The Preparedness of Russian Schoolchildren for Liberal Arts Education

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Article Info	ABSTRACT
<i>Article history:</i> Received Feb 24, 2018 Revised Apr 1, 2018 Accepted Apr 26, 2018	The article reveals data from a questionnaire of 16-17 year old Russian pupils about their experience of managing free time and using educational choice in the school. The authors compare the obtained results with the values of liberal arts education, gaining significance in Russian universities. The study shows that the principles and practices of liberal arts are in deficit even in advanced and innovative Russian schools.
Keywords:	
Educational values Free time Liberal arts education Russian schoolchildren	Copyright © 2018 Institute of Advanced Engineering and Science. All rights reserved.

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1. INTRODUCTION

The system of higher education in Russia has undergone many changes in recent years and today the educational system closely resembles that which exists in Europe. In 2009 Russia converted to a two-tier system with 4-year bachelor's programs and 2-year master's programs. Prior to this, students entered a university already having selected their specialization. In addition to numerous educational reforms conducted, Russian universities have expanded international collaboration in the sphere of research and even curriculum reform at the bachelor's and master's level. One such example is the Faculty of Liberal Arts and Sciences (Smolny College) of Saint-Petersburg State University which implements the liberal arts model of education. The Faculty of Liberal Arts and Sciences was developed in cooperation with Bard College, New York and attempts to combine the best of the Russian and American system of higher education.

Much has been written in regards to the value of the liberal arts system of education for providing an interdisciplinary approach to education that prepares individuals for various professions in a globalized world while also instilling the notions of responsible citizenship and leadership for the twenty-first century [1-3]. As the liberal arts model of education has been exported to post-Soviet countries with notable examples including Smolny College in St. Petersburg, The Russian Presidential Academy of National Economy and Public Administration in Moscow, American University of Central Asia in Kyrgyzstan, and the European Humanities University in Vilnius, much has been written in an attempt to explain what liberal arts education is and how to best implement a liberal arts curriculum in a non-traditional environment [4-5]. Other scholars, such as Surin [6], have emphasized the importance of liberalizing Russian education via liberal arts and programs in the humanities as a way "to modernize and decommunize the country, and bring it to world standards". Similar arguments have been made by Bloom and Galan [7-8] where liberal education is a means for countries, primarily developing, to modernize and prepare a workforce that is capable of adapting to the market while also producing highly skilled specialists in science and technology professions.

To the best of the authors' knowledge, there has been no research conducted that examines the preparedness of schoolchildren for a liberal arts education specifically in Russia. The following article identifies the characteristics of a liberal arts education and determines the skills and resources that a potential applicant to a liberal arts institution should possess in an attempt to assess whether or not Russian schoolchildren are prepared for the demands of such an education. The characteristics identified are then analyzed alongside data collected from a survey of 1,475 Russian school children in grades 8-11 on how they allocate their free time in order to find correlations.

For the purpose of this article, the following hypothesis can be posited. Russian schoolchildren posses some of the necessary resources to adapt and perform well in a liberal arts university or college, but lack the experience in utilizing resources for their own personal development. This is believed to be a result of the Russian school system which is still mainly subject-centered and quite cautious in expanding the area of educational choice for pupils.

1.1. Characteristics of a Liberal Arts Education

It is necessary to determine a working definition of liberal arts education that is oriented on educational goals and most importantly, the individual. This article adheres to the definition provided by Becker [4] as "a system of higher education designed to foster in students the desire and capacity to learn, think critically, and communicate proficiently, and to prepare them to function as engaged citizens." Liberal arts, known in Latin as artes liberalis, was historically the knowledge necessary for a free man in Greece and Rome to participate in civic life. It was comprised of the trivium and quadvrivium. Over time, liberal arts education has transformed, but it still retains its original tenants and its social philosophy of Plato which Lang [3] has termed "the building block of the liberal arts canon"

For our research, we have identified the main characteristics of a liberal arts education which we can then analyze in comparison to data collected to determine how well a Russian schoolchild can adapt in a liberal arts institution. Most importantly, the liberal arts system of education provides students with the freedom to determine their own field of study. Curriculums are flexible, while still containing general requirements, to provide incoming students with a range of interdisciplinary courses that help them to later concentrate on a specific discipline or field. The teaching method moves away from traditional didactic approaches to classes that are discussion based and student centered. There is a high level of interaction between teachers and students which has been found to increase student engagement [9]. Students are taught to analyze texts, think critically, and consider various viewpoints while also being creative in how they approach problems they encounter. Courses are writing intensive which allows for students to employ their analytical skills and effectively communicate arguments in a clear and coherent manner. These skills can later be applied in any field or profession and are some of the key skills sought by employers according to a survey conducted by Hersh [2] among CEOs and human resource managers. Ultimately, students having completed a liberal arts education are believed to be more flexible as the demands of the labor market change.

In addition to the abovementioned characteristics, a liberal arts education provides a safe environment for 4 years that prepares students for lifelong learning and teaches them to value scholarship and discussion with their peers and instructors. Relationships between students and professors in liberal arts colleges differ greatly than traditional education where communication is confined primarily to the classroom. In the Liberal Arts Colleges Student Survey, 60% of respondents noted that they "talk with their professors outside of class at least once a week" [10]. This only confirms the significance given to discussion in the liberal arts as well as desire for learning.

For a liberal arts college student to be successful much depends on whether or not the student can efficiently utilize the resources available to him both in and outside of the classroom. Students must be motivated and most importantly, they need to know how to effectively manage their free time. Courses are work intensive as illustrated by student responses in the Liberal Arts College Student Survey: "90% of students at the top nine liberal arts colleges (in America) say that they study three or more hours a day." This is more than what the National Survey of Student Engagement (NSSE) found after surveying more than U.S. educational institutions of various classifications in 2010 and 2011-an average of 14.7 hours per week [11]. Nevertheless, these results indicate that a significant commitment on the behalf of students is necessary for studying as well that students must have a fairly high level of responsibility and motivation.

1.2. Liberal Arts in Russia

As noted above, the liberal arts system of education has been exported to non-traditional environments, specifically post-Soviet countries in the early 2000s. In the case of Russia according to Ivanova and Sokolov [12], there are roughly 20 universities that have liberal arts programs. Many difficulties have been encountered when attempting to implement the model of liberal arts education as Becker [4] notes.

It is difficult to establish a curriculum and ensure general requirements are met while also offering students the choice in choosing a program of concentration. Administrative and structural issues are also difficult to overcome such as added costs incurred by employing additional teachers to provide small discussion based classes as well as qualified personnel who are able to successfully adapt to the liberal arts model and move away from traditional teaching methods. Challenges arise in overcoming traditional approaches to university on the part of students and the vertical relationship between students and professors which has plagued the Russian educational system from Soviet times. The liberal arts model promotes a more horizontal and democratic relationship between students and professors where the teacher serves as a guide instead of an unquestioned authority. This ultimately allows students to feel comfortable in approaching teachers outside of the classroom as well as in challenging them. This type of learning environment is not only more beneficial to the student, but also the professor.

2. RESEARCH METHOD

School pupils from various regions of the Russian Federation completed the survey "A Teenager's Free Time: how much? What type? What for?" in which the possibility of schoolchildren to manage their free time and variations connected with this was researched.

The basis for the format of the survey was the theoretical analysis of the concept of educational motivation by Ilushin [13], the concept of the development of statuses of professional identity for Russian schoolchildren by Azbel [14] and the principles of liberal arts education by Hersh, Lang, Becker [1-4].

As we designed the survey dedicated to senior school students, we assumed the following:

- a) a schoolchild's free time begins everyday when lessons end. Researching the relationship to free time was conducted in the middle of the academic year; therefore the potential resource of school vacations was not examined.
- b) free time following the conclusion of lessons is not entirely free as Russian schoolchildren have an obligation to complete homework within the structure of the school program. It should be noted that a pupil is free to allocate how much time he will spend on work assigned by the teacher.
- c) the remaining time following the completion of homework is real free time, and the survey specifically addresses this time.

In planning the research and understanding that an electronic link might be available to any pupil, we asked that respondents answer sincerely in order to help those who study education to better understand exactly how much free time the modern teenager has at his disposal.

The survey consisted of 20 closed-ended questions to ensure that a student in the 8-11th grade could complete it in 15-20 minutes. Questions or statements in the survey with which it was necessary to agree or disagree where formed when possible in a manner to avoid misunderstanding or biased wording. The survey was validated during its development through an expert group of senior school students using the focus group method (n=16). We ensured the reliability of results using statistical methods. While analyzing data, it was necessary to remove a small amount of observations (n=349) and leave only 1,126 responses as a result of random answers that were detected by the deception scale built into the survey questions.

2.1. Methods of Statistical Data Analysis

During the statistical analysis of results, the following methods were used:

- a. Methods of descriptive statistics (calculating proportions and percentage). These methods allowed us to present the material in a convenient form, provided an opportunity for data to be compared, and also served as the basis for a more qualitative and quantitative analysis.
- b. Correlation analysis (calculating coefficients of Spearman linear correlation and assessing their level of significance). The main aim of employing this method was the statistical analysis of questions connected with value judgments of senior schoolchildren in regards to their free time.

The statistical data analysis was conducted on a personal computer with SPSS software.

2.2. Sample Characteristic of Research

Researching the resource of senior schoolchildren's free time was conducted in March of 2017 within the framework of the All-Russian learner's plenary meeting held at secondary school №619 in St. Petersburg. The total number of schoolchildren in grades 8-11 who participated in the research exceeded 1,475 people. The survey was accessible in electronic form via a link and data was collected automatically. The initiators of the learner's plenary meeting, by right of the school leader in education, dispersed the link among partner schools, the majority of which are included in the TOP-500 schools of the Russian Federation. In all, schoolchildren from 21 territories of the Russian Federation participated in the research. Schoolchildren who underwent an educational program for gifted children in "Literary Creativity"

held at the Educational Center "Sirius" (n=168) also participated in the research. The age distribution of participants can be seen in Table 1.

lussian Schoolchildren 14-18 Years Old (n=1)									
	School grade	Number of schoolchildren	Percentage of research sample						
	8 grade	308	27,4%						
	9 grade	293	26,0%						
	10 grade	260	23,1%						
	11 grade	265	23,5%						
	In total	1126	100,0%						

Table 1. Age Characteristics of a Research Sample of Russian Schoolchildren 14-18 Years Old (n=1126)

3. RESULTS AND DATA

We previously identified the ability of students to effectively allocate free time as a demand for students to be successful in a liberal arts program. As noted, respondents of the survey are potential applicants to programs such as the Faculty of Liberal Arts and Sciences of St. Petersburg University. Students indicated that they need free time for talking with friends (78.8%), additional intellectual development (51.2%), and their own creativity (47.3%). Talking with friends may be an obvious response, but it serves as a positive indicator regarding preparation for a liberal arts program as the teaching method significantly employs discussion. In addition to this, half of the respondents are conscientious about their development and interested in expanding their knowledge. The liberal arts model is centered on this as students get to explore different opportunities in various disciplines.

Continuing education and exploring educational opportunities outside of the classroom are key characteristics of liberal arts students and responses indicate that the majority of schoolchildren are already involved in additional educational programs. To better understand the additional educational programs school children participate in, they can be grouped into the following categories: sports, arts, STEM (science, technology, engineering, mathematics), and languages. More than half of the respondents noted that they participate in sports, fitness, and dance (74.4%). The high percentage of involvement in sports is not a surprise for children of this age. 46% are involved in the arts compared to 44% in STEM and 26.6% of respondents take foreign language courses.

For purposes of clarity, it is necessary to briefly describe the system of additional education in Russia. This education is divided into four main areas: sports, social practices, aesthetic (cultural), and intellectual (science). These areas exist both in the school: classes held after the conclusion of official lessons or in special houses (centers) of creativity for children. There are quite a few additional education activities that may not be organized in schools due to the of lack of space and equipment. Typically, one module of additional education lasts one academic year and upon conclusion, the child can continue to study or try a different area. It is problematic for a family to change the module of additional education in the middle of the school year. There is one more tradition in organizing additional education in Russia: specialized music, art and sports schools. In such schools, children start these classes from an early age (4-5 years), as preparation. In general, additional education at these schools lasts for 8-10 years. Almost every Russian family that is interested in the education of their children tries to identify their child's talent and proclivity in the system of additional education from an early age. Traditionally, boys' interests are associated with sports and technical areas, while girls are sent to aesthetic (music, dance, design) areas of development.

When asked why they pursue additional educational activities, respondents indicated that it is due to 'enjoyment and interest' (89.1%) and 'being beneficial in determining future educational plans and selecting a profession (64.8%). The involvement in additional educational activities due primarily to 'enjoyment and interest' can be explained most likely due to the fact that these activities do not contain a strict assessment, unlike in regular schools. As to where students prefer to be involved in additional educational program, 67.1% answered 'in another institution (not school). 17.9% prefer to take part in opportunities offered 'at school and after the conclusion of lessons' while 8.9% answered 'online courses.' These results indicate that Russian students do have some experience in being proactive and motivated about their self- development outside of daily lessons, but it is clear that additional educational opportunities have not been integrated into Russian schools nor do Russian schools prepare students for virtual additional education. One possible explanation for this is that schools do not provide the proper training to teachers in the sphere of virtual courses.

One reason for the desire to do additional education outside of the school is likely due to the fact that a significant part of the additional education courses and classes in school are led by the same teachers who teach participants during the regular school day. Thus, students choosing to do something extra outside of their mandatory lessons declare their unwillingness to communicate with the same teachers after the lessons. Most likely, they just do not believe that the teacher is able to easily switch from standardized lessons to more freely structured additional classes.

It was noted previously that a characteristic of liberal arts students is that they demonstrate a great deal of responsibility and independence in their academic growth. For senior schoolchildren, an indicator of students' willingness to take responsibility for their own development can be experience making money or a job. In response to the question 'Have you been able to earn any money in your free time,' 40.6% of students have never tried to earn money. As for the remaining respondents, 14.8% responded that they have earned money while working in their parents' business and 15.2% have worked posting announcements and distributing flyers.

Respondents of the survey overwhelmingly (83.7%) noted that they are not taught in school to allocate their free time effectively. This response clearly indicates that schoolchildren themselves understand that using one's free time constructively is important and they are not satisfied with how their schools approach this particular topic. At the same time, the fact that schoolchildren are able to critically assess their schools is positive as critical thinking and the ability to evaluate a situation is necessary in the liberal arts model along with the ability to allocate free time effectively.

To further motivate students to pursue additional educational activities, achievements of students in and outside of school should be acknowledged by teachers and administration. This motivation is one way to further encourage students to pursue this independently upon leaving school. 53.6% of students responded that they felt their achievements outside of school are not valued. Furthermore, the lack of acknowledgement by the school community, consisting of teachers and peers, may result in schoolchildren deciding not to pursue any additional educational activities as they realize that their achievements are not valued. In regards to the liberal arts model, institutions take it for granted that their students are actively engaged in the community while also pursuing opportunities outside of the classroom that contribute to their personal and academic growth. Students studying at institutions that implement the liberal arts do not feel a need to be recognized for achievements, the majority understand that their involvement as active citizens in the community is necessary. Therefore if senior Russian schoolchildren do not receive any recognition or encouragement from their schools, it is unlikely they will continue additional education once they enter university. This is yet another area where the students demonstrate a lack of preparation for the liberal arts model of education.

Time spent completing homework was also analyzed in the survey, as both dedication to homework and self-learning are important components of the liberal arts education. Traditionally, homework is considered in the Russian school as a key factor in involving pupils in independent development of skills and abilities. The goal of homework is also to better assimilate the information obtained in lessons. However, the experience of avoiding conscientious homework has been a part of school life for quite some time. This is due, in many ways, to the large amount of home work and its monotony.

Another feature of the system of compulsory schooling is the subject-centrism of each schoolteacher. The mathematics teacher, as a rule, believes that his subject is one of the most important in the life of an educated person. As a result, he increases the amount of self-learning at home. Teachers of Russian (native) language, foreign languages, physics, chemistry, sometimes even teachers of art and music share similar opinions. As a rule, teachers do not observe the norms (limits) on homework in their subjects and assign much more than an average child is capable of doing.

When we asked how much time students spent on homework, only 11.8% said less than 1 hour a day, the majority (27.8%) indicated that they spend 1 to 2 hours, another 27.2% - from 2 to 4, while only 48.7% of students believe that they complete their homework at 75-100%.

In our opinion, the pupils' experience with homework, either completing or avoiding it and being assessed, is one of the key reasons why Russian school students are not prepared for the liberal education university practices. Liberal education is largely based on models of the "flipped classroom," educational reflection, and independent group projects. These approaches are not widely applied in modern Russian school education. As a result, students who enter the «liberal-oriented» university programs lack competency in the field of self-organization, discipline, setting goals, and prioritizing their educational process.

Several questions discussed above were identified for correlation analysis to understand students' value judgments in relation to free time. In addition to this, the questions allow us to examine the interconnectedness of components of the principles of liberal arts education and the preparedness of Russian schoolchildren.

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Below are the questions to which students answered "yes" or "no" and the correlation of their answers. They are illustrated in Figure 1 and in the Table 2.

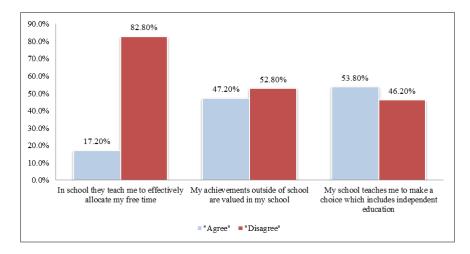


Figure 1. Students' opinion on supporting the values of liberal arts education in their schools. (n=1126)

Table 2	. Inte	erco	nne	ctec	iness	of	the I	Prin	[C1]	ple	s of	Libera	l Ar	ts Edi	icat	ion	i (n=	= 1	126,	* *	p = 0.01)
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Questions for Identifying Support for the Values of Liberal Arts Education in Russian Schools									
	In school they teach me to effectively allocate my free time	My achievements outside of school are valued in my school	My school teaches me to make a choice which includes independent education						
In school they teach me to effectively allocate my free time	1	0.196**	0.352**						
My achievements outside of school are valued in my school	0.196**	1	0.293**						
My school teaches me to make a choice which includes independent education	0.352**	0.293**	1						

Undoubtedly, we were impressed by the fact that 82.8% of schoolchildren do not believe that school teaches them to manage their free time. It is also important to note that 52.8% of students see school as being indifferent to their achievements outside of the school curriculum. One of the main reasons for this is that pupils are mostly prepared by the school to successfully pass the Unified State Exam. The results of this exam determine whether or not a student can be admitted to a university of their choice. Skills and knowledge that a child has obtained in the system of additional education, when enrolling in the University, are largely not taken into account.

We conducted a correlation analysis (calculation of the Spearman correlation coefficient) and evaluated the significance level of the correlation links in order to understand how school life for eleven years can influence the formation of liberal education patterns in schoolchildren. We attempted to determine whether it is possible to assess the pupils' readiness for liberal arts education via three positions (resources) a school should systematically develop.

As seen in Table 2. a positive relationship was found between question 3.6 'In school they teach me to effectively allocate my free time' and questions 3.7 'My achievements outside of school are valued in my school' of 0.196 and 3.8 'My school teaches me to make a choice which includes independent education' of 0.352.

Positive correlation was also found between question 3.7 "My achievements outside of school are valued in my school" and question 3.8 - 'My school teaches me to make a choice which includes independent education'. The correlation is 0.293 as seen in Table 2.

Although the majority of children (31%) answered "no" to all three questions and only 11% gave three affirmative answers, we can say that the answers of the pupils have a high degree of consistency. This allows us to say that there are enough, either two positive or two negative answers, from the three categories of "free time," "victories and achievements," "free choice," to understand whether Russian schools help to develop the values and behaviors characteristic of the liberal arts among pupils, who want to continue their education in liberal arts colleges or universities.

4. CONCLUSION

The liberal arts approach in university education presupposes that students have been taught in school appropriate models of academic behavior accepted. The list of these models includes: a) competent distribution of training efforts in accordance with the system of external and internal academic priorities; b) management of free time as a resource of self-education, gaining professional experience, and emotional harmony; c) responsible selection of resources for self-training combined with self-esteem and educational reflection.

Russian schoolchildren are experiencing obvious difficulties in the distribution of their free time because they have not had instruction nor a positive experience of allocating free time during their school years. Schools are overburdening students with homework without providing them with the resources that teach them how to effectively allocate their free time.

Homework is compulsory and almost the same for all pupils. In the upper classes the amount of homework increases greatly, which leads to a mass practice of pupils' avoiding full completion of tasks. Thus, the experience of unscrupulous academic behavior is accumulated, which significantly complicates the life of students in liberal arts programs. So, we may ascertain that school does not "cultivate" the self-training model required for the liberal arts.

One of the key values of a liberal arts education is independently identifying educational goals and recognizing students' achievements. At the same time, more than half of schoolchildren feel a lack of appreciation for their external successes in additional, alternative, non-formal education in their school. This leads to the fact that the students' motivation for independent goal setting, overcoming difficulties is not properly supported by the reference group of teachers which may later become problematic in integrating the liberal university learning environment.

Even the students of advanced, innovative schools estimate their role in developing their ability to choose independent educational practices as quite low. When students enter liberal arts programs, the deficit of this skill may become critical.

All deficits mentioned above in school practices are connected with the subject-centered pedagogy and result in a longer period of adaption for students to the liberal arts learning environment. One of the main challenges for the modern school practice in Russia according to our observation lies in the area of developing pupils' loyalty to the idea of life-long and assertive education.

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