

Expanding the boundaries of the university: the Regional complex for gifted children and youth

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Abstract. Formation of a modern university as a driver of regional development is impossible without its participation in forming a territory's intellectual potential, in particular, by its involvement into system of children's additional education. This work is devoted to studying a university's role in children's additional education mechanisms development. Advantages of higher educational institutions in its implementation are shown. To illustrate the results of the study, the case of Don State Technical University, a Pillar University of the region, is presented. Role, structure and specificities of functioning of the Regional complex for gifted children and youth, which is created at the Pillar University, are shown.

1 Introduction

Transformation of post-industrial society has expanded the boundaries of subjectivity of the University, having granted it new opportunities to participate in society development [1]. A modern university, while generating new knowledge, products, projects and initiatives, becomes a development driver of the region in where it is located. Along with that, while implementing educational and scientific mission, the University participates in human resources forming. And the boundaries of this participation are expanding: universities are being included into the system of additional education of children, building the base of society's intellectual potential, developing an ongoing education system and forming a socio-cultural environment of a region.

The objective of this work is studying mechanisms of additional education for children at a university in modern conditions of its subjectivity boundaries expansion. Authors' attention is focused on one of such mechanisms - creating of the Regional complex for children and youth (further referred to as – the Regional complex) at the University. Studying the experience of Don State Technical University (DSTU) has allowed to illustrate the

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specificities and prospects of development of the Regional complex as the University's special structure.

2 Methods

Development of additional education at the University is viewed through the prism of a systematic approach [2], and attention is called to problematic of possibilities and limitations of this mechanism in modern Russian conditions [3].

To ground the study conclusions, the method of situational analysis [4] was used, which allowed to study the experience of the Pillar Regional University (DSTU) in development of children's additional education in the framework of the third university mission.

3 Results

3.1 Development of children's additional education system in Russia: role of a university

The most important task of socio-economic development of any region, determining its future, is society's intellectual potential creating and enriching and forming of human resources, able to respond to any challenges of a permanently changing environment. And here an important role belongs to development of an effective system of ongoing education, beginning from childhood. As a modern University is called to become a driver of regional development [5], it is actively involved into development of mechanisms of children's additional education.

The system of children's additional education (extracurricular education) in Russia, formed more than a hundred years ago as a part of the governmental education system, has a successful historical experience. Soviet system of children's additional education had no analogues. Its uniqueness was, in many respects, determined by exclusively governmental ownership, free-of-charge character of programs, and presence of a separate system of extracurricular education organizations. Modern system of children's additional education partially preserved some elements of Soviet system, such as an independent extracurricular education organizations system, and free-of-charge (but not all already) educational programs.

In accordance with Russian legislation on education, organizations of additional education, as well as preschool, general education institutions, professional educational institutions, and educational institutions of higher education have rights to implement additional educational programs. The basis for admission to the implementation of additional educational programs is a license to conduct respective educational activities. The dynamics of quantity of organizations implementing programs of children's additional education is shown in Fig. 1. One can note an almost double increase in quantity of organizations implementing educational programs for children for the last four years.

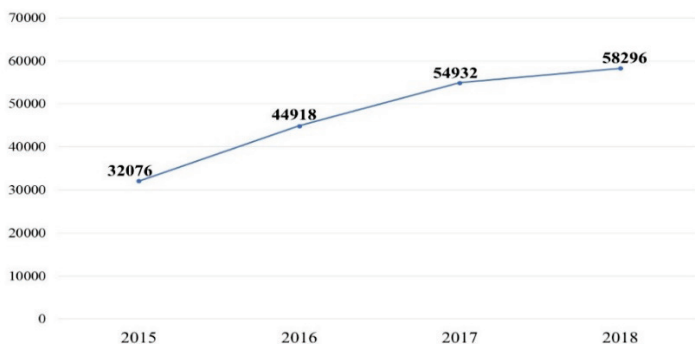


Fig. 1. Quantity of organizations implementing extracurricular/additional education programs for children in Russia (according to Rosstat)

The structure of additional education system according to types of institutions implementing additional education programs is shown in Fig. 2. Other organizations shown in Fig. 2 may include libraries, museums, children's camps, etc.

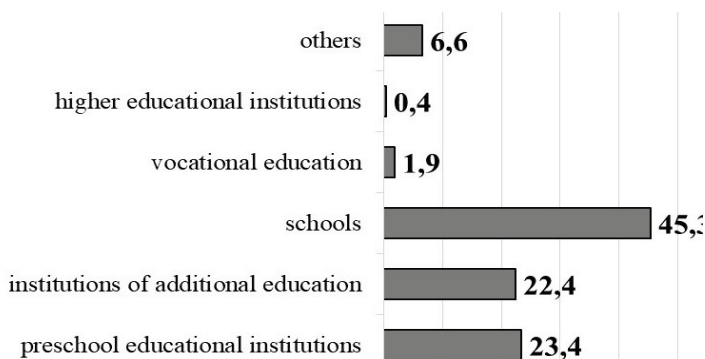


Fig. 2. Organizations implementing educational programs by type, in % (according to Rosstat)

In implementation of additional education programs, role of schools is significant: their share among organizations implementing additional education programs is 45.3% with the share of educational services 40.9%.

As for the ("profile") organizations of additional education themselves, their quantity is constantly decreasing: in 1988, more than 26 thousand of those numbered, in 2008, a little more than 16 thousand remained, and in 2017 – about 13 thousand. So, at present, the share of additional education organizations made 22.4% in the structure of all organizations implementing educational programs for children. However, the share of their services is the biggest – 41.1% of the country's additional educational services total quantity. The main reason for closing additional education organizations is shortage of budgetary funds in municipalities. In addition, additional education organizations face other problems:

- insufficient governmental informational support;
- high rental costs, lack of benefits (mainly for private organizations);
- problems of "legitimization" in the form of licensing procedure (mainly for private organizations);
- mandatory control for compliance with SanPiN sanitary rules (which are often obsolete).

So it can be noted, that an increase in total quantity of organizations implementing children's additional education, with reducing the "profile" organizations of additional education of children, becomes a modern trend.

Another trend in the development of additional education is participation of universities in implementation of additional education programs for children. And although their role is not great at present – among the organizations that implement programs of children's additional education, the share of universities is 0.4% - but activity of universities in this area increases. At the same time, one can observe growth in activity of universities mainly of technical profile, for which implementation of additional education programs is important from the point of searching motivated and talented students to attract them as enrollees [7]. The activity of technical universities in this area is also explainable because of relatively small quantity of organizations implementing programs of technical directions for children. In addition, state educational institutions possess resources and capabilities which allow to solve many problems of additional education organizations. In particular, higher educational institutions are able to solve problems of information support deficiency, rental of premises, licensing, etc.

As programs of children's additional education are implemented by few universities, from the standpoint of replication, the experience of DSTU, which is a regional Pillar University, will be interesting. DSTU actively develops the system of additional education in the Rostov region.

3.2 Regional complex for gifted children and youth of the higher educational institution in the system of children's additional education: DSTU case

DSTU is a pillar multi-profile University, which, among the first ones, received this status as a result of competitive selection under the project of the Ministry of education and science "Development of the pillar universities network", initiated in 2015. As a Pillar University of Rostov region, DSTU possesses significant scientific, educational and technological potential, which can solve a significant number of objectives in the region: starting from influx of students and ending to development of local communities [8]. In DSTU, 21.06% of students of the Rostov region study in more than 100 directions.

For DSTU, as for a pillar university, the key direction is implementation of strategic projects for the benefit of region's socio-economic development. One of the three strategic projects supported by the Ministry of education and science of the Russian Federation as a supplement to the DSTU's development program is "Creation of the Regional complex for gifted children and youth of the Rostov region".

The need to create a regional complex for children and youth in the Rostov region is conditioned by necessity for its dynamic socio-economic and innovative development, which is impossible without intellectual potential developing and "quality" human resources forming, starting from childhood. In 2018, 1644 organizations implemented additional education programs in the Rostov region. The main entities implementing additional education programs for children in the region are schools.

In average, demand of children aged 5 to 18 years in additional education services in the region is met by 74.9 %. At the same time, only 11.9% of children study technical and natural science directions. Additional education of children in the region, although represented by a large variety of hobby groups and sections, is unsystematic. There is a lack of children's involvement in promising areas of technical and natural science directions.

Search for answers to these challenges of additional education development in the region, as well as implementation of the system integrator's function, became the objectives of the Regional complex for gifted children and youth on the platform of DSTU. The Regional complex, created in 2016, is essentially an innovative educational platform for children and youth of the Rostov region. The structure of the Regional complex for gifted children and youth of DSTU is shown in Fig. 3. Despite the fact that the Regional complex is focused on

additional educational services for children, it also teaches adults (Parents' University and The Third Age Academy).

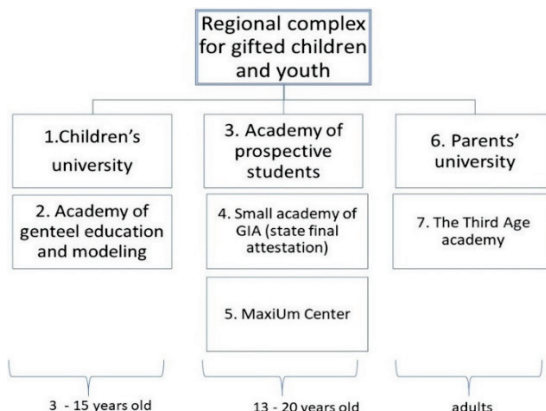


Fig. 3. Structure of DSTU's Regional complex for gifted children and youth

The Regional complex is not only a complex educational center with a certain structure, but also an integrator which forms a system of network cooperation between the region's social institutions to identify, develop and support talented children and youth on the basis of integration of general, additional, and vocational education programs.

For three years of existence of the Regional complex, the number of students in it had a 56% increase. Quantity of additional education programs increased from 40 to 75 (Fig.4). In 2018-2019 academic year, children with disabilities were included into the educational process of the Children's University for the first time – 60 children study the inclusive education programs. In the Academy of Prospective Students study more than 800 schoolchildren. Enrollment for programs "MaxiUm", designed for 60 teenagers, has been completed. Profile classes interact with 20 schools of Rostov-on-Don. In addition, 50 families became students of the Parents' University.

It is notable that quantity of students in the Regional complex in natural science and technology areas grows. If in 2017 in these areas in total the share of students was 31.7%, in 2018 it was already 50.2%. So, the Regional complex, on one hand, contributes to the formation of prospective students for DSTU, on the other hand, eliminates the structural problems of children's additional education in the region (distortion towards socio-pedagogical areas) and creates intellectual potential for scientific-technical development of the region in priority sectors.

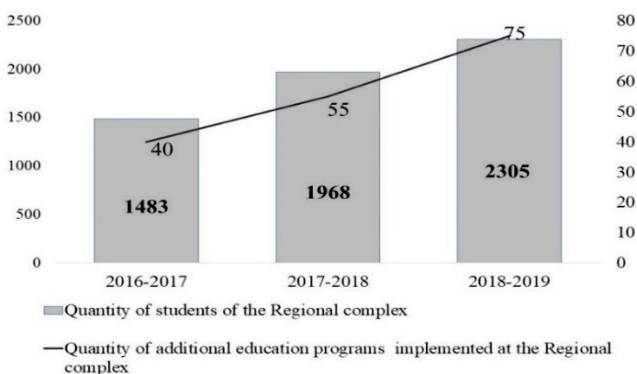


Fig. 4. Quantity of students and quantity of additional education programs dynamics in the Regional complex (by academic years)

Along with that, the following challenges were revealed for the DSTU's Regional complex in the process of its activity:

- low level of interaction with the region's educational institutions. Students from remote areas of the region are involved insufficiently;

- the need to develop modules to support and assist talented children and young people in form of special programs, psychological and pedagogical support, support for participation in regional, federal and international events, grant competitions, etc.;

- necessity in strengthening the integration of general and additional education to unite the system of work with talented children and youth at different stages: "preschool – school – higher educational institution – postgraduate education – employment".

In response to these challenges, the Regional complex expands its geography – it involves children from remote areas of the Rostov region into educational process. Training is conducted on the basis of interactive services, including Skype, with case technologies in the information-educational environment of distance training for gifted children, which is developed on the basis of Google services, organization of distance academic competitions based on a combination of network and project technologies. In order to support and assist talented children and youth, the Regional complex organizes and conducts festivals, regional professional orientation forums, conferences and meetings, and academic competitions.

4 Conclusions

Involvement of the University into the system of children's additional education is determined, on one hand, by the needs of the University itself in improving the "quality" of entrants, and, on the other hand, by the change of its institutional role, expansion of its influence on the subjects of the regional economy. A modern university, as a rule, possesses the necessary human, material, organizational, information resources for the implementation of additional education programs for children. The experience of DSTU proved that the creation of an organic structure – the united Regional complex for children and young people - is a promising organizational form which implements different additional education programs for children. In that way, developing additional education for children in the region, forming its systemic nature and implementing promising training programs, the University forms its region's future image.

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