

**REFLECTION OF POSTMODERN LINGUISTICS IN THE PROMOTION OF
SCIENCE AND PRACTICE EDUCATION**

***REFLEXÃO DA LINGUÍSTICA PÓS-MODERNA NA PROMOÇÃO DA EDUCAÇÃO
CIENTÍFICA E PRÁTICA***

***REFLEXIÓN DE LA LINGÜÍSTICA POSMODERNA EN LA PROMOCIÓN DE LA
CIENCIA Y LA EDUCACIÓN PRÁCTICA***

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ABSTRACT: Linguistics is more than just the etymology of words; it is the scientific evaluation and evaluation of language. Linguistics is based on observation, experimentation, inference, and critique of past and new theories. This article aims to introduce and explain the concept of linguistics as a managerial, psychological, and modern tool in optimizing the applied education of science, art, and technology. The explanation of postmodern linguistics determines and critiques its importance in promoting the innovative knowledge of modern science education. Therefore, entrepreneurship innovation requires the crystallization of creativity and skills training in multiple sciences. Human language evolved from biological evolution, individual and social learning, and cultural transmission, but the interaction of these three processes has never been adequately explored. Given the results, it is necessary to introduce and explain linguistic topics in pre-university and university education as a mother and applied science.

KEYWORDS: Linguistics. Evaluation of language. Science education. Innovative knowledge.

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RESUMO: *A linguística é mais do que apenas a etimologia das palavras; é a avaliação científica e a avaliação da linguagem. A linguística é baseada na observação, experimentação, inferência e crítica de teorias passadas e novas. Este artigo tem como objetivo apresentar e explicar o conceito de linguística como uma ferramenta gerencial, psicológica e moderna na otimização da educação aplicada de ciência, arte e tecnologia. A explicação da linguística pós-moderna determina e critica sua importância na promoção do conhecimento inovador da educação científica moderna. Portanto, a inovação em empreendedorismo requer a cristalização da criatividade e o treinamento de habilidades em múltiplas ciências. A linguagem humana evoluiu a partir da evolução biológica, do aprendizado individual e social e da transmissão cultural, mas a interação desses três processos nunca foi adequadamente explorada. Diante dos resultados, é necessário introduzir e explicar temas linguísticos na educação pré-universitária e universitária como mãe e ciências aplicadas.*

PALAVRAS-CHAVE: *Linguística. Avaliação da linguagem. Educação científica. Conhecimento inovador.*

RESUMEN: *La lingüística es algo más que la etimología de las palabras; es la evaluación científica y la valoración del lenguaje. La lingüística se basa en la observación, la experimentación, la inferencia y la crítica de teorías pasadas y nuevas. Este artículo tiene como objetivo introducir y explicar el concepto de lingüística como una herramienta de gestión, psicológica y moderna para optimizar la educación aplicada de la ciencia, el arte y la tecnología. La explicación de la lingüística posmoderna determina y critica su importancia en la promoción del conocimiento innovador de la educación científica moderna. Por tanto, la innovación empresarial requiere la cristalización de la creatividad y la formación de habilidades en múltiples ciencias. El lenguaje humano evolucionó a partir de la evolución biológica, el aprendizaje individual y social y la transmisión cultural, pero la interacción de estos tres procesos nunca se ha explorado adecuadamente. Dados los resultados, es necesario introducir y explicar temas lingüísticos en la educación preuniversitaria y universitaria como ciencia madre y aplicada.*

PALABRAS CLAVE: *Lingüística. Evaluación del lenguaje. Educación científica. Conocimiento innovador.*

Introduction

The pension system and its reforms affect not only the strategic interests of the state, but also the interests of every member of society, both employable and older. Pension provision has a social significance and often acts as the main source of livelihood for many citizens. The specifics, versatility and effectiveness of measures aimed at improving the pension system are due to various factors.

In January 2020, Russian President Vladimir Putin noted in a Message to the Federal Assembly that in 2024 the birth rate should be 1.7. In general, it is expected that as a result of

the measures carried out as part of the pension reform, the number of people of working age and the size of pensions will increase (Kremlin, 2020).

Today, due to the current demographic situation in Russia, raising the retirement age as part of the pension reform can be considered an extreme necessity. Unfortunately, today there are prerequisites for a gradual decrease in the economic efficiency of the Russian pension system. This situation has a dual beginning. Firstly, due to the reduction in the working-age population, the amount of financial resources coming into the budget of the Pension Fund of Russia is decreasing. Secondly, there is an increase in the number of pension recipients

Methods

In purpose to conduct a detailed analysis of the demographic factor and an effective assessment of its impact on the pension reform in Russia, general scientific, logical, historical, systemic and comparative methods were used (Baibarin, Mashkin & Shelengovskiy, 2016). Documentary sources were also studied, content analysis of mass media was carried out, scientific works of domestic and foreign researchers were analyzed. The empirical basis of the work was the statistical data of foreign countries and the Federal State Statistics Service.

The article is an analysis of scientific works of Russian and foreign authors studying pension reform issues. Its impact on the economic development of the state investigated M. Krpan, A. Pavkovich and B.O. Zagrebkiy (2020) and V.G. Dobrokhleb (2019).

T. Wiss, L. Schmidhuber and V. Bordone (2020), E.R. Kelsensenbayev (2018) and N.A. Prokopenko (2021), studied the connection between the increase in the retirement age and the stability of the labour market.

H. Jun (2020), J. Feng, Q. Li and J.P. Smith (2020), A.A. Dyshekova (2019), T. Bochkareva and I. Tkachev (2020) noted that the level of population aging affects the pension system as a whole.

The main purpose of the study is to assess the impact of demographic, economic and labor factors on the pension reform in Russia, taking into account the methods and approaches used in foreign countries.

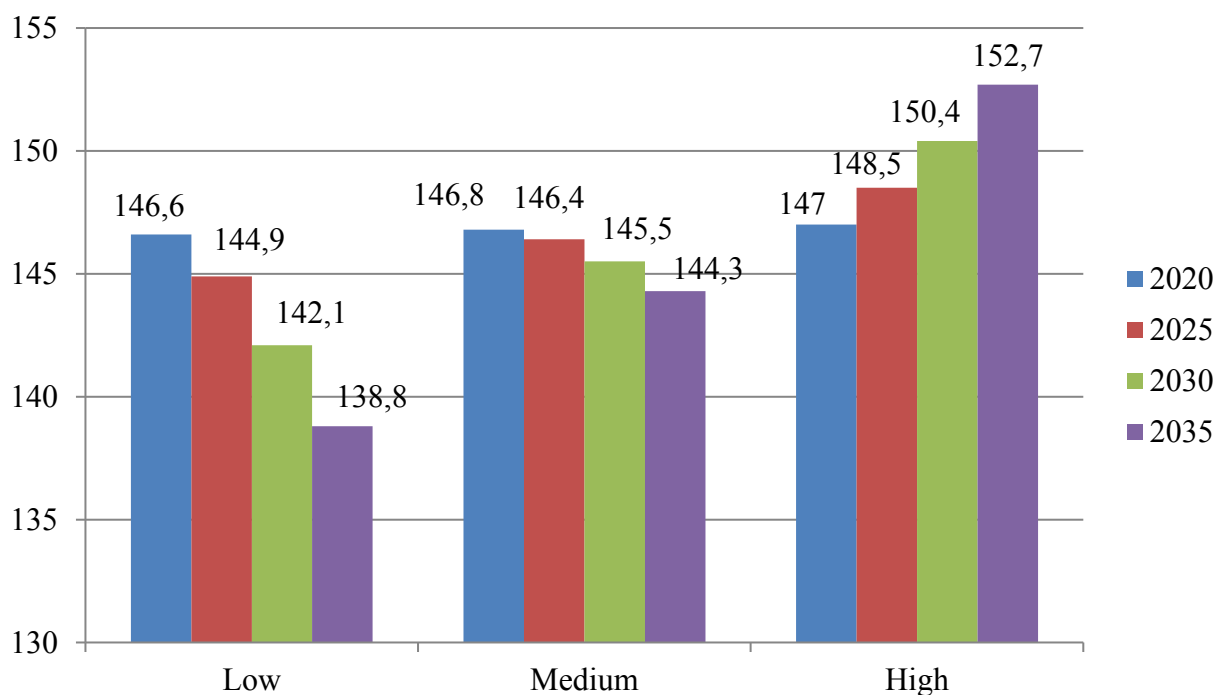
Results

It should be noted that the natural increase in the population of Russia due to its own birth rate stopped in 1990, when this indicator amounted to 2.2 people per 1 thousand

population. As a result of the deterioration of the demographic situation in 2000, mortality exceeded the birth rate by 6.6 people per 1 thousand population. This situation persisted until 2003, only in 2004 (-5.5 people per 1 thousand population) the trend has changed towards leveling the situation. Then, in 2017, the birth rate began to decrease and reached 1.69 million people, and in 2018 it became even less – 1.64 million. peoples (Rosinfostat, 2021a).

According to Rosstat, 680 thousand people were born in Russia in the first half of 2020 and 946 thousand people died. Compared to last year, the birth rate decreased by 5.4%, while the death rate increased by 3.1%. According to the forecast of Rosstat, 3 variants of the development of demographic events in Russia were identified: negative or low; medium or neutral; high positive. Let's consider the average version of the forecast, according to which in 2020 the country's population may decrease to 38,700 people, in 2025 – by 133,200 people, in 2030 - by 217,600 people, and in 2035 the birth rate will be reduced by 259,600 people, which generally shows a negative dynamics of the demographic situation (Figure 1).

Figure 1. Birth rate forecast in Russia for 3 scenarios according to Rosstat data (in thousands of people) (Rosstat, 2021a)



At the same time, there is a steady increase in life expectancy. This is happening, in particular, thanks to the state measures taken to support citizens in the field of health, labor and other areas.

Over the past few years, there has been a positive trend in average life expectancy, for example, in 2002, the average life expectancy was 64 years, in 2006 – 66.6 years, in 2010 - 68.9 years, in 2014 - 70.9 years, in 2018 - 72.9. In addition, according to the Ministry of Health of Russia, the average life expectancy in 2019 for men was 68.5 years, and for women - 78.5 years (Skvortsova, 2019). Thus, the average life expectancy has increased by an average of 9.5 years since 2006. Presumably, the dynamics of average life expectancy until 2035 will look like this.

From 2020, according to Rosstat data on the low version of the forecast in the Russian Federation, regardless of gender, citizens on average will live up to 73.3 years, while according to the high version, this indicator may reach 74.68 years. By 2030, according to the low development forecast, the average life expectancy in Russia for the entire population will be 74.74 years, and according to the upper bar - 80.08 years. And by 2035, it is planned that Russians will live on average from 75 to 82 years, depending on the quality of implementation of planned state programs (Rosstat, 2021d).

Presumably, in 2021, taking into account the established retirement age for men at 60, citizens born in 1961 will retire. According to Rosstat, their number in 2019 reached 955 thousand people (71% of the total number of births), while the share of pensioners was 29.1% of the population, and the share of able-bodied - 48.2%. The optimal solution in this situation may be the involvement of employees of retirement age who are able to carry out work activities. (Rosstat, 2020). According to Rosstat, persons 55-60 years old and older have intellectual potential, from January to September 2020, more than 9 million people of retirement age were involved in work.

Thus, the demographic factor is a key factor in calculating the number of citizens who have lived to the retirement age, in connection with which it is proposed to consider the dynamics of the number and age structure of the population. It should be noted that one of the main reasons for the decrease in the qualitative indicators of the workload is the change in the age structure of the population, which is characterized by a decrease in the number of able-bodied population and an increase in citizens who are older than employable. Thus, in 2019, the share of employed persons over 45 years of age was 27.4% of the total number of employed (71,933 thousand people) (Rosstat, 2021b).

In general, in recent years, there has been a tendency in Russia to increase the population mainly due to young people and people of retirement age, but the number of employable population has a negative trend. According to Rosstat, this may last for the next thirty years, as a result of which there is a need to expand the age limits of the employable population (Table 1).

Table 1. Forecast of the composition of the Russian population (in thousands of people/% of the total number) (Rosstat, 2021a, 2021c))

Indicators		Population, total	Working age	Younger than working age	Older than working age
2020	people	148 303	81 157	28 308	38 838
	%	100	54,7	19,1	26,2
2025	people	150 338	79 856	29 553	40 929
	%	100	53,1	19,7	27,2
2030	people	151 807	80 699	28 950	42 158
	%	100	53,2	19,1	27,8
2035	people	153 263	81 438	27 998	43 827
	%	100	53,1	18,3	28,6
2040	people	155 038	81 166	27 945	45 927
	%	100	52,3	18	29,6
2045	people	157 513	79 555	29 161	48 797
	%	100	50,5	18,5	30
2050	people	160 513	79 074	30 940	50 499
	%	100	49,3	19,3	31,5

It should be noted that the increase in the retirement age in Russia is mainly due to a significant demographic burden on the employable population. Such a measure, in fact, is forced, but the population of the country is often perceived negatively. In general, life expectancy is a key indicator that can determine the socio-demographic characteristics of a country and predict its development in the future. This indicator makes it possible to assess the effectiveness of measures implemented within the framework of state reforms in the field of economy, politics and social security in dynamics. Nevertheless, some experts deny the need to reduce the gap in the life expectancy of the country's population, since, on the one hand, there are no demographic grounds contributing to an increase in the retirement age, and, on the other hand, there is an opinion that the indicator of an increase in life expectancy should outstrip the value of the increase in the number of pensioners (Soloviev, 2021).

Pension reform affects men born in 1959 and women born in 1964, as well as everyone who is younger. In Russia, the pension reform began to be implemented in 2019, in connection

with the retirement age increasing, which was 65 years for men and 60 years for women. The transition period is expected to last until 2028 for men and until 2034 for women (Rosinfostat, 2021b).

The reform of the pension system in terms of raising the age had long-standing prerequisites, which is confirmed by world practice. M. Krpan, A. Pavkovich and B.O. Zagrebsky (2020) in their study noted that the aging of society, an increase in life expectancy and a decrease in fertility lead to an increase in the proportion of the elderly population. In turn, this may lead to an increase in government pension spending relative to GDP. Consequently, many states are reforming pension reforms to make the economy more sustainable. In the study of pension reforms in Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia, based on the results of cluster analysis, it was revealed that the composition of countries in the selected clusters varies significantly over different groups of variables. It was revealed that pension systems in countries with later retirement proved to be stable due to low pension costs, which, in turn, have a positive impact on favorable economic conditions and the labor market. The results of the study show that the use of clustering in economic research is very relevant, since it is able to show how the structure changes after a while. In addition, the opportunity to evaluate three different stages in the development of pension systems is revealed. First, the characteristics of pension systems, which include the average effective retirement age, pension costs and replacement rate. The second is demographic data (fertility rate, life expectancy, net migration rate and demographic load factor in old age). Thirdly, the variables of macroeconomics and the labor market relate to GDP growth rates, real labor productivity, the level of economic activity and the unemployment rate.

To compare the retirement age indicators, we note that in developed countries such as the USA, France, Great Britain and Germany it is 67 years old, in China - 55 years, in Italy - 66.5 years, and in Japan - 65 years. The Chinese authorities decided to increase the pension by 5.5% in 2018. But this was not the most important achievement of the pension policy of China. They decided not to increase the retirement age. Men will continue to retire at the age of 60, and women at the age of 50, and employees of state-owned enterprises and civil servants upon reaching the age of 55 (Kilsenbayev, 2018). At the same time, the Chinese government pays an old-age pension to more than 200 million citizens (Starodubova, 2018). In each of these countries, the retirement age is set for all citizens regardless of gender, which seems very rational from an economic point of view.

At the same time, it should be noted that it is possible to retire earlier than the legal age by 5 years or more for certain categories of citizens in our country (military personnel, mothers

with many children, workers whose activities are carried out in harmful and dangerous working conditions, etc.). It should also be emphasized that in March 2020, Federal Law No. 61-FZ of 18.03.2020 "On Amendments to Article 10 of the Federal Law "On Non-State Pension Funds" on the Appointment of non-state pensions" was adopted, thanks to which the age for the right to receive a non-state pension was lowered (Federal Law, 2020). The provisions of the law regulate the reduction of the age at which a citizen is entitled to a non-state pension, for men - from 60 years (previously - 65 years), for women - 55 years (previously - 60 years), which to some extent can serve as an additional measure of support for people of pre-retirement age and contributes to improving their financial situation.

Discussion

H. Jun (2020) noted that in most middle-income countries, there is a rapid aging of the population, which in turn can have an impact on pension reform. Persons of retirement age, in order to obtain financial benefits, postpone retirement, since wages significantly exceed pension contributions, and, as a rule, the labor of older citizens is not in demand in the labor market. Consequently, an increase in pensions can ensure the financial security of individuals, but weaken pension stability. For example, in Korea, there is an average income level and a high poverty threshold for older people, and promising incentive measures related to the state pension can have a statistically significant impact on the likelihood of retirement. Older employees are more susceptible to receive benefits from continuing to work through additional earnings and increased pension payments than to the financial benefits of increasing retirement wealth. Particularly noteworthy is the significant effect of transfers from children to parents at retirement, indicating that low birth rates complicate the tasks of reducing poverty among older people and maintaining pension stability (Jun, 2020).

J. Feng, Q. Li, J.P. Smith (2020) also noted that many middle-income developing countries are aging very quickly, and therefore it is necessary to adjust the retirement age in order to have financially feasible state budgets. It is important to know and understand any consequences of raising the retirement age in developing countries, as well as which subgroups of the population in these countries may be most affected.

T. Bochkareva and I. Tkachev (2020) in their study revealed that the consequences of coronavirus infection have reduced the life expectancy indicator throughout the country.

A.A. Dyshekova (2019) noted that the aging of the population is a problem of many developed countries, and therefore, most countries are taking measures to increase the

retirement age. She also noted that special demographic factors in Russia are high mortality in working age and a decrease in the birth rate. Thus, one of the main solutions to the reform of the pension system in Russia was to raise the retirement age.

However, it should be emphasized that continuing to work in old age to some extent can have a positive impact on the economic policy of the state (Prokopenko, 2021).

Moreover, it was noted that the greatest increase in life expectancy is due to older ages (Eggleston & Fuchs, 2019).

Extension of employment and postponement of retirement make it possible to develop effective solutions for the pension system, including increasing the stability of the labor market. The ability to choose the nature of work is largely associated with later retirement and commensurate pay, or with early retirement when working in comfortable conditions, without emotional demands and fair treatment of employees. Thus, improving the quality of working conditions will contribute to late retirement.

Conclusion

In the course of the study, it was determined that the current demographic situation in the country has a more negative impact on the economic efficiency of the pension system of Russia. It is the demographic factor that is the main factor in calculating the number of people of retirement age. It is obvious that measures to improve the demographic situation in the country are stimulated by the state.

According to the results of the analysis of the pension system of Russia and the experience of foreign countries, it was revealed that an effectively organized pension system is able to influence the country's economy by attracting people of retirement age to work. In addition, the effective organization of work and the preservation of decent wages contribute to an increase in the retirement age. Thus, the ongoing reform of the pension system in Russia can be effective if it is systematically reformed, taking into account the assessment of the impact of the demographic factor. The results of the conducted research can be used to correctly understand the impact of the demographic factor on the pension system and in calculating the projected indicators of the population, including retirement age.

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