының өсуі байқалмайды. Зерттеуші профессорлар мен постдокторлардан құралған зерттеу тобы жауапты қажет ететін бірқатар маңызды сұрақтар қойды. Мысалы: ҚазҰПУ ғылымының әлеуеті қандай? Ол қазіргі заманғы халықаралық талаптарға қаншалықты дайын? ҚазҰПУ-дағы ғылымның кадрлық әлеуеті қандай? Ғылыми жобаларға оқытушылар құрамының қатысуы қандай? Ғылыми мақалаларды дайындау және жариялау және гранттық жобаларға қатысу кезінде қандай проблемалар бар? Университеттің профессор-оқытушылар құрамының ғылыми қызметінің жай-күйі мен даму перспективалары туралы пилоттық зерттеуді Абай атындағы ҚазҰПУ профессор-зерттеушілері мен постдоктарының жобалау тобы жүргізді. Нәтижесінде ғылымның кадрлық әлеуеті, ғылыми жобалар мен ғылыми жарияланымдардың сапасы мен саны тұрғысынан университеттегі ғылыми зерттеулердің негізгі артықшылықтары мен әлсіз жақтары анықталды. Зерттеу тобы алған нәтижелер мен қорытындылар зерттеу қызметін жақсарту бойынша бірқатар шараларды, сондай-ақ университеттің салалық бейініне байланысты нақты шараларды ұсынуға мүмкіндік берді.

Түйін сөздер: университеттегі ғылыми зерттеулер, ғылыми жарияланымдар, ғылыми жобалар, ғылымның кадрлық әлеуеті, әлеуметтанулық талдау.

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ОЦЕНКА ЭФФЕКТИВНОСТИ НАУЧНЫХ ИССЛЕДОВАНИЙ В ПЕДАГОГИЧЕСКОМ УНИВЕРСИТЕТЕ КАЗАХСТАНА

Аннотация. В соответствии со стратегией, принятой и реализуемой КазНПУ, был поставлен приоритет превращения в исследовательский университет, а также прогресса в мировых рейтингах университетов. В последние годы

со стороны государства наука получила значительную материальную и организационную поддержку. Однако проблема развития науки университета не имеет частного приоритета на государственном уровне, как в научно-исследовательских институтах. Кроме того, наш университет реализует собственные (внутриуниверситетские) программы поддержки и развития научной деятельности. Включая профессоров-исследователей, программу постдокторантуры, прямое финансирование проектов и т.д. Тем не менее, мы не получаем значительного прорыва в научных достижениях университета, а также наблюдается спад в некоторых позициях оценки научной деятельности. В этой связи возникает парадокс: с каждым годом растет тенденция государственной поддержки науки, растет прямая поддержка, но количество реализованных исследовательских проектов сокращается, а ученые все меньше заинтересованы в подаче заявок на грантовое и программно-целевое финансирование. Не наблюдается роста качества и количества рейтинговых публикаций. Исследовательская группа, состоящая из профессоров-исследователей и постдокторантов, задала ряд важных вопросов, требующих ответа. Например, каков потенциал науки КазНПУ? Насколько он готов к современным международным требованиям? Каков кадровый потенциал науки в КазНПУ? Каково участие преподавательского состава в научных проектах? Каковы проблемы при подготовке и публикации научных статей и участии в грантовых проектах? Пилотное исследование о состоянии и перспективах развития научной деятельности профессорско-преподавательского состава университета было проведено проектной группой профессоров-исследователей и постдокторантов КазНПУ им. Абая. В результате были выявлены основные преимущества и слабые стороны научных исследований в университете с точки зрения кадрового потенциала науки, качества и количества исследовательских проектов и научных публикаций. Результаты и умозаключения, полученные исследовательской группой, позволили рекомендовать ряд мер по улучшению исследовательской деятельности, а также конкретные меры, обусловленные отраслевым профилем университета.

Ключевые слова: научные исследования в университете, научные публикации, научные проекты, кадровый потенциал науки, социологический анализ.

INTRODUCTION

The assessment of the research activity of the teaching staff, the quality and number of publications, participation in research projects and programs using various performance indicators and target indicators is a relevant and demanded research area in Kazakhstan and the world (King, 2004; Sandoval-Romero et al., 2020; Guskov et al., 2020; Suleymenov et al., 2011; Kuzhabekova et al., 2018).

Research capacity is a key competence of a university, but it also reflects an important indicator of its sustainability and impact (Zhang, 2011). A relationship between the competitiveness of a university and the research conducted at its base by the staff of a higher educational organization have established in the studies

(Ashmarina et al., 2015). It has been established that the correct use of the university research management system plays a positive role in its progress and should be the focus of constant attention of university management operators (Wang, 2013). The scientists Putri and Sofyandi considers that the number of scientific publications will increase if the research climate in the university is favorable and has strong institutional support.

Regarding the review of relevant papers based on the practice of Kazakhstan on the assessment of the scientific potential of universities, the transformation of universities into research universities, several qualified expert analyses are currently available. This is an article by prof. Bishimbayev in 2017 which proposes new mechanisms for innovation processes and a model for the management of scientific activity in research universities. It is summarized that the system of higher education in the country is insufficiently focused on technological progress and interdisciplinary knowledge. Namely, commercialization of technology is one of the main objectives of Kazakh research universities, along with educational and scientific activities. The analysis of best practices (Abdyrov et al., 2017; Shakirova et al., 2019) identified the following features of the world's most advanced research universities: high quality of human resources; continuous cooperation with employers and consumers in research and development; own modern research and experimental infrastructure, research facilities; independent management.

In empirical studies (Madina et al., 2017), conclusions are made that the effective labor contract with the teaching staff should be aimed at financial incentive of scientific activity, academic mobility, capacity building of the teaching staff. However, as fact shows, this institution does not take into account the specifics of the content and mode of work of this category of employees. Often the requirements of employers to increase the quantitative indicators of labor achievements give rise to opportunistic behavior of employees, imitation results of their research, reducing the quality of education. The specific nature of professors' work content involves not only quantitative measurements of results, but also the evaluation of their reputation, creativity, ideas, research and teaching methods.

In other studies (Tulegenova et al., 2019) the results of sociological survey on the state of the teachers' activity environment of Kazakhstan universities are presented, weak links in the management of training are identified, the hypothesis of inadequacy of teaching staff working conditions to the requirements of modern technological changes, which are rapidly spreading, is confirmed. The teacher remains the main asset of universities, creating a multiplier effect in the reproduction of professional, scientific and socio-cultural values, but one of the problems of the current educational system remains insufficient scientific training of the teaching staff due to weak participation in research work (Duisenova et al., 2019).

RESEARCH MATERIAL AND METHODS

The sociological survey on «Evaluation of scientific research in the university: status and prospects of development" was conducted during the period from September

27 to October 12, 2021 under the authority of the Department of Science. In general, 612 teachers (56%) participated in the survey. Another 18 teachers took part in in-depth interviews, which lasted up to 3 hours with each of them. This qualitative research method was chosen because the results of the personal interviews provided detailed reasoning and answers to the questions under study, as well as significantly added to the results of the sociological survey and allowed:

- obtain feedback from the most qualified and informed categories of respondents about the state of scientific work at the university;
- evaluate the initiatives implemented at the university, aimed at improving the efficiency of scientific work;
- helped to identify the desires and needs of the teaching staff in the development of scientific activity;
- determine the direction for further effective measures in the studied sphere.

All the institutes of Abai KazNPU took part in this survey. The data obtained from the respondents, by sociological standards, is valid for further statistical processing and analysis of the results (Yadov, 2002:48). As a method of data collection was chosen quantitative method - online survey with closed, semi-closed and open-ended types of questions with the possibility to indicate own opinions of the respondents. Besides, to evaluate a situation, process, a Likert scale was used in questions. This quantitative method of collecting information was chosen to cover a larger number of respondents and due to the need to obtain empirical measurable data.

The questions were grouped into three key sections:

1. The human resource potential of science at Abai KazNPU.
2. Research projects.
3. Scientific publications.

In the survey, a link to the Google form was sent out an electronic questionnaire to the respondents. The questionnaire was made in two languages. Before the start of the survey, respondents were informed about the complete anonymity of the survey and the use of survey results only in a generalized form to improve research activities at the university. As practice shows, the absence of the writing personal information, maintaining anonymity helps to get more reliable data, truthful subjective opinions about the researched sections. At the end of the survey, the results were statistically processed using MS Excel, and an analytical report was made. The results of the analysis are presented below.

SOCIO-DEMOGRAPHIC DATA. 612 teachers participated in this survey. 328 filled out questionnaires in Russian and 284 in the state language. The predominant number of teaching staff who participated in the survey were between the ages 40-60. Most of the teachers (16%) are 51-55 years old. Among survey participants, young specialists at the age of 25-35, from Philology Institute (30 people – about 5%), and the most experienced at the age of 56-63 from Pedagogy and Psychology Institute (42 – about 7%). According to the data obtained, the average work experience of the teaching staff who participated in the survey is about 12 years. The majority of teachers (16%) have up to 5 years of experience.

According to the data obtained, the majority (56%) prefer teaching, but they do not forget about scientific work (Fig. 1).

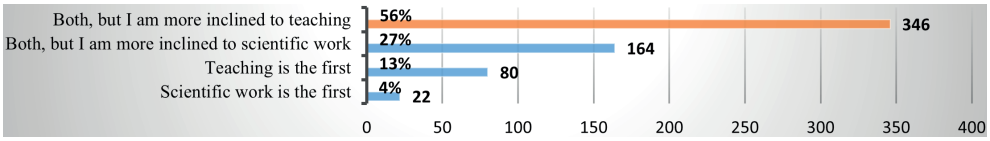

Figure 1. Teaching staff preferences

Degreeless teachers (6%) are most likely to pursue teaching. Among the teachers with master degree, 63% prefer teaching. Teachers with doctor degree (49%), candidates of science (34%), and PhDs (29%) have a strong preference for research.

At the very beginning of the sociological survey, respondents were asked to share their opinions on the level of scientific work in Abai KazNPU. In our survey as a method for evaluating the results, we used a Likert scale, which implies agreement or disagreement with a statement or question. According to the data obtained, about the scientific work respondents expressed full satisfaction on average 34%, partial satisfaction – 44%, were dissatisfied – 10%, the rest 12% refused to answer. Average levels of satisfaction with scientific work were at technical specialties and IT (75%), Pedagogy and Psychology (53%), Biology and Geography (52%). Less than 13% were not satisfied with it.

The following questions were aimed at a detailed elucidation of the reasons: why a certain part of the teaching staff is or is not satisfied with the scientific activity in their areas (Fig. 2). The main motivation for teachers in order to pursue science is the desire for self-development (70%), and the following reasons are the introduction of new scientific achievements, best practices (50%) and improving the scientific rating and university image (49%).

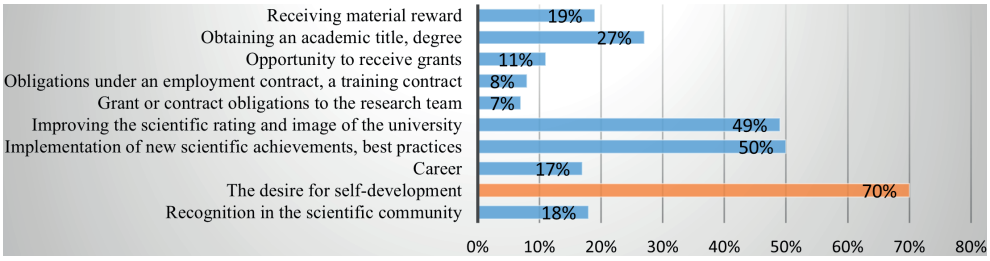

Figure 2. What is the main motivation for your scientific activity?

The payment for scientific work is not the main motivating factor to the teaching staff. Only 13% are satisfied with the payment. According to the majority of respondents, scientific work is paid at an average level, 25% believe that the payment is clearly insufficient. Nevertheless, to a question whether scientific work in other universities, research institutes of our country is well paid, many responded

that do not have such information. Perhaps, this is due to the fact that they do not seek information about scientific grants, other universities projects, organizations and research institutes, are not subscribed to their mailing lists, notifications.

As we have already noted, the main motivation in pursuing science is the desire for self-development (Fig. 2). Through what types of scientific activities is this desire realized? It is seen that for the majority of teachers, it is very important to collect and systematize scientific sources, to write articles (60%), and to participate in scientific events, such as conferences, trainings, webinars, seminars, etc. (55%). They spend over half of their time to scientific work in general. Self-development motivation can also include writing monographs, educational and methodological literature (40%), analysis of scientific trends and new research methods (Fig. 3).

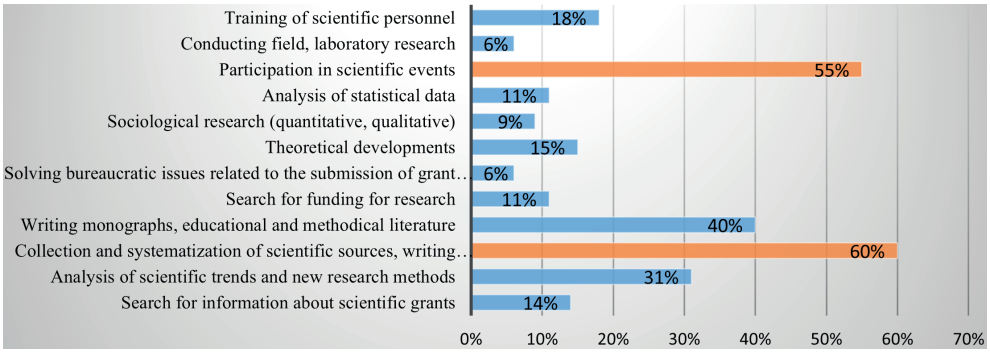

Figure 3. What type of scientific activity do you pay more attention to?

The above-mentioned types of scientific work are more theoretical in nature. Teaching staff devote less time to practical aspects of scientific work. For example, field, laboratory research (- 6%), sociological research (- 9%), analysis of statistical data (- 11%). Training of scientific personnel is preferred by only 18%. As a result, only about 80% of doctoral students in Abai KazNPU complete their studies with a dissertation defense. For one doctoral student The Ministry allocates about 1 900 000 tg per year. The scientific adviser responsible for the preparation of the doctoral student receives from this amount about 3.5%. For the supervision of a doctoral student allocated 45 hours per year, but in the first year of study scientific advisers of doctoral students and graduate students (usually the most highly qualified teachers of the university, doctors of sciences and professors) are transferred to the hourly rate of about 1700 tg per hour.

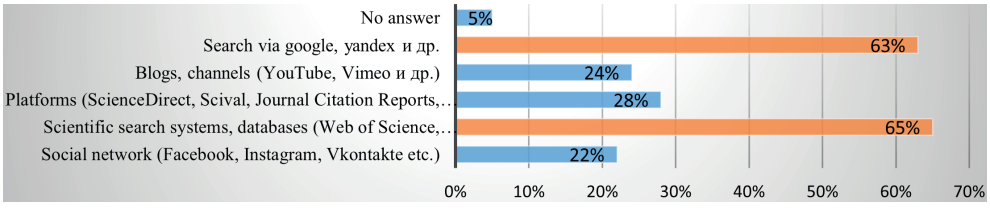

Figure 4. On what electronic resources do you find the necessary materials / data for your research?

As for seeking research materials and data (Fig. 4), most teachers (65%) use scientific search systems and databases such as Web of Science, Scopus, Pubmed, zbMath, MathScinet, Agris, Georef, Astrophysical journal, Research Gate platforms, LinkedIn, Google Scholar, ORCID and Mendeley. Regular search engines, such as Google and Yandex, are also a popular search tool (63%). The least used are social networks (22%), blogs and YouTube and Vimeo channels (24%). Such analytical platforms as ScienceDirect, SciVal, Journal Citation Reports, and InCities (28%) are not in demand among the teaching staff. Therefore, it indicates a lack of skills in working with the analytical tools of global scientific databases, a lack of need and skills in independent search of editions for publications and potential scientific contacts, which, as a result, is fraught with a large percentage of predatory publications in the future.

About 75% responded that they expand their scientific networks in most cases through the participation in scientific events, such as conferences, trainings, seminars, and webinars. In addition, they also use scientific networks obtained on advanced training courses. As the data showed, about 27% do not use their scientific networks to create collaborations with scientists from Kazakhstan and other countries, because they do not have sufficient experience in this area. This, in turn, explains why teachers do not have close ties with foreign scientists. Furthermore, a quarter of the respondents (25%) noted that they have collaborations with domestic and foreign scientists.

In the survey to the question how to strengthen the human resource potential of Abai KazNPU in the field of scientific research, the following answers were received.

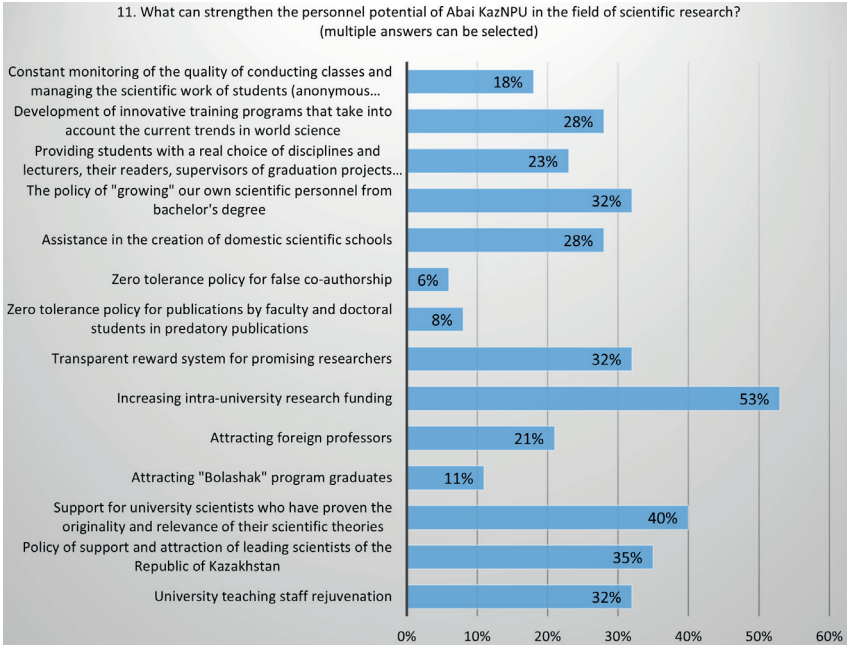

Fig. 5. What can strengthen the personnel potential of Abai KazNPU in the field of scientific research?

Over half of the survey participants (53%) believe that this problem can be solved by increasing the intramural funding of scientific research, support the university scientists, who have proven the originality and relevance of their scientific theories. Least of all, a policy of intolerance for false co-authorship and publications in predatory journals (6%), as well as involvement the holders of the fellowship of the program "Bolashak" (11%) to the teachers' opinion, will contribute to increasing the scientific potential of the university. The tolerance of Abai KazNPU teachers to academic dishonesty (false co-authorship, predatory journals) is an alarming factor, indirectly indicating the prevalence of such practices in the university. This problem may result in the downgrading of the university in the world rating systems in future.

II. RESEARCH PROJECTS

In this section, respondents were asked key questions to determine the level of teachers' participation in research projects, identifying barriers to the participation of university scientists, as well as to assess the transparency of the grant award system, decision-making on grant funding awards, incentive of teachers for success in scientific publications, ranking of scientists.

More than one-third of the teachers (38%) noted that they participated in research projects of the MES RK, 31% - in intramural projects. 36% have no experience in such projects. Only 12% have experience in project work with international and foreign organizations.

According to the collected data, 63% of respondents are not currently involved in any research projects. 18% participate in projects of the Ministry of Education and Science of the Republic of Kazakhstan, and 15%–in projects at Abai KazNPU (Fig. 6).

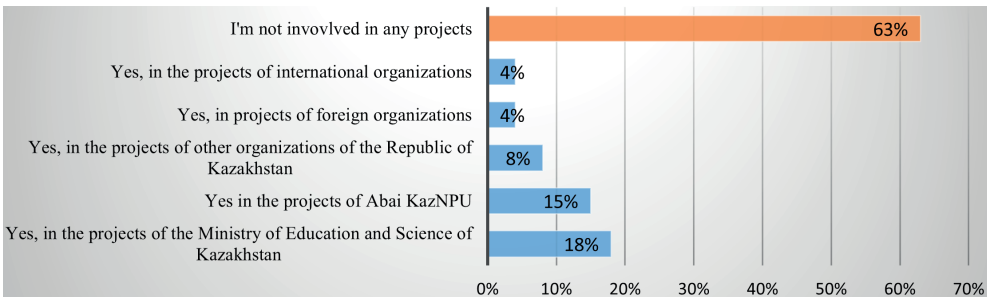

Figure 6. What scientific projects are you currently involved in?

The results of the survey revealed that there are no particular reasons why teachers do not participate in research projects. More than 30% state that they always try to take part in such projects. Less than 30% indicate that the main barrier to participating in projects is lack of time. The next in descending order is a complicated procedure for submitting documents for participation (20%). Lack of technical means, information on the website, social media pages of the university or the problem of unfair distribution of workload / salary among project participants are not the reasons for non-participation in research projects. These answers were chosen by less than 10%.

In the next block of questions, respondents were asked to rate (from 1 to 5) on the clarity of the following indicators relating to research activities:

- The system of awarding research grants in Abai KazNPU;
- The system of decision-making on grants, program-targeted funding of the Ministry of Education and Science of the Republic of Kazakhstan;
- The incentive system of Abai KazNPU teaching staff for publications in the editions indexed in Scopus, WoS;
- The system of scientists' ranking at Abai Kazakh National Pedagogical University;
- The system of competitive selection of applicants on research scholarships and awards of the MES.

Teachers were more satisfied with the transparency of grant distribution in the system of awarding grants for research at their own university (43%, but it is less than 50%, is also an unsatisfactory score), and the lowest scores were given to the incentive system of teaching staff for publications in publications indexed in Scopus and WoS (26%).

According to teachers' opinion, the material and technical support of the university is at an average level. More than half of them (57%) expressed average satisfaction with this indicator.

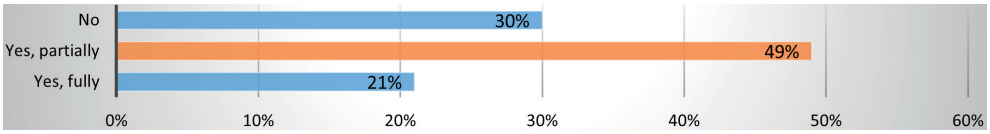

Figure 7. Are you familiar with the work of NCSTE?

According to answers (Fig. 7), almost half of the respondents (49%) are partially familiar with the site of the NCSTE (The National Center for State Scientific and Technical Expertise), and 21% have a good knowledge of this site. Those who do not know working on the site of the NCSTE are 30%. It suggests that there is a need for regular advisory activities to work on the NCSTE site for them.

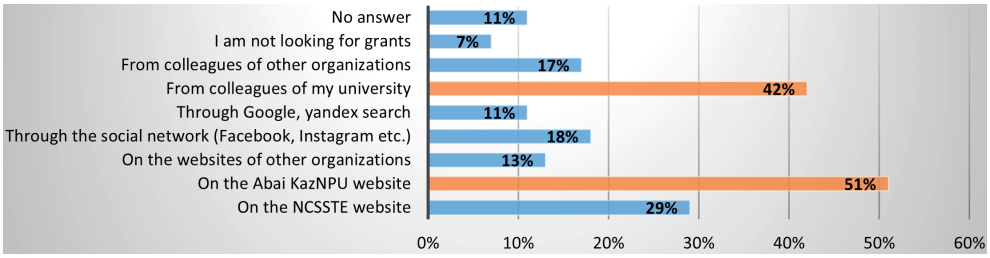

Figure 8. How do you find out about competitions for scientific grants?

51% of respondents answered that they find out about competitions for scientific grants on the institution website. This indicates the good work of the Department

of Science, which timely notifies the teaching staff of the upcoming scientific competitions and other events. 42% receive information from their colleagues. Least of all they look for information about scientific grants in search systems, such as Google and Yandex (11%), as well as on the sites of other organizations (13%). 18% look for information through social networks. In this regard, there is a need to increase the information activity in social networks of the Department of Science, Abai KazNPU (Fig. 8).

The biggest problem that teaching staff face is the voluminous amount of paperwork in submitting grant proposals for projects (42%). The main obstacles for interdisciplinary projects applying: less than 20% attributed the low information about related sciences (17%), lack of a project coordinator (14%) and lack of professionalism to implement research in this direction (12%).

III. SCIENTIFIC PUBLICATIONS

As it turned out, the majority of the teaching staff does not speak English at a high level. About 57% know it at a basic level (Beginner/Elementary - 38%, Elementary - 19%). Moreover, 54% noted that they would like to improve their level of English in order to be able to study scientific sources and write articles. The level of English proficiency of other teachers can be seen in the charts above.

About 83% unanimously confirmed that they know the requirements for the preparation, design and writing of a scientific article in the journals recommended by the Ministry and included in the databases Scopus, Web of Science. According to the results of the survey, it was found that the work conducted by the university to train the teachers in the preparation of publications, the choice of scientific journals indexed in the bases Scopus and Web of Science, is at a good level. Slightly less than half of the respondents expressed partial satisfaction on it (45%), and 28% - full satisfaction. The number of dissatisfied is 9%.

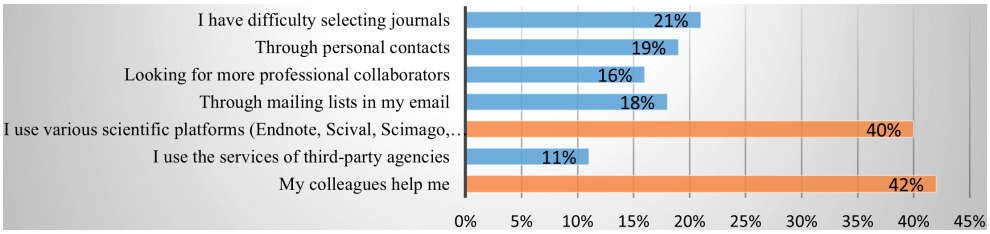

Figure 9. How do you choose a journal for publications with a high impact factor?

Many of the teaching staff (40%) use various scientific platforms when selecting journals (Fig. 9), such as Endnote, Scival, Scimago, Scopus, WoS, etc., so it indicates their sufficient competence, and confirms the respondents' answer to the previous question about the level of satisfaction with the activities conducted by the university to help the teaching staff in this area. Additionally, 42% noted that when selecting journals, colleagues help them, and it shows a good level of relations in the team, a high level of trust. Western scientists, sociological economists (T.Schultz,

G.Bakker), proved that the level of trust in the team directly affects the productivity of labor. About 20% choose journals through personal contacts and receive mailing lists by e-mails. The same number of teachers admitted that they have difficulties in selecting journals.

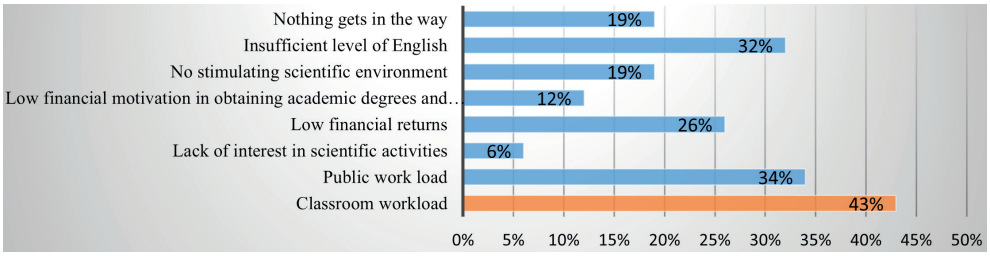

Figure 10. What limits your publishing activity?

In the chart above (Fig. 10) we can see that university professors see the greatest problem that affects the publication activity in class workload (43%). It is followed by a heavy community work (34%) and low moral engagement (26%). Institute departments can use the empirical data obtained in planning and organizing their work.

According to the survey, 31% support the policy of the university on the mandatory publication of the results in journals indexed in the Scopus and WoS databases. However, 23% would like to reduce the qualitative and quantitative requirements for publication. The same number of teaching staff (23%) indicated that publications require additional financial expenses, so they do not support the university policy in it.

To the key question of the questionnaire - what problems do teachers face when writing and publishing their articles - 40% answered that they have the main problem with the long wait to decide on the publication and the need to pay for it. The next significant problem is the difficulty in selecting a journal (34%). The next obstacles in writing and publishing articles are insufficient proficiency in English (27%) and difficulties with the design of the article according to the journal requirements (25%).

To the summarizing question of the survey - what could stimulate the teaching staff to intensify research work in general - many teachers (44%) responded - an increase in the number of research internships. 35% correlate the activation of publication activity with a balanced teaching load. 28% would like incentive rewards for their research work.

CONCLUSION

As a result of sociological research among Abai KazNPU teachers in the period from September 27 to October 2, 2021 were identified the main advantages and weaknesses of scientific research in the university. Survey participants shared their opinions on three key sections:

1. The human resource potential of science at Abai KazNPU.
2. Research projects.

3. Scientific publications.

Conclusion to the section «The human resource potential of science at Abai KazNPU»

On average, 24% Abai KazNPU teachers give priority to scientific activity in their work, and it is the main scientific potential and reserve of Abai KazNPU on the transformation way into a research university.

The science is preferred by tenured professors, primarily doctors of science (49%). PhD (34%), candidates (29%) and masters (30%) are less active.

As it turned out, Abai KazNPU teachers does not consider scientific work as a stimulus for their financial and career progression. Only 13% are satisfied with the payment of their research activities.

As a priority of their research work, only 18% announced the training of academic staff. The inadequate level of payment for the scientific supervisors of doctoral and master's students reduces motivation and responsibility for the work, which leads to a low percentage of doctorate theses and reduces the quality of master's theses.

The majority of the teaching staff in its scientific activity is focused on theoretical scientific research. 6-11% possess empirical methods of analysis, on which the modern world science relies first of all. 54% pay special attention to the quality of publications, rather than quantity, but the rating system of the university, which is satisfied only 56%, takes into account mainly the quantitative indicators of science.

Grant funding, research projects are of great interest among the teaching staff, but teachers find it difficult to independently search for information on grants, and lack of knowledge on the analytical tools offered by such resources as ScienceDirect, SciVal, Journal Citation Reports and InCities. Hence the low percentage of scientific contacts with foreign scientists and organizations, the low level of participation in international projects.

Over half of the survey participants (53%) consider it necessary to increase intramural research funding, including intramural grant funding.

The idea of institutional stimulation of the scientists who proved the originality and demand for their scientific theories was widely supported by university scientists. This idea can be implemented by creating conditions for the development of scientific schools, providing them with grant support, opening scientific centers and specialized laboratories under the guidance of leading university scientists.

The Asian field of science remains underdeveloped in the university's academic staff. The system of internships in pedagogical universities in China, Singapore, South Korea, and Japan could fill this gap.

The high tolerance of the teaching staff for academic dishonesty (6% condemn false co-authorship, 6% condemn publications in predatory journals) suggests a not quite satisfactory situation with the quality of journals in which our teachers are published, with the quality of their scientific publications and even lower percentage of the real involvement of teachers in the publication activity. This situation in 2-3 years is fraught with a sharp drop in the university's ranking in the world system of educational institutions, when the Scopus database will stop indexing the pool of

predatory journals, in which the teaching staff of the university, probably, is currently published.

Recommendations. The strategic goal of university science is to expand the scope of scientific activity, disclosure of scientific potential of talented young people and achievement of results, which involves the sustainable receipt of demanded and relevant to the world level of scientific results. The development of scientific activity, its success is a factor of competitiveness of educational services provided by the university. In general, the study, findings and conclusions allowed us to recommend a number of measures to increase research activity, as well as specific measures due to the sectoral affiliation of the university and other circumstances.

The scientific component of the activity is secondary compared to the educational component for the majority of the teaching staff, Abai KazNPU, it is clearly expressed in the structure of the survey responses. The adoption of a set of measures, the creation of incentives for greater involvement of the teaching staff and students on Bachelor's and Master's degree programs in scientific research is demanded. In the last competition for grant funding of The Ministry (projects for young scientists 2022-2024) the requirement of the project group members' higher education was cancelled, similar barriers should be removed in the intramural competition as well. Differentiation of university employees into researchers and lecturers will be inevitable in the future. At the same time, it is much easier to recruit the latter than to raise or attract a professional researcher, in connection with which it is recommended to expand programs of «nurturing» and support of the university's own scientists, as well as to attract new leading experts, including by expanding the use of professors-researchers and postdocs.

There is a demand for measures to ensure greater objectivity in addressing the participation of teaching staff in research projects of the university, the nomination for the award of prizes, scholarships, financial incentives based on the results of scientific work, as these are guarantee additional income for scientists. In general, the existing preliminary procedures for nomination, decision–making, cause criticism in terms of incomplete transparency. The experts were unanimous that the system of rewarding the teaching staff for publications in the editions indexed in Scopus, WoS, should be more open. The information and requirements should be posted on the website. The main source of funding research work remains grant and program-targeted funding, the results of the survey show the need to strengthen and deepen the work on organizational support for participation in the relevant competitions.

Actual update of the material and technical base of the University in terms of the acquisition of equipment (scientists use for work their own computers, MFP), materials necessary for research, improvement of the Internet, which, along with the human resource potential is essential for the development of scientific activity. The orientation and preference of the majority of surveyed teaching staff for the international program ERASMUS raises questions, since it does not contain a large research component. Presumably, the desire to participate in this program is associated with the preference and demand among the teachers to participate in international

conferences, forums, research internships, professional development activities. Here, the formation of clear and transparent principles of selection activities and programs for scientists of the university, targeted or competitive funding of measures to improve the qualifications are relevant; the determination of an appropriate budget as part of the implementation of paragraph 4, Article 37, subparagraph (6), paragraph 2, Article 51, the Law of the Republic of Kazakhstan from July 27, 2007 No 319-III «On Education», it fixes a guarantee of the teachers' professional development in educational organizations (including higher education) at least once every five years.

Due to the few publications in foreign languages, Abai University stays low – profile in the international information space. This is largely due to the ignorance of the English language at a level sufficient for the publication in top- rated journals, including those indexed in the Web of Science, Scopus. It is important to create conditions for teaching staff to study the language, passing the appropriate exams to confirm the level. To solve the problem of low publication rate, it is recommended to expand the program of intramural grants for publications, so the article is, as a rule, the result of research conducted by scientists. An obligatory result of the project should be the publication of an article in a top- rated journal. It is important for teachers to hold special seminars on selecting journals for publications, on working with databases, to explain the procedure for submission without publication fees.

A large percentage of the respondents noted that the study workload, bureaucratic reporting, completing various reporting forms, as factors limiting employment in research. In this direction, it is recommended to create a common electronic base for annual reports of the teaching staff, including research and development, teaching load, social and educational functions. Update and reduce the existing reporting forms, including the elimination of duplicate information, tables.

It is important to preserve the university's leading scientific schools, which are generally integrated into the global scientific community. The creation of new scientific laboratories, reflecting the established scientific potential of the university scientists, its leading scientific schools and the projects being implemented, is in demand. Respondents were in favor of creating a special center (co-working center) for doctoral and undergraduate students.

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www: nauka-nanrk.kz
ISSN 2518–1467 (Online),
ISSN 1991–3494 (Print)
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Заместитель директор отдела издания научных журналов НАН РК *Р. Жәлиқызы*
Редакторы: *М.С. Ахметова, Д.С. Аленов*
Верстка на компьютере *Г.Д. Жадыранова*

Подписано в печать 28.02.2023.
Формат 60х881/8. Бумага офсетная. Печать - ризограф.
27,5 п.л. Тираж 300. Заказ 1.

Национальная академия наук РК
050010, Алматы, ул. Шевченко, 28, т. 272-13-19