Abstract

Historically volunteerism in Russia has traditionally developed in the system of higher education. Nowadays Russian universities' scientific potential is becoming more active due to the changing of the educational processes. Despite the fact that self-government bodies, business as well as academic mobility and local communities stimulate university community, social mission of the higher education is being replaced with pragmatic goals. Whereas university community's initiative is gaining value, universities overall program is formed under the guidance of innovation and commercialization. Meanwhile the popularization of volunteerism among younger generations as a trend is reflected in support provided to organized youth groups that often function in universities and colleges. The purpose of this article is to assess the impact of volunteerism on the scientific activity of Russian university students and their innovative potential. The report presents the data of a survey of students of the Urals Federal District which was realized in 2017. The method of correlation analysis is applied. The following research solves such tasks as the evaluation of dependence of the self-assessment of the innovative culture on the degree of the Ural macroregion’s students’ involvement in volunteer activity. The specificity of the involvement of student volunteers in the innovative and scientific activity of the university is determined.

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1. Introduction

Russian universities are in an active phase of reforming. There are changes in the organization of the educational process. The scientific potential is becoming more active. The interaction of the university community with the external environment is stimulated with local communities, self-government bodies, business and other universities. However, the social mission of higher education is being replaced by pragmatic goals. Universities are guided by innovation, commercialization of scientific research. The initiative of teachers and students is gaining value.

At the same time, a powerful campaign for the popularization of volunteerism is taking place throughout the country. As in many developed countries, resources are allocated for systemic state support for the activities of volunteers in all spheres of society. The main focus is on the younger generation. In this direction, support is provided to organized youth groups, usually functioning in the context of Russian universities and colleges. In Russia, volunteerism has traditionally developed in the system of higher education.

1.1. Students in the development of the universities

Global trends in the development of universities around the world are the changes in the management structure, the strengthening of administration and an orientation towards the development of innovative activities (Ambarova, 2017). The latter can be defined as an activity to create innovations or a supportive factor for their development, such as training in innovational activities or a factor in the reproduction of innovative personnel. Researchers define innovative activities of the university as multidimensional activities aimed at creating innovative products, technologies and services (Latuha, 2012). In some extent, innovations are directly related to the activity of educational communities, those researchers who work in modern universities. In this regard, the concept of "Innovation initiated by an employee" is widely disseminated. Within the framework of this concept, all employees of the organization are considered as subjects of action, potential resources of innovative development of the organization (Melikian, 2013). The low geographic mobility of highly qualified specialists between Russian regions determines the prevalence of academic inbreeding in modern Russia (Academic Inbreeding..., 2016). Under such circumstances successful students may well become a potential for the development of their universities' development due to their active involvement in scientific activities and innovative projects.

In recent years, there has been a change in the organization of the educational process. Guided by advances in research of high school reform and recent education policy, leaders and funders of reform and educational innovations should seek to further integrate structural arrangements and instructional practices with local employers and higher education institutions. (Kuo, 2010). Studies usually consider the influence of the educational process, scientific activity on the development of students, their personal and professional competencies as a potential workforce (Daniel et al., 2012). Researchers consider algorithms of formation of the youth of the elite at the present stage of development of Russia and substantiates the relationship of these processes with the innovative development of higher education, to be a mandatory condition for the formation of national elites (Myasoedova, 2016). Sociologists distinguish and describe the innovative type of students and employees of educational institutions of different levels (Queen, 2015). An important emphasis in studying the prospects for the development of higher education is associated with the
civic engagement of students. The emergence of student volunteering initiatives in higher education coincides with concern about a perceived decline in the levels of social capital, and a growing belief that it can play a supporting role within civil society through proactive student volunteering measures (Higher education..., 2012).

Most often, the influence of the university environment and higher education on the development of students, their achievements and personal characteristics, professional competence and experience is examined. In our study we want to find valuable experience, contribution and characteristics of students with volunteer experience, which can be useful for universities in the implementation of their development strategy, namely in promoting scientific projects and innovation.

1.2. Review of the literature on the study of student volunteering

Researchers consider volunteering through the prism of the theory of social and human capital, proving the potential of volunteering in the development of the latter (Wilson, 2000; Rochester et al., 2009).

In scientific research, student volunteering is seen in the context of young volunteers' self-development (Rusu, 2016; Williamson, 2017) and in studying the contradictory motivation of student volunteers and its dynamics (Handy, 2010; Holdsworth, 2010; Rusu, 2017). A number of researchers analyze volunteer activity as a specific stage in the professional development of the individual (Handy, 2010), as a resource capable of activating the initiatives of young people (Leko-Šimić, 2018).

In the United Kingdom universities have used volunteering as one way of enhancing student employability (Anderson, 2012). Students’ volunteering does not merely represent response to the different social needs and problems, but it also develops skills, competencies and self-awareness of the individual who volunteers (Leko-Šimić, 2018). One more of the benefits of the students' volunteering is self-development (Williamson et al., 2017).

Active participation in different aspects of social and economic development in Colleges and universities attach great importance to students volunteering to promote their ethical and moral development, emphasize self-responsibility for employability and community cohesion (Holdsworth, 2014). The activities involved are very extensive, including community service, education, hospital, and events. Volunteering is an increasingly heterogeneous activity that occurs along a continuum, with long-term regular volunteers at one end and occasional volunteers at the other end (Cnaan, 2010).

It has to be mentioned that in China students were passionate about learning and enriching their life experience (Qi, 2017).

Thus, the impact of volunteer training on personal and professional development of university students is obvious. However, there is one question. How much is this development and personal and professional competencies can appear to be in demand in the development of modern universities? Can the experience of participating in volunteer activities somehow influence the scientific and innovative activity of students?

2. Problem Statement

In modern conditions in universities there is a need for young people, who have innovative potential and entrepreneurial activity. People who are able to set goals and achieve them are in demand. There is a
need for young people who are hardworking, know how to do their job, and have soft skills at the same time. It is these characteristics that are given to those who have experience of volunteer activity. However, in the new economic realities of Russian universities, organizations pay much less attention to student’s volunteering than before.

3. Research Questions

The first research task is connected with the assessment of the innovative potential of students from the universities of the Russian macroregion.

To solve this problem it is important to answer these questions:

- Does participation in volunteer activities influence the self-esteem of students in relation to their innovative culture?
- Is there a correlation between the involvement of students in volunteerism and their participation in innovative projects that are being implemented in their universities?

The second research task is connected with the evaluation of the scientific activity of students-volunteers from the universities of the Russian macroregion.

To solve this problem it is important to answer the question:

- Does participation in volunteer activities influence their participation in research projects of the university?
- What forms of research work are preferred for student volunteers?

4. Purpose of the Study

The purpose of this article is to assess the impact of volunteerism on the scientific activity of Russian university students and their innovative potential.

5. Research Methods

The article is based on the materials of a survey of students based in the Urals Federal District. The general population included 51 universities. In the course of the study a quota sample was implemented. It was formed on the basis of statistical data on the number of students in the regions of the federal district (Sverdlovsk, Chelyabinsk, Tyumen, Kurgan regions, Khanty-Mansiysk Autonomous Okrug). Within each region, quotas were applied in different areas of training (engineering, science, humanitarian, socio-economic). We used the public information posted on the websites of universities. The total sample size was 1860 students. Students of 3-4 courses were interviewed.

The following research solves such tasks as the evaluation of dependence of the self-assessment of the innovative culture on the degree of the Ural macroregion’s students’ involvement in volunteer activity. The specificity of the involvement of student volunteers in the innovative and scientific activity of the university is determined.

In order to assess the innovative potential of student volunteers four dichotomous questions were asked: "Did you participate in the development of innovative projects for the social sphere?", "Did you
participate in the development of projects for the business sphere?", "Did you participate in the development of innovative projects for the management sphere?", "Did you participate in the development of innovative scientific projects?". In addition, students were asked to assess the level of their innovative culture. Respondents could choose from four alternative answers: high, medium, low, or difficult to answer.

To study the scientific activity of students, their answers to the closed question: "Do you participate in research activities?" was analyzed. Respondents could choose the answer from three alternatives: "I constantly take part," "I participate situationally," "I do not participate." The next question was: "In what forms do you participate in scientific research?". It presupposed a choice of 5 alternatives: "I participated in the scientific projects of my faculty, department"; "I work in scientific projects in the framework of educational activity under the guidance of my scientific adviser"; "I work on my own initiative"; "I participate in the collective project of a scientific foundation with grant support," "I participate in research commissioned by the authorities." The study analyzed only the answers of those respondents who claimed to have experience in research and development.

The method of correlation analysis is applied. The answers to the questions of students with different degrees of involvement in volunteering (from regular activities to one-time participation) and those with no volunteer experience were evaluated. To assess the involvement of students in volunteering during the period of study at the university, the question was asked in the questionnaire: "Have you had to volunteer in the last three years?" Respondents could choose the answer from the four proposed alternatives: "Yes, I constantly work as a volunteer (at least once a month)"; "Yes, from time to time I participate in volunteer projects (3-5 times a year)"; "I participated accidentally 1-2 times".

6. Findings

45% of students who study at universities on 3-4 courses who answered the question asked in the questionnaire do not have experience in volunteering projects. 28% participated in volunteerism 1-2 times, from time to time - 18% of respondents, 9% of students volunteer regularly. Thus, during the period of study at the university, almost every second student was involved in this or that volunteer practice.

6.1. Innovative potential of students-volunteers of the Russian macroregion's universities

The innovational potential was measured through students' 'self-assessment of their innovative culture and objective indicators of respondents' involvement in innovative projects.

Differences in subjective assessments of their innovative culture by students with different degrees of involvement in volunteerism are presented in Table 01.
**Table 01.** Self-assessment of innovation culture by students of the Russian macroregion with different levels of involvement in volunteer activities (% of the number of respondents in the group)

<table>
<thead>
<tr>
<th>The evaluation of the innovative culture level</th>
<th>Involvement of students in volunteering</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regularly works as a volunteer</td>
<td>Participate from time to time</td>
</tr>
<tr>
<td>High</td>
<td>22,5</td>
<td>11,7</td>
</tr>
<tr>
<td>Medium</td>
<td>58,9</td>
<td>59,2</td>
</tr>
<tr>
<td>Low</td>
<td>10,9</td>
<td>12,3</td>
</tr>
<tr>
<td>Difficult to answer</td>
<td>7,7</td>
<td>16,8</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

According to the correlation analysis, the higher the students' involvement in volunteerism is, the higher is the level of their self-esteem in relation to their innovative culture. The higher the involvement of students in volunteering is, the higher is their level of awareness/understanding of their innovative culture (Gamma coefficient – 0, 226, p-value - 0.000).

When studying the objective indicators of the university students' involvement in the innovative activities of their universities, statistically significant differences in the responses of student volunteers and students who do not have such experience were identified only with regard to their participation in innovative projects for the social sphere and business. The data are presented in table 02.

**Table 02.** Participation of students of the Russia macroregion with different levels of involvement in volunteer activities in the innovation activity of the university (% of the respondents of the group who responded positively)

<table>
<thead>
<tr>
<th>Participation in innovative activity</th>
<th>Involvement of students in volunteering</th>
<th>Assessment method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regularly works as a volunteer</td>
<td>Participate from time to time</td>
</tr>
<tr>
<td>Participation in the development of innovative projects for the social sphere</td>
<td>41</td>
<td>28</td>
</tr>
<tr>
<td>Participation in the development of innovative projects for business</td>
<td>38,8</td>
<td>19</td>
</tr>
</tbody>
</table>

Between the variables "Participation in innovation activity" and "students involvement in volunteering", an average relationship is revealed. According to our survey, the higher the involvement of students in volunteering is, the more likely they are to participate in the development of innovative projects for the social sphere (Gamma coefficient – 0,466, p-value - 0.000). The higher the involvement of students in

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volunteering, the more likely they are to participate in the development of innovative projects for business (Gamma coefficient – 0.391, p-value - 0.000).

1.2. Scientific activity of students-volunteers from universities of the Russian macroregion

Scientific activity of students with different degree of involvement in volunteering was studied through the analysis of correlation between the volunteering experience and the involvement of these students in the scientific activity of the university. The data are presented in table 03.

**Table 03.** Student assessment of the Russian macroregion with different levels of involvement in volunteer activities (% of the number of respondents in the group)

<table>
<thead>
<tr>
<th>Participation in scientific activity</th>
<th>Involvement of students in scientific activity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regularly work as a volunteer</td>
</tr>
<tr>
<td>Regular participation</td>
<td>21,5</td>
</tr>
<tr>
<td>Accidental participation</td>
<td>34,7</td>
</tr>
<tr>
<td>Does not participate</td>
<td>43,8</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

According to the research, the higher the students' involvement in volunteering is, the more real is their participation in the scientific activity (Gamma coefficient – 0,337, p-value – 0,000).

When assessing the forms of participation in scientific research, in which students were involved, statistical differences were revealed only between independent informal participation in scientific activity and the involvement of respondents in volunteering. The data are presented in table 04.

**Table 04.** Student assessment of the Russian macroregion with different levels of involvement in volunteer activities of their research activities, which they lead independently and initiate ( % of the number of respondents in the group)

<table>
<thead>
<tr>
<th>Participation in the scientific activity on the informal basis</th>
<th>Involvement of students in volunteering</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regularly work as a volunteer</td>
</tr>
<tr>
<td>Yes</td>
<td>25</td>
</tr>
<tr>
<td>No</td>
<td>75</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

Evaluation of the results of a university students survey in the Russian macroregion demonstrates that the higher the involvement of students in volunteering is, the more likely that they will initiate scientific research independently, focusing on their own interests and opportunities (Gamma coefficient – 0,346, p-value - 0.000).
7. Conclusion

The study made it possible to evaluate volunteerism as a predicate of Russian students’ innovative and scientific activity. The volunteer experience acquired in the student years and the degree of involvement in volunteer projects affect students’ self-esteem in relation to their predisposition to the understanding of innovations and their readiness to produce them. It seems to us that this effect is an obvious consequence of the fact that volunteerism determines the development of young people's social self-confidence and critical thinking skills, which is confirmed by a number of sociological studies (Handy, 2010).

The study revealed the relationship between students’ volunteer experience and indicators of their involvement in interaction with stakeholders through the participation in innovative projects that are implemented by commercial enterprises and NGOs. It seems to us that social capital of volunteering plays a special role here, allowing young people who have experience in social projects to communicate easily with the representation of different social groups. In addition, student volunteers are open to the external initiatives of innovative transformation that go far beyond the university environment. The orientation of student volunteers to a broader field of social interactions is confirmed by the evaluation of their scientific activity, namely, by more expressed indices of independence and initiative in scientific research. Students who volunteer are active both within their university and in the wider community (Cnaan, 2010). Perhaps, our data prove that students with the experience of volunteering can indirectly become participants of integrate structural arrangements and instructional practices with local employers and higher education institutions (Kuo, 2010).

To sum up, this paper contributes to the growing number of literature on the consequences of volunteerism for students and for higher education in Russia. As a limit of the study, it could be the fact that the research was conducted only in the universities of one large industrial region of the country. Perhaps, if within the framework of this research’s logic volunteer students from other Russian regions or other countries are interviewed, another picture can be obtained due to several differences in the sociocultural environment, economic and political conditions.

It seems to us, that according to the results of the research, there are a number of important issues that require further study. Is the involvement of students in innovative projects and scientific activities effective for universities and students themselves? Russian universities, like all other world universities, are interested not in the process, but in the results, namely, in scientific publications, patents and contracts. There is a risk that the involvement and orientation of student volunteers in different types of group activity can work as a massive involvement in the project activity without expected positive consequences for the development of the university and its promotion.

In addition, in our opinion, it is extremely important to study the personality characteristics of student volunteers in the context of their correspondence to the profile of the innovator and entrepreneur. Summarizing the characteristics of volunteers and innovators, we can conclude that there are many similar personal traits. They are characterized by the value of independence, benevolence and universalism. Innovators are distinguished by a high educational level and active participation in additional education activities. They are less guided in their actions by the desire to receive and retain power, not based on their own achievements (Queen, 2015). Sociological research proves that the higher the person's level of education is, the more likely that this person will be engaged in volunteering.
Acknowledgments

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