

Scientific Student Societies: A Way of Scientific Research Vocations Boosting

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Abstract

Born in Russia at the end of the XIXth century the Scientific Student Societies have developed a rather original way of initiation and involvement of the young in the scientific research during High School and University cursus. All through the XXth century and up to now, they have given several generations of Russian scientists an adequate pre formation consisting not only of skill acquisition in their future speciality but also in planning, realization and organization of scientific research and sharing of its results. Their popularity was also due to the high degree of initiative and autonomy left to the students.

Abbreviations: SSS: Scientific Student Societies

Introduction

In our days, when most of young people with a diploma of physician are no more inspired by a scientific career possibility, and though Occidental World has general negative opinion about Russia and its institutions, it is not forbidden to exhume some moments which have proved efficacy and may be useful for us now. Such an interesting institution (from my point of view) was the Scientific Student Societies (SSS) [1], existing in all the High Schools and Universities, but may be especially activated in Medicine Faculties. They were created in the end of XIXth century by famous scientists such as VI Vernadski (Figure 1) and his colleagues in Sankt Petersburg (1882) and in the beginning of the XXth century by NE Jukovski (Figure 2) in Moscow (1909) [1-4]. In the 30-ies they were reactivated and widespread through all the country. After the 2nd World War, SSS were also working in the other countries of the "East Bloc". The links and experience exchanges were current between them (International meetings and conferences, scientific information share, student exchanges and so on). Presently in the XXIth century they have not disappeared: "NIRS" - student scientific research work - remains a preoccupation of the academic staff in Universities and High Schools as well as different Ministries of the Russian Federation. Student scientific associations still exist, may be a little modified, sometimes independently as "Meridian", "Luch" (that means ray or beam). Books including scientific articles written by students are still published [5-7], regional and national competitions are organized.

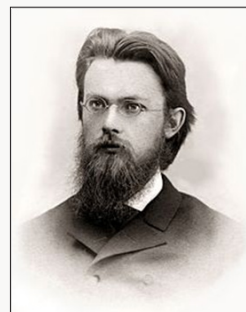


Figure 1: Vladimir Vernadski (1863-1945) famous chemist and mineralogist, creator of the first student scientific circles in Russia.

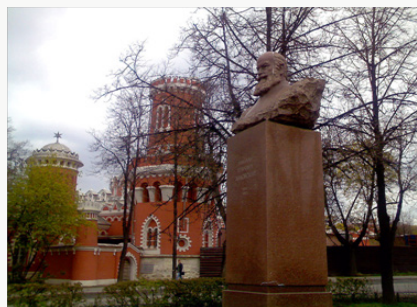


Figure 2: Monument to NE Jukovski (1847-1921) - The "Father of Russian Aviation" - in the Entry Square of the Petrovski Palace (Aviation school) in Moscow.

Description and Commentaries

The SSS aims were: to popularize scientific research among students, to find out the most talented among them and to help them to develop towards an eventual scientific career. It was also a mean for students to acquire deeper knowledge in one or several disciplines and to choose their future speciality. The Student Scientific Circles eventually provided the departments with qualified helpers, as a just return for the teaching staff mobilisation during the young researcher's formation. The structure schema of the SSS is presented in Figure 3. At the basis level was the Circle. As soon as they wanted, students were invited to join a student scientific circle by the department of their choice and to begin their initiation according to their trends with one of the assistant or docent. At this level, the students learned step by step how to manage scientific literature, to review it, to deepen their

knowledge's in the chosen subject, to acquire technical skills and, last but not least, to participate to the research of their mentor/supervisor, or even to start their own investigations on their personal research topic.*NB. The work performed within the SSS activity differed from end of cycle obligatory works, but the members of SSS were allowed to include their personal data in the end of cycle work, if it was adequate. The students - members of a circle - elected their president - responsible who organized periodic reunions for reviewing the work performed by the circle members. During these meetings experienced assistants and docents or professors were invited to present lectures or demonstrations helping the students to assess the peculiarities and the research specifics of the discipline (Figure 4). The best student 'works were selected and recommended for reporting at Faculty and inter Faculties student scientific conferences.

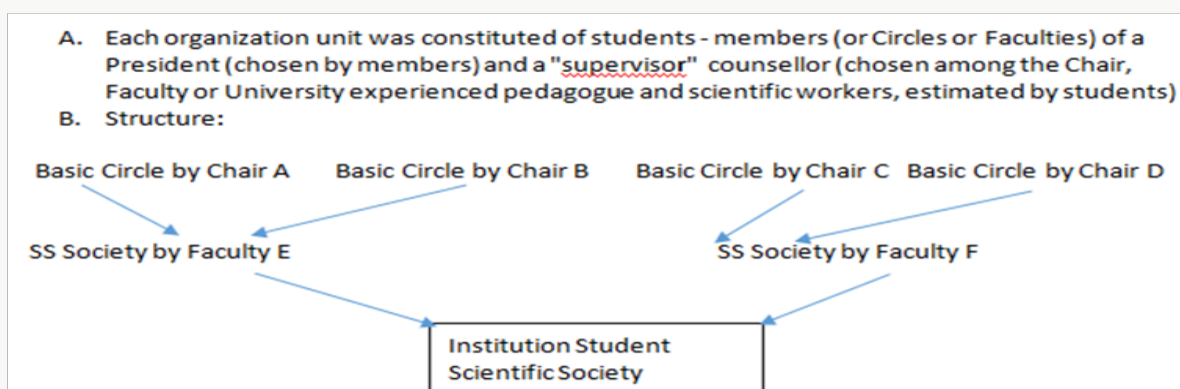


Figure 3: Schema of a Student Scientific Society structure.



Figure 4: Professor SHOR GV (1812-1944) - well known Pathologist - with students at a meeting of the student scientific circle of Pathologic Anatomy in the 30-ties.

The next level was Faculty and University or High School Scientific Student Society. The department circles joined forming faculty and institute Student Scientific Societies (SSS), which were gathered as University or High School SSS. They were handed by students and only supervised by a responsible chosen among docents and professors of the Faculty. Students elected their president and delegates for contacts with other faculties, institutes of the country and of foreign countries. They organized faculty

conferences, Inter-faculty scientific sessions. Their activity was financed either by the Professional Union of their School or by the University budget. The most promising students - members of SSS were further recommended for scientific work either in the department where they started their work, or in Scientific Research Institutes and other High School Faculties (according to the young specialist's will and the possibilities of the aforementioned institutions). The Ministries took into account the SSS activity of the young specialist when his future was considered after the end of his cursus. Besides career start consideration, other awards were current: scientific books, scientific travels, being the co-author of a "chief's paper, and so on. So the students made acquaintance not only with the individual searching process itself (Figure 5), but also with elements of organizing scientific research, co-operative investigation, discussion and peer evaluation of its results both by other students and by the Faculty staff scientists. Students also learned to communicate at different levels and, if they wanted, to prepare themselves to a scientific career. If not, nevertheless the aptitudes obtained during their work in the SSS was precious for their further professional activity: acquaintance with special literature research methods, reviewing and critics of scientific publications, acquisition of some technical skills, capacity to plan scientific research and organize scientific meetings.

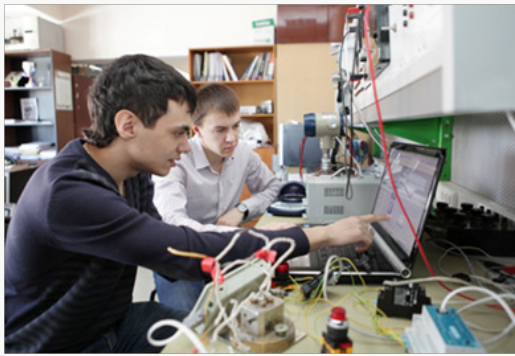


Figure 5: Students at Research work in a Technical High School in the 80-ies.

It is estimated that about 20% of the students attended the SSS. Among them about 30% have presented a valuable work (compilation, fundamental or applied research). Most of the ex-members of SSS have pursued a career in the previously chosen speciality. In Russia, all through the years 1930-1990 and up to now most of those who have followed a successful scientific or pedagogic career, were ancient members of the SSS. (That does not mean that without SSS a scientific career was not possible). Many of the students, even foreigner hosts, who have passed through this "school" have been later eminent scientists of their countries (for instance: Academician VI Shumakov - the first Director of the Transplantation Institute in Moscow, Professor VM Filipov - present Rector of the Russian University of People Friendship; Professor R Roman Ramos - Dean of the Medicine Faculty of the Mexico Autonomous University)

Conclusion

The SSS have given several generations of motivated Russian scientists an adequate pre formation consisting not only of skill acquisition in their future speciality (especially precious in surgical disciplines) but also in planning, realization and organization of scientific research and share of its results. This was capital for a developing country and remains important nowadays. The large autonomy and initiative given to the students in the SSS has certainly contributed to their popularity and success. This experience ought to be adapted to the conditions of our present society development and could enhance individual initiative and motivation, as well as collective research organization. It ought to be included into Faculties staff task and financing.

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