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Information support of students in scientific activity in higher education institutions system

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Abstract

The article presents the results of the study of information support of students in research activities. The relevance of the study is due to the fact that the development of information support is one of the important indicators of the university's effectiveness. The problem is that the degree of student involvement in scientific activity in most universities is not high enough. The purpose of the study is to identify the degree of interest of students in scientific activities. The novelty of the research is that an attempt made to construct a typology of students in terms of their attitude to scientific activity. In the course of the research, the percentage of how students receive information on scientific events and who organized the work to attract students to NID (research activity) was determined. The study conducted among 1-4-year students of the Kazan Federal University (KFU) and the Kazan National Research Technical University named after A.N. Tupolev-KAI (KNITU-KAI). An online questionnaire survey used as a research method. Based on the results of an online survey, it is obvious that 87,3% of students are ready to engage in scientific activities in the framework of the chosen specialty. At the same time, interest in scientific activity is high, this is confirmed by 88,1% of students with scientific achievements. The results of the study make it possible to assess in reality the perception of scientific activity by students and to show the problems of an objective nature that exist in the organization of the university.

Keywords: Research activities; research work; information work; information support; the science.

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Introduction

Currently, scientific research work with students (SRWS) is one of the most significant indicators for assessing the effectiveness of the activities of higher educational institutions. The Bologna Regulations and the latest generation of Federal State Educational Standards also indicate the need to create a flexible system of higher education that trains specialists who are able to quickly, creatively perceive and apply new knowledge and adapt to new labor market conditions. In this regard, at each level of education at the university, it is necessary to develop students' creative thinking and research skills and abilities, activating their participation in scientific research work (Ilyina, 2014).

The level of research activity at a university depends on many factors: the system of organization of work at the university, the activity of scientific leaders and teachers, the ideology of students, their motivation. Scientific research work with students can be viewed as a block of three stages: attracting students to NID, the process of scientific work and the result. Often, the effectiveness of scientific activity is determined by the result, which is presented in the number of published articles, the number of participants and victories in olympiads and various competitions, etc. However, the initial block is important, namely, involvement in this activity: informing students, motivation, preparing students for conferences and communication with the teacher.

With a detailed analysis, information support plays one of the main roles in the formation of interest in the NID. Information support of students in scientific activities is a purposeful and continuous process of collecting, accumulating and presenting information in a convenient form for consumers, necessary for the formation of specialists who are able to implement the acquired knowledge and skills in practice (Shishkova, 2016).

Thus, information support for scientific events includes not only a high-quality search for information, but also the competent design of information and full responsibility is directly assigned to the employees of the university. The effectiveness of this work in the university is sometimes at a low level. This is influenced by many factors: the system of organizing work at the university, the activity of teachers in information support, a failure in the electronic system of the university, etc. Without proper organization of this process, it will be difficult to achieve high efficiency. The process and result of NIRS is very often a huge amount of work, which is not always tracked and evaluated.

Purpose and objectives of the study

The aim of the study is to identify the activity, involvement of students in educational work, the degree of their interest in this. The novelty of the research is that an attempt to build a typology of students in terms of their attitude to scientific activity. The results of the study allow us to assess, first of all, the subjective aspects of the perception of scientific activity by students, but also show the problems of an objective nature that exist in the organization of this system in universities.

Literature review

A huge number of works by Russian researchers are devoted to various aspects of students' scientific research work. Local studies to assess the development of SRWS within individual universities are quite often carried out by domestic scientists, such as Lyutkin (2005), Girfanova (2013), Zavrazhin & Shubina (2011), Vostroknutov (2012). The work of Muravyova & Knyazkina (2020) examines the formation of students' interest in technical sciences. Modern foreign researchers also pay attention to the study of the scientific research work of students. For example, Feldman, Divoll, & Rogan-Klyve (2013) consider the experiences of students in the process of their scientific activities from the point of view of a phenomenological approach. Research by Krause & Coates (2008) is aimed at student involvement in the educational process. The analysis provides an insight into the current engagement of undergraduate students in educational activities, including online, self-government, interaction with peers and students.

Methodology

In this study, the following methods were used: the analytical method was used both for the analysis of published works on this topic; a comparative method for comparing the level of information support for research activities of several universities; the diagnostic approach used in the study made it possible to conduct a questionnaire online survey.

In the course of the study, 94 students of two universities were surveyed, including KFU students (31 students) and KNITU-KAI (63 students). The universities were selected on the basis of accessibility. The research was carried out by the method of online questionnaire using google-forms. Students of the 1st-4th courses took part in the survey. The participants are enrolled in 4 courses (33,3%) and 90,9% in the first year of master's degree.

The experimental base of the research is the Kazan Federal University and Kazan National Research Technical University named after A.N. Tupolev-KAI.

The study of the attitude of students to research activities was carried out in 2 stages. First, not only bachelor's students, but also postgraduate students were included in the Internet survey. Secondly, students from several Kazan universities took part in the survey.

Results

The analysis of the results of students 'research allows us to assess, first of all, an objective assessment of students' interest in scientific research work, but it also shows the barriers of an objective nature that exist in the organization of scientific research work with students in universities.

1. Information support of students on research activities in universities.

Based on the research at KFU, 90,9% (Figure 1) of students receive information about scientific events in the form of mailings to an e-mail address from the headman.

The same percentage (27,3%) of students receive mailings to the e-mail address from the department and from the supervisor, another 36,4% receive information personally from the teacher. Also 18,2% independently search for scientific events.

The survey showed that the information support from the departments of the institute and the scientific leader is at the same low level. However, it is worth noting the high rate of participation of the head of the group in mailing lists for scientific activities.

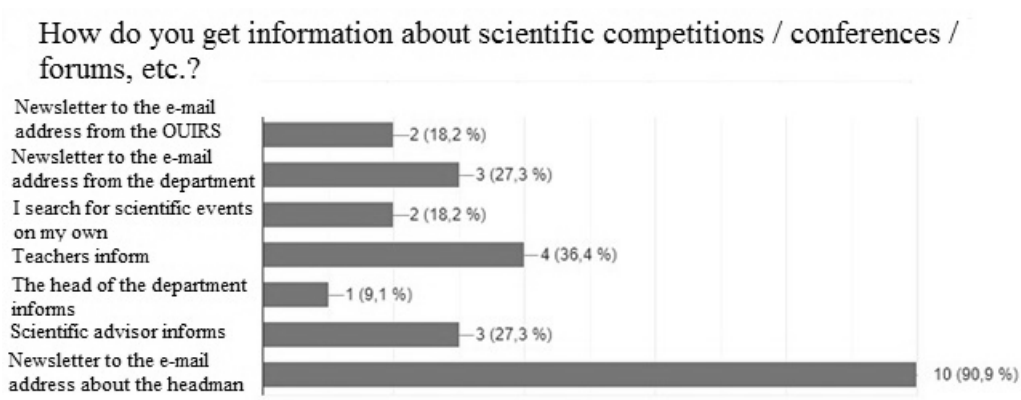

Figure 1. Information support of KFU students

Let us consider the indicators in KNITU-KAI, as can be seen from the diagram, the distribution to the e-mail address from the department of organization of educational and scientific research work of students (department of OUIRS) is the maximum percentage (34,9%). This suggests that the work of the OUIRS department at the university is doing its job well. More than a third of the survey participants receive information about SRWS events from the teacher personally. The second position is occupied by an independent search for scientific events and amounts to 27% (Figure 2). Distribution to the e-mail address from the department is a minimum percentage (1,6%). Thus, it is obvious that the process of informing in the studied university is involved in only two directions.

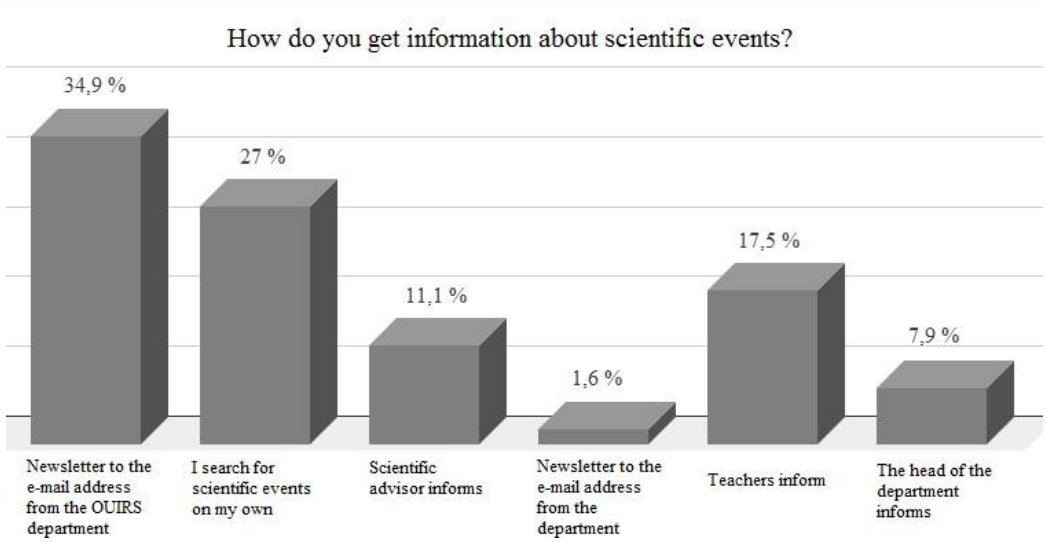

Figure 2. Information support of KNITU-KAI students

In addition to the positive aspects, this study identified the weaknesses of SRWS from the point of view of students. It should be noted that the opinions of students are sufficient here, different, there are no pronounced, dominant shortcomings.

2. Barriers to scientific participation

In the course of an online survey using the example of the Kazan Federal University, we will note the problems that prevent the student from engaging in scientific activities. More than half of the students surveyed noted that they do not have enough time to engage in scientific activities, since their priority is educational activity. The rest of the students note that they do not have a sufficient level of training in scientific activity, since they have not previously been involved in science. The minimum number of respondents answered that they have no desire and interest to participate in scientific activities.

It is worth noting that the individual wishes of the student play an important role on the path of participation in scientific activities.

3. Evaluation of information support for scientific activities from the point of view of students

Information support for scientific activities at the Kazan National Research Technical University. A.N. Tupolev - KAI plays a significant role in the student's interest in science. The poll showed that (46%) of the respondents are more satisfied with the information support for scientific events. The share of those who gave a negative answer was 7,9% (Figure 3). It is interesting that the diagram contains similar answers "Mostly yes" and "Yes, satisfies" when summing up the data, the answer will be 69,8%, thus, we can state a very high level of information support for students in research activities at the university.

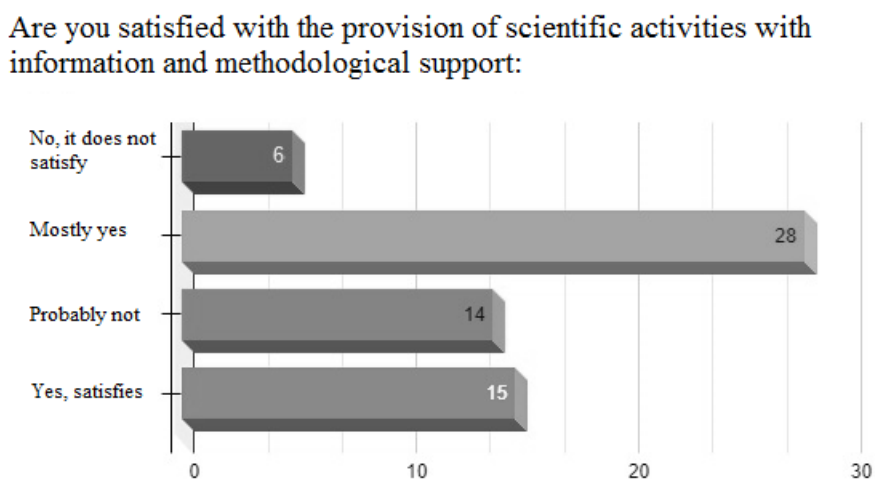

Figure 3. Assessment of information support at KNITU-KAI

Consider the indicators on this issue in KFU (Figure 4). About 36% are fully satisfied with the informational support received from the university and 27,3% are more in agreement with this statement. More than 2⁄4 of the respondents find it difficult to answer and give a negative answer. The pie chart shows that the situation is very similar with another university and it should be noted that, according to the students' assessment, the information support is at the proper level.

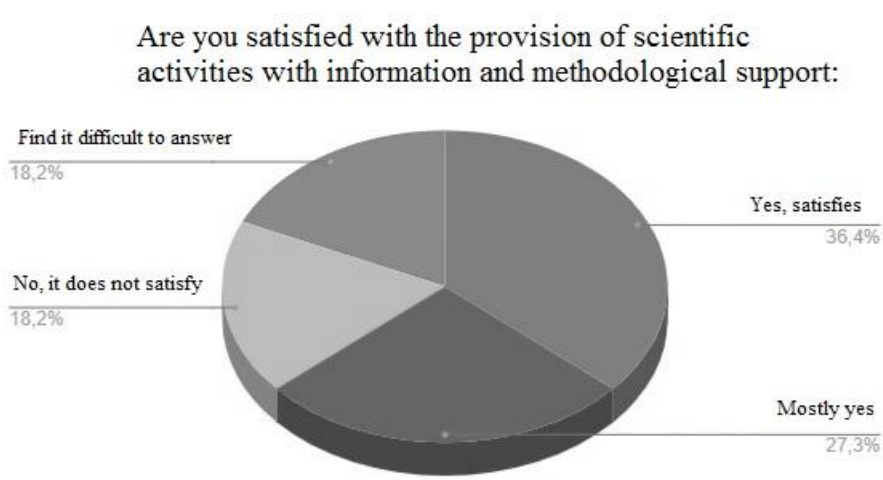

Figure 4. Evaluation of information support at KNITU-KAI

Discussion

The study of pedagogical literature makes it possible to establish the absence of various studies on this issue. However, information support for managing the quality of education of students of higher educational institutions is considered in the works of Abilkasimova & Saduakas (2016). In the works of Latysheva & Razumnova (2016) describe the specifics of the organization of scientific research work with students of the magistracy. Volkova (2010) shows the relationship between the activity in scientific research work and the values of students, and also highlights the factors influencing the development of research activities in the university.

A student's manifestation of interest in science can arise from any information he or she has taken on scientific activity, received both to his or her personal e-mail address and personally from the teacher. The main thing is to understand the emphasis the university makes on the dissemination of information on this type of activity. Earlier, the monitoring carried out at two universities in Kazan helped to reveal that the Kazan Federal University pays special attention to the elders of the group and students receive more information on scientific activities from them than from university staff. In my opinion, this is a rational solution for the distribution of information. The headman receives a mailing list for scientific events from the dean's office or scientific adviser and then, sends mailing through modern instant messengers (WhatsApp, Viber). Students learn about scientific events much faster, as they check for new messages on these messengers quite often. Thus, the activation of students' independent work will be accelerated, in contrast to the information received by e-mail.

At the Kazan National Research Technical University A.N. Tupolev - KAI, the focus of attention is directed to the department of organization of educational and scientific research work of students and in the course of the study it was revealed that the department copes with its activities excellently. However, some nuances should be noted. One of the drawbacks that can interrupt a bulk mailing: an incorrectly specified email address, due to inattention. The human factor, of course, cannot be ruled out. As a result, the student is not informed about scientific events, and the mass mailing is interrupted. Bulk informational mailing on scientific events to the student's e-mail address may not be available to him, since the letter is redirected to junk mail. Consequently, the student is missing important information on scientific activities. This drawback was identified in the e-mail system, so it is worth noting that support from other departments or university staff in providing information support to students is needed. On the basis of theoretical analysis in educational institutions, it can be concluded that it is absolutely inappropriate to use one structure in a university.

Conclusion

The study showed that students have an interest in research activities. This allows us to conclude that with competent work with students, a sufficient number of students can be involved in scientific research work. But it is necessary to pay attention not only to the formal side of scientific research work, but also to take into account the work of teachers, employees of scientific research work, who strive to arouse a keen interest of students in this activity.

The materials of this article can be useful for employees engaged in the scientific activities of universities, for specialists in the field of organizing educational and scientific research work.

Many years of experience in organizing the scientific research work of students shows that it is necessary to use various forms of mailing for scientific research work and constantly improve the level of organization. Students actively engaged in science reveal their creative potential, continuing to engage in science in graduate school and in the future become highly professional specialists.

Acknowledgements

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