

# THE INFLUENCE OF DEMOGRAPHIC FACTORS ON THE STRUCTURAL CHANGES OF THE STUDENT COMMUNITY

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## Abstract

Significant changes have been occurring in the demographic structure of students experiencing within the last few decades. These changes have affected their gender, family, and especially the age structure. Gender changes of students is affected by more than just two factors: the emergence of new professions; migration, due to which more and more men are involved in the system of higher education. Changes in the demographic situation also refer to the students' families, which is being manifested by high popularity of the same-sex marriage. There is a process of «maturation» of students. We have reasons to mark out three generations of students. The first involves the students under 30, the second includes more mature students of older age, and the third includes people of pre-retirement and retirement age. The object of the study was the community of older learners. The purpose of our paper was to identify how demographic factors influence structural changes of the students' community. We assumed that «students' maturation» and acquisition by older learners characteristics of the particular group will force the system of higher education to become more flexible and elaborate new principles of interaction with the students and new educational technologies.

**Key words:** demographic structure of students, older students, higher education, age groups

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## Introduction

The large-scale demographic processes that are taking place in the modern society lead to structural changes in the student community. Gender, age, family-marriage and other demographic characteristics of this social group have become mobile. This is followed by changes in the system of higher education itself. Among the above mentioned processes, changes in the age structure of students and the related transformations of higher education are especially noticeable. This vision of the research problem has determined the structure of this article, which is mainly focused on the age factor.

Complex study of the structural changes of the students under the influence of demographic factors was not carried out, although data on separate demographic parameters and student changes are available in modern European, American and Russian scientific literature. These are empirical studies of the gender aspects of the professional choice of students (Kemmet, Bannikova, 2015; Hapgood) and academic mobility (Chistohvalov, Filippov, 2008; Jöns, 2011; Novak, Slatinšek, Devetak, 2014). There are studies on the inclusion of migrants and their descendants in higher education in Europe and Russia (Aleksandrov, Baranova, Ivanyushina, 2012), the reproduction of gender stereotypes among migrants (Kostenko, 2014), which are indirectly linked to the problem of the modern students gender structure. A separate group contains studies of the dynamics of sexual orientation of students and their family and marital status (CIRP Freshman Survey, 2014; Petinova, 2015).

Theoretically and empirically the problem of age students is being elaborated. The educational needs, benefits and expectations of older students for training under the «third age» programs (Dupuis-Blanchard, Theriault, Mazerolle, 2016), learning practices and educational interaction in heterogeneous groups in colleges and universities are studied (Dauenhauer, Steitz, Cochran, 2016). Surveys that show the satisfaction level of the age students with continuous education received at the university, as well as the influence of such factors as gender and age have been carried out (Yang, Hsu, Chen, 2016). Interesting results that clarify the meaning of formal education for people on retirement were obtained by A. Jamieson (Jamieson, 2016). Meanwhile, the intergenerational effects from the inclusion in the practice of higher education of age students have not been the subject of a special study. In connection with this, this research problem has become the subject of special consideration given the studies related to other demographic «shifts».

## **1 Methods**

Our study was devoted to the structural changes of modern students in the context of the study of the transformation of the higher education system (2016–2017). The empirical basis of the article consists of two parts. The first part contains the data related to the secondary analysis of the results of statistical and sociological research, which is connected with the subject of the author's study. In the framework of this direction, such demographic aspects as gender, family and marital characteristics of students, their sexual orientations were studied.

The second part of the research was related to the study of age students. The methods of investigation were the following:

1. Secondary analysis of the interviews with students of older age groups, available in open sources (media, Internet sites). The total number of publications analyzed is 25.

2. Semi-formalized interviews with employees of the Russian universities (N = 80, 2016). The interview was devoted to the problems of the development of higher education in modern Russia, including the issues of the functioning and development of educational communities. Among the experts were teachers, scientists, representatives of the administration of universities of different levels. For selection of experts, eight-window sampling (8 types of experts) was used.

3. Survey of university students in the Ural Federal District of Russia (N = 1860, 2017). 51 universities of the Urals Federal District entered the general population. The quota sample was formed on the basis of statistical data on the students of the regions of the Ural Federal District. Within each region, quotas were administered in the areas of training (engineering, science, the humanities, the socio-economic).

## **2 Results and Discussion**

### **2.1. General trends of demographic changes related to the student body**

In the last third of XX – beginning of the XXI century significant demographic changes have been taking place referring to the students of the developed countries of the world. The gender structure of students, as a rule, is related to the ratio of «male» and «female» training profiles. However, in today's Russia gender profile of professional choice is being transformed (Kemmet, Bannikova, 2015). This leads to a growing number of young women in Russian universities who choose «male» professions. Thus, in the Ural universities, 65 % of men and 35 % of women between the age of 21 and 23 are majoring in engineering (Kemmet, Bannikova, 2015: 101). Among Russian students studying majoring in technical disciplines, the female students make up 25 % of the total student body, and in some areas of STEM-education this number reaches 30 % (Kemmet, Bannikova, 2015). It is interesting to note that in foreign countries the number of female students, majoring in engineering skills is make up 15–20 % of the total student body (Hapgood).

The process of academic mobility appears to be the factor of the changes related to the student body gender structure. According to Tempus, in 1994, female students made up about 73 % in the humanities, 57 % in the social sciences, in natural sciences and engineering – about 33 % of the total number of all the «mobile» students (Chistochwalov, Filippov, 2008: 37). In 2013, according to a study by R. Novak, A. Slatinšek, G. Devetak, female students were more

actively involved in academic mobility programs. They made up 65,8 % of the total number of «mobile» students, while for the males it was only 32,2 % (Novak, Slatinšek, Devetak, 2014).

Certain changes related to the gender characteristics of the student body are caused by migration. Representatives of the second and subsequent generations of migrants in Europe and in the USA enter the universities of these countries and quite actively form their segment in the structure of student body. Meanwhile, the persisting stereotypes of gender inequality, typical for the countries of the outcome (Kostenko, 2014), allow the inclusion of predominantly male students in the system of university education. Thus, being enrolled in the American and European universities, children of migrants promote growth of the total number of the male students.

In Russia labor migrants and their children are quite poorly involved in the system of higher education. The main barrier is a financial one. However, the trend typical for the European countries is more likely to be developed in Russia as well. This is being proved by the intentions of the migrants' children, who are currently studying at schools. A poll conducted by sociologists at the Higher School of Economics (2012) showed that 72 % of them planned to study at the universities (Alexandrov, 2012). In 2016–2017 some of these school students already implemented their ideas and entered the Russian universities.

Non-traditional sexual relations have become a common trend among students nowadays. This tendency is still poorly touched upon in the official statistics. However, the data obtained in the framework of the sociological studies and related the attitude of students to same-sex marriage, implicitly proves this trend to be true. For example, the CIRP Freshman Survey (2012) showed that 75 % of students holding conservative views agreed that same-sex couples have the right to be legally recognized. Among the students who hold ultra-left views, this number reached 91 % (CIRP, 2014). The strengthening of this type of attitude was registered in the survey, where the freshmen were involved (CIRP, 2014). This not only indicates a high level of tolerance regarding this phenomenon, but also shows readiness for same-sex relationships, as well as its significant dissemination within the student body.

Russian students have very mixed feelings regarding the representatives of sexual minorities and phenomenon of same-sex marriage. Sociological surveys conducted on the local samples (at separate Russian universities in various regions of Russia) (Petinova, 2015), show a generally negative attitude towards them, especially among male students. In addition, studies show that the less the social distance between a respondent and a representative of other sexual orientation is, the lower his level of tolerance will be (Petinova, 2015: 159).

As we can see, taking into account some social and demographic characteristics, Russian students differ from their American and European peers. However, all the demographic changes, mentioned above become global in scale and in one way or another affect undoubtedly life, studies, social and labor activity of students of all countries.

## **2.2. «Growing up» of students: a challenge to universities and the problem of intergenerational relations**

Age boundaries of students are becoming more «fluid». Taking into account population aging in European countries, one can see gradual «growing up» and even «aging» of the student body. Our task was to consider the influence of this demographic factor on the structure of the students, namely, the appearance in it of several age groups and generations, followed by the new format of intergenerational relations in the system of higher education.

There is every reason to talk about three generations of students. The first is the youngest, which includes «classical students» under the age of 30. The second generation includes adult students and even older (30–50 years). The third generation of students includes persons of pre-retirement and retirement age. The boundaries between «the student youth» and «the student's adulthood» become blurred due to the emergence of the middle generation.

Today in Russia a process of forming of the group of older students, consisting of representatives of pre-retirement and «silver» age is going on. So far people of retirement age (women over 55, men over 60) have been admitted to Russian universities quite rarely. At the same time, the number of Russian students of pre-retirement age is increasing. Representatives of this group of students are mainly «victims of the 1990-s». They are a special generation of Russians, who, during the crisis of 1990-s refused to study in universities in order to survive economically and earn some money. Today they are just about 50 years old, and many of them entered universities to «fill the education gap». Among them there are those who have the experience of being leaders or business owners. Some of them already have one higher education. Now they are striving to get a second higher education: they choose such areas as «Management» (24 %), «Accounting, finance», «Economics» (22 %), «Psychology» (10 %), «Jurisprudence» (5 %) (Morozova). This is a very significant group of age students, and orientation towards them and their needs gives an additional impetus to the development of higher education in Russia.

We assumed that the appearance of several generations in the structure of student body will promote the development of tolerance among young students as a universal socio-cultural and psychological quality. Thanks to this, the system of higher education can become a space

for overcoming intergenerational conflicts and ageism. The materials of interviews with older students of European and American universities prove the validity of this hypothesis. Informants claimed that they feel comfortable and «on equal terms» with young people, receive moral support from young students. Here are some transcripts from the interview:

*«It seems to me that young people with whom I study like me, and as for me I enjoy studying with them» (Nola Ochs, 92 years old, studying in the same group as her 21-year-old granddaughter).*

*«My grandchildren admire me» (Simone Bouquerel, 65 years old, University of Toulouse, France).*

These examples show how effectively the concept of intergenerational learning is implemented, emphasizing the importance of co-education in groups of people of different ages. Meanwhile, a survey conducted by us in the Ural universities showed that the younger generation of Russian students are somewhat wary of their older peers (see Tab. 1).

**Tab. 1: The attitude of students towards structural changes in students, %**

Structural changes in student body	Positive attitude	Neutral attitude	Negative attitude	Total
Increase in the number of foreign students	49,8	40,8	9,4	100,0
Inclusive education with the students from other universities	43,9	48,5	7,6	100,0
The appearance of students over 45 years in the group	20,3	59,2	20,5	100,0
The appearance of students over 60 years in the group	17,0	56,5	26,5	100,0
Co-education with people with disabilities	30,8	60,1	9,1	100,0

Source: data of the authors' survey

Let's pay attention to the fact that the attitude to foreign students and students with disabilities is more tolerant than to the older students, especially to the students of «silver age». Probably, this is due to the fact that the problem of older students is located the «zone of silence», in contrast to the problem of internationalization and inclusive education. We found out the dependence of students' opinions on older students, which correlates with the supposed social distance between them (see Tab. 2).

**Tab. 2: The attitude of young students towards the older students, depending on the social distance, %**

How do you feel about the fact that older people will study at the ...	Positive attitude	Neutral attitude	Negative attitude	Total
university	56,8	32,4	10,8	100,0
in your group	32,4	67,6	27,0	100,0

Source: data of the authors' survey

It turned out that the greater the social distance between students of different ages is, the more tolerant the young people feel about the presence of older students. The smaller the distance is, the less likely the young people are to have their joint training, as proved by some typical student comments: *«We will have different life concepts, and it will be difficult to communicate»*; *«I do not think that they will feel comfortable with young people»*; *«I will feel uncomfortable»*; *«If there are not many of them, but, in fact, universities are for young people»*.

## Conclusion

The structural changes of modern students are not only a problem for higher education, but also give impetus to its development. The phenomenon of growing up of students in this sense seems to be of particular importance. It originates from the inclusion of representatives of the second and third («silver») age in the practice of higher education. Educational practices in the US and in Western European countries have shown a significant perspective of this trend. Considering the fact that the trends of the aging of the population in Russia are proceeding at a high pace, the experience of higher education for the older students, which has developed in European countries and the USA, also becomes relevant for Russian universities.

One of the tasks of subsequent research is to predict the consequences of this phenomenon for higher education and to develop elements of its nonlinearity, flexibility, which correspond to the revealed tendency. The study of the impact of demographic factors on the structural changes in the student community is necessary for the creation of information bases for the purpose of making timely managerial decisions, as well as for changing the normative basis of higher education institutions dealing with interaction with older students.

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