

SOI: 1.1/TAS

DOI: 10.15863/TAS

Scopus ASJC: 1000

ISSN 2308-4944 (print)

ISSN 2409-0085 (online)

№ 02 (106) 2022

Teoretičeskaâ i prikladnaâ nauka

Theoretical & Applied Science



Philadelphia, USA

**Teoretičkaâ i prikladnaâ
nauka**

**Theoretical & Applied
Science**

02 (106)

2022

International Scientific Journal

Theoretical & Applied Science

Founder: **International Academy of Theoretical & Applied Sciences**

Published since 2013 year. Issued Monthly.

International scientific journal «Theoretical & Applied Science», registered in France, and indexed more than 45 international scientific bases.

Editorial office: <http://T-Science.org> Phone: +777727-606-81

E-mail: T-Science@mail.ru

Editor-in Chief:

Alexandr Shevtsov

Hirsch index:

h Index RISC = 1 (78)

Editorial Board:

1	Prof.	Vladimir Kestelman	USA	h Index Scopus = 3 (38)
2	Prof.	Arne Jönsson	Sweden	h Index Scopus = 10 (33)
3	Prof.	Sagat Zhunisbekov	KZ	-
4	Assistant of Prof.	Boselin Prabhu	India	-
5	Lecturer	Denis Chemezov	Russia	h Index RISC = 2 (61)
6	Associate Prof.	Elnur Hasanov	Azerbaijan	h Index Scopus = 8 (11)
7	Associate Prof.	Christo Ananth	India	h Index Scopus = - (1)
8	Prof.	Shafa Aliyev	Azerbaijan	h Index Scopus = - (1)
9	Associate Prof.	Ramesh Kumar	India	h Index Scopus = - (2)
10	Associate Prof.	S. Sathish	India	h Index Scopus = 2 (13)
11	Researcher	Rohit Kumar Verma	India	-
12	Prof.	Kerem Shixaliyev	Azerbaijan	-
13	Associate Prof.	Ananeva Elena Pavlovna	Russia	h Index RISC = 1 (19)
14	Associate Prof.	Muhammad Hussein Noure Elahi	Iran	-
15	Assistant of Prof.	Tamar Shiukashvili	Georgia	-
16	Prof.	Said Abdullaevich Salekhov	Russia	-
17	Prof.	Vladimir Timofeevich Prokhorov	Russia	-
18	Researcher	Bobir Ortikmirzayevich Tursunov	Uzbekistan	-
19	Associate Prof.	Victor Aleksandrovich Melent'ev	Russia	-
20	Prof.	Manuchar Shishinashvili	Georgia	-

ISSN 2308-4944



© Collective of Authors

© «Theoretical & Applied Science»

International Scientific Journal

Theoretical & Applied Science

Editorial Board:

Hirsch index:

21	Prof.	Konstantin Kurpayanidi	Uzbekistan	h Index RISC = 8 (67)
22	Prof.	Shoumarov G'ayrat Bahramovich	Uzbekistan	-
23	Associate Prof.	Saidvali Yusupov	Uzbekistan	-
24	PhD	Tengiz Magradze	Georgia	-
25		Dilnoza Azlarova	Uzbekistan	-
26	Associate Prof.	Sanjar Goyipnazarov	Uzbekistan	-
27	Prof.	Shakhlo Ergasheva	Uzbekistan	-
28	Prof.	Nigora Safarova	Uzbekistan	-
29	Associate Prof.	Kurbonov Tohir Hamdamovich	Uzbekistan	-
30	Prof.	Pakhrutdinov Shukritdin Il'yasovich	Uzbekistan	-
31	PhD	Mamazhonov Akramzhon Turgunovich	Uzbekistan	-
32	PhD	Ravindra Bhardwaj	USA	h Index Scopus = 2 (5)
33	Assistant lecturer	Mehrinigor Akhmedova	Uzbekistan	-
34	Associate Prof.	Fayziyeva Makhbuba Rakhimjanovna	Uzbekistan	-
35	PhD	Jamshid Jalilov	Uzbekistan	-
36		Guzalbegim Rakhimova	Uzbekistan	-
37	Prof.	Gulchehra Gaffarova	Uzbekistan	-
38	Prof.	Manana Garibashvili	Georgia	-
39	D.Sc.	Alijon Karimovich Khusanov	Uzbekistan	-
40	PhD	Azizkhon Rakhmonov	Uzbekistan	-
41	Prof.	Sarvinoz Kadirova	Uzbekistan	-

International Scientific Journal
Theoretical & Applied Science



ISJ Theoretical & Applied Science, 02 (106), 650.
Philadelphia, USA



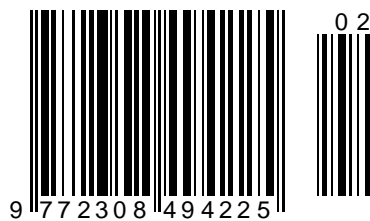
Impact Factor ICV = 6.630

Impact Factor ISI = 0.829
based on International Citation Report (ICR)

The percentage of rejected articles:



ISSN 2308-4944



Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHLI (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

SOI: [1.1/TAS](#) DOI: [10.15863/TAS](#)

International Scientific Journal Theoretical & Applied Science

p-ISSN: 2308-4944 (print) e-ISSN: 2409-0085 (online)

Year: 2022 Issue: 02 Volume: 106

Published: 01.02.2022 <http://T-Science.org>

QR – Issue



QR – Article



Gennady Evgenievich Markelov

Bauman Moscow State Technical University
Candidate of Engineering Sciences, associate professor,
corresponding member of International
Academy of Theoretical and Applied Sciences,
Moscow, Russia
markelov@bmstu.ru

PARALLEL CONNECTION OF PTC THERMISTORS

Abstract: A mathematical model of a technical system was obtained using a unified approach to building a working mathematical model. The technical system provides for the parallel connection of positive temperature coefficient thermistors. The built mathematical model possesses the properties of fullness, adequacy, productivity and economy to a sufficient degree. The use of such a model reduces the time and costs spent on research and makes efficient use of the mathematical modelling capabilities.

Key words: PTC thermistor, working mathematical model, properties of mathematical models, principles of mathematical modeling.

Language: English

Citation: Markelov, G. E. (2022). Parallel connection of PTC thermistors. *ISJ Theoretical & Applied Science*, 02 (106), 1-4.

Soi: <http://s-o-i.org/1.1/TAS-02-106-1> **Doi:**  <https://dx.doi.org/10.15863/TAS.2022.02.106.1>

Scopus ASCC: 2604.

Introduction

Extensive educational and scientific literature is devoted to the consideration of technical characteristics of positive temperature coefficient thermistors, the basic principles of their operation, and the methods of designing circuits with said thermistors. There are numerous examples of successful practical use of such equipment in various fields of human activity.

The purpose of this work is to build a working mathematical model of a technical system using a unified approach. This technical system provides for parallel connection of positive temperature coefficient thermistors.

The dependence of the resistance R of such a thermistor on its temperature T is not linear over a wide temperature range (for an example, see [1; 2]). However, within a relatively narrow temperature range, it can be assumed that

$$R(T) = r \left[1 + \beta(T - T_0) \right],$$

where r is the thermistor resistance at $T = T_0$; β is a positive constant.

A unified approach to building a working mathematical model that has necessary properties for a specific study is described in [3; 4]. Some properties of mathematical models are formulated, for instance, in [5; 6]. An example of building a mathematical model with the necessary properties for a study is presented in [7]; some of the results of this study were published in [8–10]. The particular features of using a unified approach to building mathematical models are described, for example, in [11; 12].

Problem statement

The parallel connection of n thermistors is discussed below. The i -th thermistor shall be considered a body with high thermal conductivity, whose temperature T_i at the initial time point t_0 is equal to T_0 , while $T_i \leq T_1$, $i = 1, 2, \dots, n$. Convective heat exchange occurs with the environment, the temperature of which is equal to T_0 on the surface of the thermistor area S_i , and the heat transfer coefficient is known and equal to α_i . For a relatively

Impact Factor:

ISRA (India) = 6.317
 ISI (Dubai, UAE) = 1.582
 GIF (Australia) = 0.564
 JIF = 1.500

SIS (USA) = 0.912
 ПИИИ (Russia) = 3.939
 ESJI (KZ) = 9.035
 SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
 PIF (India) = 1.940
 IBI (India) = 4.260
 OAJI (USA) = 0.350

narrow temperature range from T_0 to T_1 , it is considered that

$$R_i(T_i) = r_i \left[1 + \beta_i (T_i - T_0) \right],$$

$$C_i(T_i) = c_i \left[1 + \gamma_i (T_i - T_0) \right],$$

where $R_i(T_i)$ and $C_i(T_i)$ are the resistance and total heat capacity of the i -th thermistor; r_i and c_i are the resistance and total heat capacity of the i -th thermistor at $T_i = T_0$; β_i and γ_i are positive constants. Electric current flows through the i -th thermistor, and its intensity is

$$I_i = \frac{U}{r_i \left[1 + \beta_i (T_i - T_0) \right]}, \quad (1)$$

where U is the constant electrical potential difference at the poles of the i -th element.

The electric current

$$I = \sum_{i=1}^n I_i \quad (2)$$

is of interest in the study. Let us design a working mathematical model of the object of study that has sufficient properties of fullness, adequacy, productivity and economy.

Problem solution

The results obtained in [13] are to be used in order to solve the problem. These results allow us to build a hierarchy of mathematical models of this object of study and determine the conditions under which it is possible to find the desired value I with a relative error of no more than the given value δ_0 .

If the differences $T_i - T_0$ are small enough, then according to (1), the desired value is obtained using the formula

$$I_0 = U \sum_{i=1}^n r_i^{-1}. \quad (3)$$

Conditions under which the obtained formula is applicable are to be determined. A steady-state heat exchange process is considered for this reason. In this case, according to the calculations in [13], the steady-state value I_i is determined using the formula

$$I_i^* = \frac{2U}{r_i \left[1 + \sqrt{1 + 4\beta_i U^2 \alpha_i^{-1} S_i^{-1} r_i^{-1}} \right]},$$

and for the given temperature range

$$\frac{U^2}{\alpha_i S_i r_i (T_1 - T_0)} \leq 1 + \beta_i (T_1 - T_0), \quad (4)$$

then the steady-state value of the sought value is equal to

$$I_* = \sum_{i=1}^n I_i^*. \quad (5)$$

The relative error of the value I_0 is

$$\delta(I_0) = \left| \frac{I - I_0}{I} \right| = \frac{I_0}{I} - 1 \leq \frac{I_0}{I_*} - 1.$$

In the event of inequation

$$\frac{I_0}{I_*} - 1 \leq \delta_0$$

formula (3) can be used with a relative error of no more than δ_0 to find the desired value. Consequently, in the event of inequation

$$I_0 \leq (1 + \delta_0) I_* \quad (6)$$

the mathematical model (3) possesses the properties of fullness, adequacy, productivity and economy to a sufficient degree.

Then let us define the conditions under which mathematical model (5) can be applied. The unsteady-state heat exchange process is considered for this reason. In this case, according to the results from [13], we obtain a Cauchy problem

$$\frac{dI_i}{dt} = \frac{\beta_i r_i I_i^2}{c_i U} - \frac{\alpha_i S_i U - \alpha_i S_i r_i I_i - \beta_i r_i U I_i^2}{\gamma_i U - \gamma_i r_i I_i + \beta_i r_i I_i},$$

$$I_i(t_0) = U r_i^{-1}, \quad (7)$$

where $i = 1, 2, \dots, n$, and we can find the time point

$$t_i = t_0 + \frac{c_i}{\alpha_i S_i} \left[\frac{\gamma_i}{\beta_i} \left(\frac{r_i I_i^*}{U} - 1 + \delta_0 \right) \frac{U}{r_i I_i^*} + \left(\frac{U}{2U - r_i I_i^*} + \frac{\gamma_i}{\beta_i} \frac{U - r_i I_i^*}{2U - r_i I_i^*} \frac{U}{r_i I_i^*} - 1 \right) \times \right. \\ \left. \times \ln \left(2 - \frac{r_i I_i^*}{U} - \delta_0 \right) - \left(\frac{U}{2U - r_i I_i^*} + \frac{\gamma_i}{\beta_i} \frac{U - r_i I_i^*}{2U - r_i I_i^*} \frac{U}{r_i I_i^*} \right) \ln \left(\frac{U}{U - r_i I_i^*} \delta_0 \right) \right],$$

for which

$$I_i(t_i) = \frac{I_i^*}{1 - \delta_0}.$$

It is obvious that at $t \geq t_i$

$$\delta(I_i^*) = \left| \frac{I_i - I_i^*}{I_i} \right| = 1 - \frac{I_i^*}{I_i} \leq \delta_0,$$

and the value I_i^* can be considered equal to $I_i(t)$ with a relative error of no more than δ_0 . If $t_* = \max_{1 \leq i \leq n} t_i$,

then it is easy to show that at $t \geq t_*$

$$\delta(I_*) = \left| \frac{I - I_*}{I} \right| = \frac{\sum_{i=1}^n (I_i - I_i^*)}{\sum_{i=1}^n I_i} \leq \delta_0.$$

Consequently, formula (5) can be used to find the desired value with a relative error of no more than δ_0 .

If condition (6) is not met, then mathematical model (5) at $t \geq t_*$ possesses the properties of fullness,

Impact Factor:

ISRA (India) = 6.317
 ISI (Dubai, UAE) = 1.582
 GIF (Australia) = 0.564
 JIF = 1.500

SIS (USA) = 0.912
 ПИИИ (Russia) = 3.939
 ESJI (KZ) = 9.035
 SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
 PIF (India) = 1.940
 IBI (India) = 4.260
 OAJI (USA) = 0.350

adequacy, productivity and economy to a sufficient degree.

The development of a new mathematical model in the event of the formation of a hierarchy of mathematical models of the object of study might lead to the clarification of the previously determined conditions for the applicability of the built mathematical models. Indeed, it is possible to clarify the condition of applicability of formula (3) using the mathematical model (2), (7). For this we need to calculate the time point

$$t_i = t_0 + \frac{c_i}{\alpha_i S_i} \left[\left(\frac{\gamma_i}{\beta_i} \frac{U - r_i I_i^*}{2U - r_i I_i^*} \frac{U}{r_i I_i^*} + \frac{U}{2U - r_i I_i^*} - 1 \right) \ln \left(1 + \frac{r_i I_i^*}{U} \delta_0 \right) - \left(\frac{U}{2U - r_i I_i^*} + \frac{\gamma_i}{\beta_i} \frac{U - r_i I_i^*}{2U - r_i I_i^*} \frac{U}{r_i I_i^*} \right) \times \ln \left(1 - \frac{r_i I_i^*}{U - r_i I_i^*} \delta_0 \right) - \frac{\gamma_i}{\beta_i} \delta_0 \right],$$

for which

$$I_i(t_i) = \frac{U}{r_i(1 + \delta_0)}.$$

It is obvious that at $t \leq t_i$

$$\delta(Ur_i^{-1}) = \left| \frac{I_i - Ur_i^{-1}}{I_i} \right| = \frac{U}{r_i I_i} - 1 \leq \delta_0,$$

and the value Ur_i^{-1} can be considered equal to $I_i(t)$ with a relative error of no more than δ_0 . If

$t^* = \min_{1 \leq i \leq n} t_i$, then it is easy to show that at $t \leq t^*$

$$\delta(I_0) = \left| \frac{I - I_0}{I} \right| = \frac{\sum_{i=1}^n (Ur_i^{-1} - I_i)}{\sum_{i=1}^n I_i} \leq \delta_0.$$

Consequently, formula (3) can be used to find the desired value with a relative error of no more than δ_0 .

If condition (6) is met or $t \leq t^*$, then the mathematical model (3) possesses the properties of fullness, adequacy, productivity and economy to a sufficient degree.

Results

The following statements, which make it possible to identify a working mathematical model of the object of study, are valid in case of inequation (4).

Statement 1. If condition (6) is met or $t \leq t^*$, then the mathematical model (3) is considered as working.

Statement 2. If condition (6) is not met, then the mathematical model (5) at $t \geq t_*$ is selected as working.

Statement 3. If the inequation (6) does not hold, while the time interval from t^* to t_* is of interest, then the mathematical model (2), (7) is considered as working.

Conclusion

Thus, a unified approach was used to formulate the statements that allow us to define a mathematical model of a technical system. They allow a working mathematical model of a technical system to be established that provides for parallel connection of positive temperature coefficient thermistor thermistors. The built mathematical model possesses the properties of fullness, adequacy, productivity and economy to a sufficient degree.

The use of such a mathematical model not only reduces the time and costs spent on conducting research, but also facilitates the rational use of mathematical modeling capabilities.

References:

- Macklen, E. D. (1979). *Thermistors*. Ayr: Electrochemical Publications Ltd.
- Sze, S. M., Li, Y., & Ng, K. K. (2021). *Physics of Semiconductor Devices*. Hoboken, New Jersey: John Wiley & Sons.
- Markelov, G. E. (2015). On Approach to Constructing a Working Mathematical Model. *ISJ Theoretical & Applied Science*, 04 (24), 287–290. SoI: [http://s-o-i.org/1.1/TAS*04\(24\)52](http://s-o-i.org/1.1/TAS*04(24)52) DoI: <http://dx.doi.org/10.15863/TAS.2015.04.24.52>
- Markelov, G. E. (2015). Constructing a Working Mathematical Model. *ISJ Theoretical & Applied Science*, 08 (28), 44–46. SoI: <http://s-o-i.org/1.1/TAS-08-28-6> DoI: <http://dx.doi.org/10.15863/TAS.2015.08.28.6>
- Myshkis, A. D. (2011). *Elements of the Theory of Mathematical Models* [in Russian]. Moscow: URSS.

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
ПИИИ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

6. Zarubin, V. S. (2010). *Mathematical Modeling in Engineering* [in Russian]. Moscow: Izd-vo MGTU im. N. E. Baumana.
7. Markelov, G. E. (2012). Peculiarities of Construction of Mathematical Models. *Inzhenernyi zhurnal: nauka i innovatsii, No. 4*, <http://engjournal.ru/catalog/mathmodel/hidden/150.html>
8. Markelov, G. E. (2000). Effect of initial heating of the jet-forming layer of shaped-charge liners on the ultimate elongation of jet elements. *J. Appl. Mech. and Tech. Phys., 41, No. 2*, 231–234.
9. Markelov, G. E. (2000). Effect of initial heating of shaped charge liners on shaped charge penetration. *J. Appl. Mech. and Tech. Phys., 41, No. 5*, 788–791.
10. Markelov, G. E. (2000). *Influence of heating temperature on the ultimate elongation of shaped-charge jet elements*. Proc. of the 5th Int. Conf. “Lavrentyev Readings on Mathematics, Mechanics and Physics”. (p. 170). Novosibirsk: Lavrentyev Institute of Hydrodynamics.
11. Markelov, G. E. (2015). Particular Aspects of Teaching the Fundamentals of Mathematical Modeling. *ISJ Theoretical & Applied Science, 05 (25)*, 69–72. SoI: [http://s-o-i.org/1.1/TAS*05\(25\)14](http://s-o-i.org/1.1/TAS*05(25)14) DoI: <http://dx.doi.org/10.15863/TAS.2015.05.25.14>
12. Markelov, G. E. (2016). Teaching the Basics of Mathematical Modeling. Part 2. *ISJ Theoretical & Applied Science, 01 (33)*, 72–74. SoI: <http://s-o-i.org/1.1/TAS-01-33-15> DoI: <http://dx.doi.org/10.15863/TAS.2016.01.33.15>
13. Markelov, G. E. (2021). A working mathematical model of an PTC thermistor. *ISJ Theoretical & Applied Science, 02 (94)*, 1–4. SoI: <http://s-o-i.org/1.1/TAS-02-94-1> DoI: <https://dx.doi.org/10.15863/TAS.2021.02.94.1>

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIIHQ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

SOI: [1.1/TAS](#) DOI: [10.15863/TAS](#)

International Scientific Journal Theoretical & Applied Science

p-ISSN: 2308-4944 (print) e-ISSN: 2409-0085 (online)

Year: 2022 Issue: 02 Volume: 106

Published: 04.02.2022 <http://T-Science.org>

QR – Issue



QR – Article



Dilnoza Aminova

Tashkent Military Academic Lyceum «Temurbeklar Maktabi»
English teacher, head of the department of philology

MODERN METHODS OF TEACHING A FOREIGN LANGUAGE

Abstract: This article discusses several modern methods for the effectiveness of the English lesson, as well as for the development of a new topic without barriers.

Key words: Method, interactive methods, result, approach, case, portfolio.

Language: English

Citation: Aminova, D. (2022). Modern methods of teaching a foreign language. *ISJ Theoretical & Applied Science*, 02 (106), 5-8.

Soi: <http://s-o-i.org/1.1/TAS-02-106-2> **Doi:**  <https://dx.doi.org/10.15863/TAS.2022.02.106.2>

Scopus ASCC: 3304.

Introduction

UDC: 13.00.02

The changing realities of the modern world require the same changes in educational systems. Therefore, the topic of innovation becomes important for the entire education system and foreign language teaching in particular. Unfortunately, the educational system at this stage takes a “catching up position” in relation to the economy, engineering, technology, although education should predict the future activities of a specialist and prepare him for this activity [1].

Modern methods of teaching foreign languages offer us a wide range of teaching concepts, methods and technologies - both traditional and innovative. Curriculum developers and educators prefer one method or another depending on the learning objectives, student population, duration and intensity of the training course, and other conditions. At the same time, each of the teaching methods has its advantages and disadvantages, and the success of their application depends on the specific goals and conditions of training. In recent years, the role of a foreign language as a means of communication has increased significantly, which should be taken into account when teaching a language. The specificity of a foreign language is that we do not teach the basics of science, but skills and abilities, and this requires sufficient speech practice. The purpose of language teaching is not only to acquaint students with the system of a foreign language, but, above all, to teach them how to use the language as a means of

communication. Consequently, both the entire structure of the classes and the methods used must correspond to the real situation of communication, and training must take place in the conditions of interaction between students.

The means of achieving subject and meta-subject results, as well as personal results of students, are educational technologies. The teacher's work system to ensure the results of teaching a foreign language must necessarily include the implementation of the following technologies: communicative learning technology, technology for understanding the communicative meaning of the text, game technologies, learning technologies in collaboration, project technologies, and others.

The most important trends in the development of modern society, associated with the processes of globalization and informatization, are directly reflected in the educational process in general and in the field of foreign language education in particular. At the moment, there is a need to further develop the issue of introducing modern Internet technologies into the educational process, especially in the field of higher professional education. There is a need to develop a specially organized work with information. Today there are a large number of Internet resources. They contain material that could potentially be used for educational purposes. One of the modern technologies that allows organizing the cognitive activity of students in a special way in the context of a constantly growing amount of information and the

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
ПИИИ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

emergence of accessible online learning resources is the technology of web quests.

Developed in 1995 by Professor Bernie Dodge, Professor of Educational Technology at the University of San Diego (USA), WebQuest is a learning method in which students of various levels take part in a specific task that uses pre-prepared Internet resources [2].

According to B. Dodge, the structure of a web quest should be presented as follows: - introduction - a description of the main roles of the participants or a quest scenario, a preliminary work plan, an overview of the entire quest; - task - the formulation of the problematic task, the form of presentation of the final result; - resources - list of information resources; - work plan - a description of the work procedure that must be performed by each participant of the web quest when completing the task independently (stages); - assessment - description of the criteria and parameters for evaluating the web quest; - conclusion - a section that summarizes the experience that participants will gain when working on a web quest.

M. Luzon, who studies the use of web quests as a means of teaching English to students of military specialties, argues that the use of web quest technology expands the possibilities of using linguistic knowledge and skills [3]. It promotes effective communication in the professional field, prepares students for lifelong learning and autonomous learning, helps students become multiliterate and teach them how to process semantic constructions so that they can understand and create the full variety of texts that exist today, including electronic ones.

Another highly effective teaching method is the use of the educational "Portfolio" in the learning process at an educational institution, because it is a means of increasing the level of independence of students in educational activities and their professional and personal self-development [4]. During its compilation, a phased documented fixation of the student's achievements takes place. The student is given the opportunity to demonstrate not only language skills, but also communication skills, self-reflection. During learning 10, the student is fixed both on the process and on the product of labor; high creative and cognitive activity of the student is required: he learns to present the result of his work; the student performs a new role for him in relation to himself and his partners in learning - the role of an evaluating teacher; the motivation for learning increases, because the student feels like a real participant in the educational process, whose interests are not indifferent to both the teacher and classmates.

Simulation method. Especially in teaching a foreign language to students of economic specialties of universities, the simulation method can be successfully applied. In cybernetics, this term is used to model and simulate reality. In training, we are

talking about various simulation business games that provide students with the opportunity to develop their skills, apply knowledge in order to solve a particular problem in the so-called "safe environment", which simulates real situations, for example, in business, in work in a company. The simulation provides an opportunity for students to try themselves in a certain role - the head, the president of the company, gives the opportunity to explore the system of work of this enterprise. The participants in the game are given certain tasks - to achieve an increase in the company's profit, to conclude an agreement, to profitably sell the company's shares, and the like. Simulations are characterized by a high degree of interest of the participants, they are completely immersed in the game, embodied in their role, root for the result of the work, since the overall result of the game depends on the team spirit and the speed of decision-making. Thanks to the simulation, the skill of strategic planning of students is formed, the ability to work in a team, negotiate, and convince a business partner develops. Simulations streamline students' knowledge, prepare them for the need to make quick and motivated business decisions in future activities. There are computer simulations, where participants work with a computer program, manage an imaginary company, and desktop simulations, where participants, companies, enterprises "exist" in the form of chips, cards. Role play method. The role-playing game is an active teaching method, a means of developing the student's communication skills. The role-playing game is connected with the interests of students, it is a means of emotional interest, motivation of educational activities. Role-playing is an active way of teaching practical knowledge of a foreign language. The role-playing game helps to overcome the language barriers of students, significantly increases the volume of their speech practice. This is learning in action. There are a large number of forms, types of role-playing in foreign language lessons. So, for example, you can use the role-playing game "At the interview", where students take on the role of employer and employee. From all of the above, it should be concluded that today it is important for a teacher to constantly improve their knowledge about the methods of teaching foreign languages, introduce the latest educational concepts into their teaching practice, and keep up with the times [5].

Of great interest and effective results is the method of working with Internet resources:

1. "List of links" ("Hotlist"): a list of annotated Internet resources on the topic under study.

2. "Multimedia Scrapbook" - studying a collection of multimedia links (photos, maps, stories, facts, quotes, audio clips, video fragments), selecting the necessary resource and creating your own collection of multimedia materials.

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIIHQ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

3. "Treasure Hunt" - the search for information that allows you to answer questions of a specific nature on the topic under study; implies the presence of problematic issues on the content of sites and the final task.

4. "Collection of examples" ("Subject Sampler") - students explore a collection of links selected by the teacher, including questions based on the content of sites, and express their attitude towards it; this is a more complex activity than "treasure hunt", which has a personality-oriented character.

5. "WebQuest" - a project that uses a selection of Internet sites as the beginning of a comprehensive activity of exploring different points of view on solving a problem, group cooperation and a final project of choice, sometimes integrating a role-playing game. Thus, the use of a variety of innovative methods of teaching foreign languages has a number of advantages that help teach students to actively acquire new knowledge, develop their creative and

organizational skills, and give a powerful incentive to learn the language. Innovative technologies make it possible to perfectly combine theory with practice, form knowledge on the subject, professional skills and abilities [6].

The current state of teaching foreign languages can be characterized as a state of struggle between traditional teaching and innovation. Of course, the predominance of one type of learning leads to an extreme. If traditions prevail over the new, then there will be stagnation, stagnation of science and practice, and if in the pursuit of innovation we forget traditions, then science will have nothing to rely on. Therefore, an optimal ratio of traditions and innovations is needed in order to move pedagogical science towards progress and development based on experience. We need technologies that would be effective and contribute to the progressive development of pedagogical science and would prepare students for future professional activities.

References:

1. Kraevskij, V.V. (2009). Nauki ob obrazovanii i nauka ob obrazovanii (metodologicheskie problemy sovremennoj pedagogiki). *Voprosy filosofii*, №3, pp. 77-83.
2. Dodge, B. (n.d.). *Some Thoughts About WebQuests*. URL: Retrieved from http://webquest.sdsu.edu/about_webquests.html
3. Luzon, M.J. (n.d.). *Internet content-based activities for ESP*. URL: Retrieved from <http://exchanges.state.gov/english/teaching/forum/archives/docs/02-40-3-g.pdf>
4. (n.d.). *Evropejskij jazykovej portfel'*. URL: Retrieved from <http://methods.ucoz.ru/publ/12-1-0-2>
5. (2022). *Sovremennye metody i tehnologii prepodavaniya inostrannyh jazykov v vysšej shkole* / Jerkinov Hudajberganova, B. M. Gulimetova. — Tekst : neposredstvennyj. Filologija i lingvistika v sovremennom obshchestve : materialy IV Mezhdunar. nauch. konf. (g. Moskva, iun` 2016 g.). (pp.94-97). Moskva : Buki-Vedi. Retrieved 28.01.2022 from <https://moluch.ru/conf/phil/archive/178/10430/>
6. Pavlova, E. V. (2015). Innovacionnye metodiki obuchenija inostrannym jazykam / E. V. Pavlova, N. A. Kobzeva, I. S. Ovchinnikova. — Tekst : neposredstvennyj. *Molodoj uchenyj*, № 12 (92), pp. 790-792. <https://moluch.ru/archive/92/20495/>
7. Karimova, V. V. (2021). The Analysis Of Lexical-Semantic Variants Of Kinship (Wife, Stepmother) Expression Means In Female Gender. *International Journal of Progressive Sciences and Technologies*, 24(1), 71-72.
8. Rasulova, Sh. H., & Karimova, V. V. (2020). Ob onomasiologicheskom aspekte izuchenija terminov rodstva zhenskogo pola v uzbekskom i tadzhikskom jazykah. *Vestnik Bohtarskogo gosudarstvennogo universiteta imeni Nosira Husrava. Serija gumanitarnyh i jekonomicheskikh nauk*, 1-1(71), 75-78.
9. Vakhobovna, K. V. (n.d.). The Lexical Plan Suppletivism in Turkic Languages. *International Journal on Integrated Education*, 3(12), 184-185.
10. Karimova, V. (2019). Brief history of researching terms of kinship in uzbek and english languages. *Scientific Bulletin of Namangan State University*, 1(12), 156-162.
11. Karimova, V.V., & Jyldasheva, D.A. (2016). The Responsibility of a Teacher for Increasing the Probability of Advancing Student Achievement. *Molodoj uchenyj*, 3-1(107), 41.
12. Hamzaevna, R.M. (2021). Sovremennye pedagogicheskie tehnologii na urokah russkogo jazyka. *EPR International Journal of Multidisciplinary Research (IJMR)*, 7(4), 148-150.
13. Khamzaevna, R.M. (2020). Linguistic features of the novel "New Moscow Philosophy" by V. Pyetsuh. *International Journal of Research*, 7 (3), 198-201.

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHII (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

14. Rasuloval, M. H. (2018). *Priem obratnoj svjazi na urokah literatury*. In *Molodezh` i nauka: real`nost` i budushhee* (pp. 554-555).
15. Rasuloval, M. H. (2017). *Innovacionnye tehnologii v jekologicheskom vospitanii*. In *Molodezh` i nauka: real`nost` i budushhee* (pp. 302-305).
16. Rasuloval, M. H. (2016). *Proektnaja rabota na zanjatijah po russkoj literature*. In *Molodezh` i nauka: real`nost` i budushhee* (pp. 329-330).
17. Rasuloval, M. H. (2016). *Opyt primenenija metoda proektov pri obuchenii russskomu jazyku*. In *Molodezh` i nauka: real`nost` i budushhee* (pp. 327-329).
18. Rasuloval, M. H. (2015). *Nravstvennoe merilo v russskoj literature*. In *Molodezh` i nauka: real`nost` i budushhee* (pp. 339-340).
19. Rasuloval, M. H. (2019). *Zadacha sovremennoj vysshej shkoly - nauchit` studentov*. In *Molodezh` i nauka: real`nost` i budushhee* 463-464.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	PIHII (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

SOI: [1.1/TAS](#) DOI: [10.15863/TAS](#)
International Scientific Journal
Theoretical & Applied Science
 p-ISSN: 2308-4944 (print) e-ISSN: 2409-0085 (online)
 Year: 2022 Issue: 02 Volume: 106
 Published: 05.02.2022 <http://T-Science.org>

QR – Issue



QR – Article



Daniil Sergeevich Shcherbakov
 Institute of Service and Entrepreneurship
 bachelor

Artur Alexandrovich Blagorodov
 Institute of Service and Entrepreneurship
 bachelor

Vladimir Timofeevich Prokhorov
 Institute of Service and Entrepreneurship
 (branch) DSTU (Shakhty, Russia)
 Doctor of Technical Sciences, Professor

Stanislav Matveevich Zverev
 OOO SOYUZLEGPROM
 PhD in Economics, Professor
 (Moscow, Russia)

Galina Yurievna Volkova
 LLC TsPOSN «Orthomoda»
 Doctor of Economics, Professor
 (Moscow, Russia)

FEATURES OF CREATING PREREQUISITES FOR SOLVING THE TASKS BY LIGHT INDUSTRY ENTERPRISES IN THE SUSTAINABLE MANUFACTURE OF PRIORITY PRODUCTS DEMANDED BY CONSUMERS OF THE SOUTH AND NCFD REGIONS

Abstract: *The article examines the role of the leader of the enterprise team to ensure their effective activities in the production of demanded import-substituting products, for which the Authors have designated such a list of competencies that the leader - the head of the enterprise team must have in order to be able to successfully fulfill the goals and objectives formulated before him, in order to ensure to this very enterprise both the successful execution of production for consumers of demanded products, and being able to answer for failure to fulfill its obligations, only in such an alliance is it possible to guarantee the successful operation of the light industry enterprises of the regions of the Southern Federal District and the North Caucasus Federal District on filling their markets with demanded and competitive products. The results of such studies confirmed the justification for understanding that the head of the enterprise.*

The authors motivate the manufacturer to recommend to the market due to their motivation, managing quality, to produce import-substituting products for the consumer, to revise their concept of forming a market with demanded and competitive goods, taking into account their priority. Such a mutual understanding will fully correspond to the desire of the consumer to satisfy his desire to make a purchase, taking into account his social status, to ensure that manufacturers sell their products in full and guarantee themselves sustainable TEP from their activities and financial stability.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	PIIHQ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

Key words: leader, competencies, quality, demand, professionalism, priority, market, profit, demand, buyer, manufacturer, financial stability, sustainable TEP, assortment, assortment policy, paradigm, economic policy, profitability.

Language: English

Citation: Shcherbakov, D. S., Blagorodov, A. A., Prokhorov, V. T., Zverev, S. M., & Volkova, G. Y. (2022). Features of creating prerequisites for solving the tasks by light industry enterprises in the sustainable manufacture of priority products demanded by consumers of the south and NCFD regions. *ISJ Theoretical & Applied Science*, 02 (106), 9-47.

Soi: <http://s-o-i.org/1.1/TAS-02-106-3> **Doi:**  <https://dx.doi.org/10.15863/TAS.2022.02.106.3>

Scopus ASCC: 2000.

Introduction

UDC656.06:357.46.

It's no secret that now almost all clothes and shoes in Russia are imported. For example, rummaging through the closet, I found only one piece of domestic production - socks. Most of our citizens have recently either bought goods in the mass market at sales of global brands, or ordered new clothes online directly from China (but cheap!). Why is it impossible to establish production in Russia? Why did trousers and boots never succumb to import substitution?

Maybe it's my wardrobe that is not quite patriotic? But here are the numbers. The share of imported footwear in Russian retail is 87% clothes - 82%, textiles - 73%. Basically, we import all these things to wear from Asia - China, Vietnam, India, Bangladesh, Indonesia, Malaysia, and some from Belarus and even Kyrgyzstan. Meanwhile, imports are rapidly rising in price. The cost of clothing and footwear in Russia in 2021 increased by 10-15%, and in the coming 2022, prices may increase by another 15-25%, reported the disappointing news agency Fashion Consulting Group. Many experts give even sadder forecasts: in their opinion, the growth in prices for clothes and shoes in the middle and low price segments can grow up to 40%.

"Last year was one of the most difficult for the commodities business," explains an expert in trading on marketplaces and the commodities business Maxim LOGINOV. - Restrictions due to covid in the work of customs led to stagnation of commodity flows and disruption of supply chains, and then to an acute shortage of containers, which have risen in price several times. Entrepreneurs were forced to recoup losses by raising prices, plus the cost of delivery to Russia has risen sharply. The clothing and accessories segment has always been expensive, and now the cost of logistics has increased by 2-2.5 times. The prices for materials are also rising in China itself, sheathing and shoeing half of humanity. Not only raw materials are becoming more expensive, but also equipment, energy, labor of workers, and the cost of transportation continues to grow. The situation will definitely not improve in the near future:

It would seem that we need to get down to business. If we are making rockets, how can we

manage the boots? Nevertheless, the expert is very skeptical about the possibility of setting up production in Russia: in his opinion, China fulfills orders for the whole world and years of active PR work must pass in order to attract a flow of external orders to Russia. The second problem is materials. We buy them for production at Russian factories, again in China, so we still face the same delivery problems and rising prices for raw materials. The mentality of the Russians also matters, says Loginov: the Chinese are used to working seven days a week, and we are clearly not ready for such a regime.

The reason for the current situation in the country is an economist Andrey BUNICH calls the oil model of economic development: "It was believed that everything except oil and gas did not matter, that it was a trifle, nonsense." Such a dismissive approach, in his opinion, has led to the fact that in terms of non-food products, we now completely sit on imports. There are either direct imports or hidden ones. That is, even if a thing is listed as Russian-made, its components are still imported.

"Obviously, there are branded clothes," says Bunich. — But we could close some very simple positions in the market ourselves. And that would have a dampening effect on prices. Shipping from China is no longer as cheap as it used to be, costs and wages have risen there. And many manufacturers are already leaving from there - to India, Bangladesh, Indonesia. If we produce here, the prices will be comparable: there is almost no fundamental difference in the cost of labor now, but you can save a lot on transport and logistics. Plus jobs will be created here. I believe that our producers could compete, but we need to provide them with preferential conditions. It's possible and not that expensive. The same Turkey for its textile industry uses various forms of support, they have this industry as a priority.

As tells SOYUZLEGPROM President Andrey RAZBRODIN, we, for example, make excellent down jackets and leather goods that are exported around the world, but mass production is not easy. Nevertheless, under the conditions of covid, the industry, one of the few in the country, showed growth: "Before the pandemic, our clothing industry was underloaded by 45% with orders, and now orders are in line, the salaries of seamstresses have grown to 100 thousand rubles, it is almost impossible to find free capacity".

Impact Factor:

ISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	ПИИИ (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

According to him, already now more and more industries are thinking about moving from China and Bangladesh to Russia: it is cheaper to sew with us and transport to Europe than from China. The production of large brands is being localized, and our brands have begun to develop more actively.

"Establishing production only for Russia is a minimum task," says Razbrodin. - China has developed production for the whole world in 10 years, nothing prevents us from doing this. We have a lot of opportunities and traditions, the Chinese had to learn everything from scratch. We have lost part of the industry, it must be restored. Following the localization of finished products, the localization of fabrics will follow, we will be able to restore their production. The government needs to take over this industry. Remember how agriculture and farming were supported, and now you can buy a variety of cheeses, although until recently there was almost nothing domestic. It's a similar situation here."

Main part

The quality of production and the quality of the product of production depend on the technical conditions - technology, technical means, organization of production, professional qualifications of organizers and performers and attitude to work. The last two components form the content of the concept of "subjective factor" or "human capital". Based on the achievements of the scientific and technological revolution, entrepreneurs are trying to minimize the complicity of the "subjective factor" due to its volatility. Without advertising, the "subjective factor" refers to the conditions of uncertainty and risk.

The problem here is that all attempts to limit the presence of the subjective factor in production and, mainly, in its technological component, inevitably lead to the absolutization of the technical component. It becomes a total means of increasing labor productivity, production safety and profitability. Thus, the management of the organization of production development is delegated to artificial intelligence, built on the laws and rules of formal logic, expressing one of the aspects of development - conservatism.

The original law, and, in essence, the principle of this logic is the law of identity. The subject and the subject, their relationship are recognized as immutable. Movement is reduced to its relative moment - rest. Peace replaces movement and with it change as the essence of any movement.

C. Darwin said: nature does not like jumps and explained, because all of them consist. J. Cuvier, on the contrary, tried to understand the variability of species as a result of earthly cataclysms. The life of nature tells us that we should be afraid of logical linearity in thinking. It is effective when it is important to bring something to perfection in its traditional

manifestation. For example, in the case of improving the existing assortment, achieving a rational ratio of consumer requirements for a well-known attractive product, its quality and price. But everything comes to an end, improvement is not an exception, therefore, it is necessary to look in advance for options for an interesting promising development of the product line, to think not about what is already there in principle, to improve what is available, but to try to fantasize systematically, ahead of demand with innovations.

Our thinking in that part of it, which is called creative, is spacious enough for innovative actions. It is only important to understand that beyond the horizon of the known, Aristotelian logic endures its heuristic potential. Perspective thinking is thinking that tries to "grab" the direction of change in commodity production. Here, the possibility in thinking of an anticipatory reflection of reality dominates - a property discovered by P. Anokhin. There are physiological grounds for foreseeing changes, mental prerequisites in the form of will, needs, emotions are also natural. It remains to look for logical tools. The arrow of movement should be translated from Aristotelian formal logic to Hegelian dialectical logic, based on the principle of developing the content of concepts and changing the concepts themselves. Representing the peculiarity of dialectical logic, its fundamental difference from the logic of Aristotle, G. Hegel wrote: "In rational logic, the concept is usually considered as a simple form of thinking and, more precisely, as a general idea that the concept as such is something dead, empty, abstract." And he clarified: "Of course, the concept should be considered as a form, but as an infinite, creative form."

It is no coincidence that the like-minded people of K. Marx noted that the founder of the universal understanding of dialectics did not leave a textbook to the heirs, since it was supposed to be the logic of analyzing the movement of production in Capital. K. Marx showed how the logical limited thinking of production managers reduces the process to capital management and brings production not only to a crisis provoked by overproduction, but also to socio-political tension. The development of political economy after K. Marx was expected, subordinated to the historical rehabilitation of capitalism. Intellectual and political forces concentrated on identifying the perfection of commodity production with its bourgeois form of organization.

Here, the features of Aristotelian logic, aimed at the immutability of the conditions of inference, came in handy. If commodity production is the only universal reality of the objective historical process in the conditions of a developed society, then history itself is destined to carry it out with dignity exclusively in the form of a bourgeois organization. Thus, the consumer's thinking, also generally tuned to a formally logical type of action, is led to the final conclusion: the period preceding capitalism was

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
ПИИИ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

prehistoric, just becoming. The true history of commodity production is being created in a bourgeois form. Objective reality was embodied in an absolute, that is, non-historical form.

The power of logic lies in the ability to build an internally consistent theory, but the truth of any theory is not verified by its sequence alone. Here, the correspondence of the consequences of the theory to the realities of life is of particular importance. Economic theory is being tested en masse, because its results concern everyone directly. People may or may not be producers, but everyone consumes products of production and everyone wants to make consumption of sustainable quality and corresponding to the ability to pay.

Starting with handicraft labor and the guild form of its organization, the quality of the goods pushed all other signs of production into the background. As long as the division of labor had a shop form, and inside the shop everyone produced the goods up to the final commodity form and fully guaranteed the quality with his brand, the quality of production and the quality of the goods remained in the unity of existence, and the problem of the quality of the goods was simplified, reduced to the observance of the technological standard of production. Production was a way of life support for the manufacturer, so the relevance of the quality of the product was removed by the specifics of its relationship to production.

On the market, the goods were of high quality, one should only be afraid of counterfeiting, which did not have the current scale and was resolutely suppressed by both the state and self-regulation of trade. For mass production, which was the main consequence of the industrial revolution, the problem of the producer's interest in the quality of goods, among socially significant ones, was not noted. It undoubtedly existed, but the nature of production did not allow it to leave the sphere of private consciousness and materialize in the product range.

Potentially, this problem appeared even before commodity production, but at that time it was in the form of an abstract possibility, because the reality was the actuality of the quantity of the product produced. Production was only gaining strength as a source of human viability. First, the problem of quantity was born, the increase in quantity raised the question of quality, since it became possible to compare the produced product, and there was a specialization of production depending on the uniqueness of the natural environment.

The developing market demanded a variety of goods. Goods were needed within the framework of the difference in the purchasing power of consumers. Factory - factory production, based on the technical base, opened up the prospect of varying the quality of the goods. Severe restrictions on production, which distinguished shop activity, receded. There are different types of goods on the market.

In British philosophy, the very concept of quality was actively discussed. J. Locke proposed a version of the combination in determining the quality of the objective properties of objects and their subjective perception by consciousness.

In the division of quality attributes into "primary" and "secondary" there was a rational principle associated with the specifics of the "second nature" - things transformed from their natural state by human labor. The "primary" qualities of a product or its raw materials are determined by natural reality and are completely independent of a person. "Secondary" signs, on the contrary, depend on human labor. It is labor that reveals or creates them, and therefore the quality of objects transformed by labor must be determined with a human assessment. The inclusion of a person as a factor in the production of the quality of goods enhances the influence of the subject of labor on the quality of production and the quality of the goods produced. As a result, the burden on the management process increases.

Management is subject to the solution of the problem of sustainable production of a quality product. As in any task, here you need:

- clearly define what "quality" is?
- understand what is specific to the quality of the goods?
- to understand how the "quality" of commodity production and its mass character are connected, to trace the mechanism of interaction of qualitative changes with quantitative.
- reveal the systemic position of the quality problem of mass production in the context of a developing economy.

Only having received answers to the listed questions, we will be able to productively investigate the problem: "How realistic is our desire to give the mass producer the need for the quality of the product result", in other words, "is it possible to sufficiently motivate the receipt of a quality product from within mass production?". So far, unfortunately, quality management is carried out by introducing into production ideas developed not in it, but in the "pure" theory of management. Such a quality management mechanism elevates the importance of scientific analysis, determining the self-promotion of production towards quality, the role of an auxiliary, experimental farm.

A retrospective look at the history of understanding how to manage the quality of production in general, demonstrates clearly that this history is very similar to the movement of thought on the principle of "trial and error". Each following "theory" after S. Colt (1870s) - G. Lalande, G. Ford, A. Fayol, M. Weber, F. Taylor, W. Schuchert, E. Deming, I. Ishikawa, I. Juran, F. Crosby, A. Feigenbaum invariably resembled a way out of the impasse into which her predecessor led, until, in the

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
ПИИИ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

end, they replaced the key concept of QS with QMS - "Quality Management System".

Comparison of QMS with SC allows us to consider the trend of movement - the desire, developing a new approach to quality management, to overcome the narrow technological view of quality as a kind of standard, limited by the production process outside the conditions of consumption.

The interpretation of the quality of a product that has developed under the influence of economic rationality does not reflect the socio-cultural status of the product, at least, the product of the consumer series. It is advisable to look for a qualitative characteristic of a product intended for mass consumption at the junction of its industrial, household and socio-cultural merits.

Moreover, it is desirable that the product not only satisfies existing needs, but also stimulates their cultural development, serves as a tool for the development of the consumer's personality. Human capital is involved in the creation of the product of production, and production is designed to contribute to the improvement of the individual. There is no other way to overcome alienation in the conditions of absolutization of private property and its distribution disproportionate to labor. Only giving creativity to work and rewards corresponding to creativity can be "removed", in terms of Hegelian philosophy, the tension of alienation. The quality of goods in a broad sense can be considered as a factor of social progress and as a test of socio-cultural achievements of social development.

In the definition of quality, the most common shortcoming is the lack of consistency. Quality is defined as a set of essential properties. The usual method of selecting such is the method of pyramidal arrangement of the properties of the object. Important, but not decisive, remain at the base, and as you climb to the top, a hierarchy of the remaining properties is formed. At the top, we get the sum of the main properties, which are included in the definition of the quality of the item. G. Hegel at one time wittily defined quality from the contrary - "quality is that, losing what, the object ceases to be itself."

Following the example of the great thinker, let's define "shoes" as "clothing for the feet." How accurate is this definition? For shoes, probably yes. Not for the quality of the shoes. If you deprive shoes of the ability to be "clothing for the feet", then it really will not be a shoe. If, however, only the ability inherent in footwear is preserved, then the required quality of the product will be indefinite. "Clothes for the legs" can be dangerous due to the toxicity of the material, the means of fastening, and the construction that is inconvenient for movement. A formally constructed requirement for an item does not coincide with the quality of the item. It is significant as a prerequisite for the qualitative certainty of the product. To

determine the quality of a product, one must proceed from its functional purpose.

Legs, for which clothes are sewn in the form of shoes, are part of a living organism. These are not stocks and not the limbs of a corpse, also intended for certain clothes. Footwear will not be shoes until there is sufficient evidence of its safety - hygienic, ergonomic, industrial, household. Quality is not a set of essential properties of a product, it is their system, the system-forming feature of which is indeed the ability to perform some formally most significant function. It is laid as the basis for determining the quality of a product, then "growing" the system itself, as a pearl in a shell is grown from a random grain of sand or the Periodic Table of chemical elements from atomic weight.

G. Hegel was right in his definition of quality, it is always better to start with what is "in plain sight" in order to build up the definition later. There is an electron shell around the nucleus of an atom, and together they give the definition of an atom. In the definition, we lay the quality, revealing it later in the aggregate of concretizing properties.

From a philosophical point of view, the quality of an object, reflecting the diversity of the world, reproduces in itself this objectively existing objective difference. The quality of the product, especially for mass direct human consumption, requires additional clarification related to the manufacturer's responsibility for the safety of using the product. The quality of consumer goods is more complexly structured. Its definition includes a systematic arrangement of core competencies of technical and humanitarian importance.

The situation under study, which has developed both in Russia and in the regions of the Southern Federal District and the North Caucasus Federal District with light industry enterprises in filling them with domestic products that are in demand on the markets, is regrettable. Their absence not only provokes shortages, but significantly worsens the social situation of those living in these regions, since for the majority of the population they were the only source of income, they were city-forming and provided the entire infrastructure for the life of the population, provoking not only employment, which in itself is very important, but also ensured the flow of funds to these regions to solve all their social problems. The hope of the regional and federal branches of power that everything can be solved through the ruthless exploitation of natural resources, which is not only criminal, but also a road to nowhere. And the talk about that domestic products are not in demand are groundless. The characteristics of imports and exports of footwear in 2021 are presented in tables 1 and 2, and the characteristics of imports and exports of p / f raw materials and finished leather in tables 3 and 4.

Impact Factor:	ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
	ISI (Dubai, UAE) = 1.582	ПИИИ (Russia) = 3.939	PIF (India) = 1.940
	GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
	JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

Table 1 - Characteristics of footwear imports in 2021

TN VED code	2021			2020			2019		
	Quantity, thousand pairs	Price, thousand dollars	Price, USD/c couple	Quantity, thousand pairs	Price, thousand dollars	Price, USD/c couple	Quantity, thousand pairs	Price, thousand dollars	Price, USD/c couple
6401	1621.0	11,349.3	7.0	1277.5	9423.1	7.4	1941.8	14,073.6	7.2
6402	142 994.0	909 763.3	6.4	128,798.7	712 494.4	5.5	126,495.3	782 532.5	6.2
246	52,093.0	1,452,777 .2	27.9	48,548.9	1,306,379.6	26.9	60,314.9	1,644,496.9	27.3
6404	79,882.7	804 621.3	10.1	74,340.1	727 911.6	9.8	73,875.0	807 691.5	10.9
6405	2624.6	20,319.9	7.7	3,122.5	16,962.2	5.4	5265.2	25,203.6	4.8
Total	279 215.3	3,198,831 .0	11.5	256,087.7	2,773,170.9	10.8	267 892.2	3,273,998.0	12.2
6406, tons	24,995.2	128 919.8	5.2	24,765.0	114 137.4	4.6	26,324.6	128 625.5	4.9

Table 2 - Characteristics of footwear exports in 2021

TN VED code	2021			2020			2019		
	Quantity, thousand pairs	Price, thousand dollars	Price, USD/c couple	Quantity, thousand pairs	Price, thousand dollars	Price, USD/c couple	Quantity, thousand pairs	Price, thousand dollars	Price, USD/c couple
6401	3,549.7	10 102.6	2.8	3906.2	9,763.1	2.5	3,568.0	10,009.2	2.8
6402	7,176.5	51,247.9	7.1	7,856.1	51 103.9	6.5	7452.6	59,383.6	8.0
6403	3,541.3	87,469.2	24.7	3,726.0	90,938.2	24.4	4,038.8	109,021.5	27.0
6404	7049.5	64,078.8	9.1	8008.2	67,454.6	8.4	8,021.2	74,276.7	9.3
6405	2,719.2	15,924.7	5.9	2389.2	14,373.3	6.0	2528.3	14,951.8	5.9
Total	24,036.3	228 823.2	9.5	25,885.7	233,633.1	9.0	25,608.8	267 642.8	10.5
6406 , tons	925.6	7,884.8	8.5	722.2	5924.1	8.2	829.8	7348.2	8.9

Reference:

6401 rubber shoes	6404 footwear textile	6404 footwear textile
6402 other rubber footwear	6405 other footwear	6405 other footwear
6403 leather shoes	6406 shoe parts	6406 shoe parts

2019

Table 1 continued

Rates of growth, %						
2021 to 2020			2021 to 2019			
Quantity	Price	Price	Quantity	Price	Price	
126.9	120.4	94.9	83.5	80.6	96.6	
111.0	127.7	115.0	113.0	116.3	102.8	
107.3	111.2	103.6	86.4	88.3	102.3	
107.5	110.5	102.9	108.1	99.6	92.1	
84.1	119.8	142.5	49.8	80.6	161.7	
109.0	115.3	105.8	104.2	97.7	93.7	
100.9	113.0	111.9	95.0	100.2	105.6	

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИИ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

Continuation of table 2

Rates of growth, %					
2021 to 2020			2021 to 2019		
Quantity	Price	Price	Quantity	Price	Price
90.9	103.5	113.9	99.5	100.9	101.5
91.3	100.3	109.8	96.3	86.3	89.6
95.0	96.2	101.2	87.7	80.2	91.5
88.0	95.0	107.9	87.9	86.3	98.2
113.8	110.8	97.3	107.6	106.5	99.0
92.9	97.9	105.5	93.9	85.5	91.1
128.2	133.1	103.9	111.5	107.3	96.2

Table 3 - Characteristics of imports of raw materials, semi-finished products and finished leather in 2021

TN VED code	2021			2020			2019			Rates of growth, % 2021 to 2020 2021 to 2019					
	Quantity, tons	Cost, thousand dollars	Price, USD/ton or sq. m	Quantity, tons	Cost, thousand dollars	Price, USD/ton	Quantity, tons	Cost, thousand dollars	Price, USD/ton	Quantity	Price	Quantity	Price	Price	
4101	5657.0	3,058.5	540.7	7,052.9	2536.9	359.7	3490.8	1354.2	387.9	80.2	120.6	150.3	162.1	225.9	139.4
4102	3,740.5	2322.1	620.8	2201.0	1398.9	635.6	7,163.3	7,027.0	981.0	169.9	166.0	97.7	2.2	33.0	63.3
4103				1.5	1.8	1,173.5									
4104 including wet blue	1341.9 1295.4	1,721.1 1,109.8	1282.5 856.7	3920.1 3,893.1	3654.5 3,261.3	932.2 837.7	2755.4 2688.0	3607.7 2857.4	1309.3 1,063.0	34.2 33.3	47.1 34.0	137.6 102.3	48.7 48.2	47.7 38.8	98.0 80.6
4105	14.0	63.6	4554.5	7.9	23.4	2952.3	69.8	174.2	2494.6	176.3	272.0	154.3	20.0	36.5	182.6

Impact Factor:

ISRA (India) = 6.317 **SIS (USA) = 0.912** **ICV (Poland) = 6.630**
ISI (Dubai, UAE) = 1.582 **PIHII (Russia) = 3.939** **PIF (India) = 1.940**
GIF (Australia) = 0.564 **ESJI (KZ) = 9.035** **IBI (India) = 4.260**
JIF = 1.500 **SJIF (Morocco) = 7.184** **OAJI (USA) = 0.350**

4115	4114	4113 in thousand square meters m	4112	4107 in thousand square meters m*	4106
1,872.1	41.8	223.7 489.6	61.3	3245.1 2826.0	22.0
1431.8	780.1	2540.3	1356.8	31,989.2 31,784.6	75.7
764.8	18,652.9	11,355.9 5.2	22,123.1	9,857.7 11.2	3448.6
1,148.2	21.3	308.6 676.9	46.7	3,575.1 2,790.3	57.0
1,705.5	575.6	3,061.7	1110.3	30,900.2 30,773.0	338.2
1485.4	27,063.1	9920.4 4.5	23,764.7	8643.1 11.0	5928.6
3460.9	31.8	473.3 1,059.2	92.4	3,746.0 4,056.9	55.7
2319.7	566.0	4,145.6	1,753.5	36,963.6 36,792.4	209.6
670.3	17,790.3	8,758.2 3.9	18,979.7	9,867.4 9.1	3,766.1
163.1	196.7	72.5 72.3	131.3	90.8 101.3	38.5
84.0	135.5	83.0	122.2	103.5 103.3	22.4
51.5	68.9	114.5 114.7	93.1	114.1 102.0	58.2
54.1	131.5	47.3 46.2	66.4	86.6 69.7	39.4
61.7	137.8	61.3	77.4	86.5 86.4	36.1
114.1	104.8	129.7 132.6	116.6	99.9 124.0	91.6

4101cattle skins

4102skins of sheep and lambs

4103other skins

4104"wet blue" and "crust" from cattle

4105"wet blue" and "crust" from sheep and lambs

4106"wet blue" and "crust" from other animals

4107 leather and "crust" from cattle

4112 leather and "crust" from sheep and lambs

4113 leather and "crust" from other alive

4114 suede, patent leather

4115 composite leather

4107 leather and "crust" from cattle

4112 leather and "crust" from sheep and lambs"

4113 leather and "crust" from other animals

4114 suede, leather

4115 composite leather

Impact Factor:

ISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	PIHII (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

Table 4 - Characteristics of exports of raw materials, semi-finished products and finished leather in 2021

TN VE D code	2021			2020			2019			Rates of growth, %					
	Quantity, tons	Price, thousand	Price, USD/ton	Quantity, tons	Price, thousand	Price, USD/ton	Quantity, tons	Price, thousand	Price, USD/ton	2021 to 2020			2021 to 2019		
										Quantity	Price	Price	Quantity	Price	Price
4101	813.4	752.2	924.8	170.0	87.9	517.0	1,830.7	1679.3	917.3	478.4	855.6	178.9	44.4	44.8	100.8
4102	29.8	145.0	4,869.0	26.14	106.2	4,063.3				113.9	136.5	119.8			
4103	53.5	68.7	1284.9	104.3	401.5	3,848.4	166.2	541.4	3,258.5	51.3	17.1	33.4	32.2	12.7	66.8
4104 including wet blue	1,799.3 1,757.0	2543.0 2450.3	1413.4 1394.6	629.2 628.4	894.9 882.1	1422.3 1403.8	266.3 265.9	563.4 549.4	2116.0 2066.0	286.0 279.6	284.2 277.8	99.4 99.3	675.7 660.7	451.3 446.0	67.5 67.5
4105				6.8	20.3	2970.5	109.3	215.3	1969.3						
4106	300.3	547.8	1824.4	389.4	821.7	2110.2	354.5	978.5	2760.7	77.1	66.7	86.5	84.7	56.0	66.1
4107 in thousand square meters m*	5,883.7 6997.5	64,351.8 64,316.8	10,937.4 9.2	4,839.3 5234.0	52,823.5 52,810.0	10,915.4 10.1	6530.8 7482.6	82,347.5 82,277.2	12,609.2 11.0	121.6 133.7	121.8 121.8	100.2 91.1	90.1 93.5	78.1 78.2	86.7 83.6
4112	5.8	102.2	17,502.7	9.1	94.2	10,324.4	12.7	138.8	10,944.0	64.0	108.5	169.5	46.0	73.6	159.9

Impact Factor:

ISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	PIHIQ (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

4113 in thousand square meters m	4114	4115
72.0 113.5	25.3	721.9
860.7	298.2	170.5
11,950.7 7.6	11,803.2	236.1
62.5 150.1	31.9	262.7
705.9	389.9	148.8
11,296.3 4.7	12,237.8	566.7
73.5 117.6	30.5	151.4
746.9	435.7	187.6
10,164.0 6.3	14,291.6	1238.9
115.2 75.6	79.3	274.8
121.9	76.5	114.5
105.8 161.3	96.4	41.7
98.0 96.5	82.9	476.7
115.2	68.4	90.8
117.6 119.5	82.6	19.1

4101 cattle skins

4102 skins of sheep and lambs

4103 other skins

4104 "wet blue" and "crust" from cattle

4105 "wet blue" and "crust" from sheep and lambs

4106 "wet blue" and "crust" from other animals

4107 leather and "crust" from cattle

4112 leather and "crust" from sheep and lambs

4113 leather and "crust" from other alive

4114 suede, patent leather

4115 composite leather

4107 leather and "crust" from cattle

4112 leather and "crust" from sheep and lambs"

4113 leather and "crust" from other animals

4114 suede, leather

4115 composite leather

We tried to show a way out of this situation through a well-developed assortment and assortment policy, when the unity of all branches of government, namely: municipal, regional and federal, in alliance with manufacturers, will offer consumers in their regions not only demanded and competitive products, but what is especially important - economically justified and guaranteeing enterprises the receipt of sustainable TEP, providing them with a warning against bankruptcy and guaranteeing stability, and employment and satisfaction of their social problems for the population of these regions. After the 2008 crisis, society spent a lot of energy trying to return the economy to the same rapid growth as before. But the assumption that the problems caused by the crisis are temporary is wrong, and we should accept this and understand that the economy in the new "post-crisis world" will work in a new way. Klaus Schwab, founder and president of the World Economic Forum in Davos, writes about this in his article on Project Syndicate, he identifies six features of this new world, namely:

- its economic growth will be slower but potentially more sustainable than before the crisis;
- growth will be driven by technological change, and its impact will be larger and deeper than, for example, the industrial revolution and its consequences in the 19th and 20th centuries;

- the current industrial revolution will hit economies like a tsunami, almost without warning and with ruthless force, the columnist warns;

- the pace of change will be high due to the interconnections operating in the modern world, changes will affect simultaneously economic structures, governments, security mechanisms and everyday life of people;

- every standard needs to be revised, every industry is in danger of being turned on its head. If you need an illustration, look at Uber, which has changed not only the sphere of commercial transportation, but also retail in general: goods and services are being "uberized" - consumers use, but do not own them;

- light industry will change due to 3D printing, because supply chains will have to disappear or transform;

- Gone are the days when the big fish ate the little ones. In the post-crisis world, fast fish will dominate, slow ones will die, - says Klaus Schwab;

- economic growth will be driven not by capital and natural resources, but by human imagination and innovation.

According to the economist, despite the difficulties that a new round of technological progress will entail, its overall impact will be positive. At the same time, Klaus Schwab suggests not to be afraid of the advent of robots, because labor automation will

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHII (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

allow more people to get high-paying jobs (for this, however, they will have to acquire new skills so as not to be left behind). In general, in order to compete in the economy of the XXI century, and the authorities, and business, and society will need to constantly adapt to new conditions, Klaus Schwab predicts. Governments will need to not so much manage the consequences as they will need to anticipate change and, by anticipation, create the conditions for innovation in the private sector. These changes are inevitable, the columnist concludes, but ultimately they will allow us to improve our strategies. The choice of light industry enterprises as an object for assessing the effectiveness of the socio-psychological factor in the implementation of the QMS for the production of demanded products, including for children with pathological deviations, is due to the fact that these enterprises are characterized by the presence of highly qualified workers and specialists. Thus, the Policy of goals and objectives of the QMS will be implemented much more professionally and at lower cost due to three main aspects:

- employee involvement;
- process approach;
- systems approach.

In addition, the personnel of light industry enterprises are more effectively able to implement the goals and objectives of the QMS also because control activities are more professionally provided to fulfill the following situations:

- belief;
- execution of delegated powers;
- creation of conditions for increasing productivity and effective use of the business qualities of employees.

The attention of researchers to solving the problem of combining state and market mechanisms for managing competitiveness is justified because it becomes a strategic resource for the economy of these regions. Today, and even more so, tomorrow, in the global economy, the place of price competitiveness will be taken by the competitiveness of quality levels, which has widely increased its importance in connection with Russia's entry into the WTO and the need to use the ISO 9000 series. In this regard, the increase in the quality factor of the results of the domestic light industry in strategy to compete in global markets is a long-term trend. The task of increasing competitiveness is especially urgent for those enterprises that, due to external factors (increased competition due to globalization, the global financial crisis) and internal (inefficient management), have lost their competitive positions in the domestic and foreign markets.

Ways to solve this problem based on the use of innovative technological solutions by them, the development of an assortment policy taking into account the characteristics of these regions, the reduction of production costs due to effective

technological solutions with a more frequent change of assortment while maintaining minimal costs for reconfiguring the technological process and the formation of a pricing policy that creates competitive advantage in markets with unstable demand and taking into account the demand for light industry products.

As a result, the Russian market began to be filled with products brought from abroad, which, with rare exceptions, do not even have a quality certificate, and now even children are forced to wear shoes that do not provide them with the elimination of their pathological abnormalities.

Thus, the restoration of light industry production volumes is a rather urgent task facing manufacturers, and is of great social and economic importance for the population of these regions.

Specific reduced costs - an indicator of the comparative economic efficiency of capital investments, used when choosing the best option for solving technological problems.

When comparing possible options for solving a technical problem, rationalization proposals, technical improvements, various ways to improve product quality, the best ceteris paribus is considered to be the option that requires a minimum of reduced costs.

Reduced costs - the sum of current costs, taken into account in the cost of production, and one-time capital investments, the comparability of which with current costs is achieved by multiplying them by the standard coefficient of efficiency of capital investments. An analysis of this software was carried out in the manufacture of the entire range of light industry products, which confirmed the effectiveness of the software product for evaluating the proposed innovative technological process using universal and multifunctional equipment in their manufacture within the territory of socio-economic development. Today, and even more so tomorrow, the implementation of one of the defining principles of production efficiency is important - the manufacturer produces exactly what the consumer needs in the assortment that creates the basis for meeting demand.

Both political leaders and the government have recently been talking about the need for a competent industrial policy. A world-famous quality specialist E. Deming, who at one time was a scientific consultant to the Japanese government and led Japan out of the economic crisis, writes in his book "Out of the Crisis": "... managing paper money, not a long-term production strategy - the path to the abyss. Whether the state needs to pursue an industrial policy, we can cite the statement of the outstanding economist of the past, Adam Smith, who 200 years ago laid the foundations for the scientific analysis of the market economy. About the role of the state, he said: "... only it can, in the interests of the nation, limit the greed of monopolists, the adventurism of bankers and the egoism of merchants." You can't really say.

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIIHQ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

What are the results of economic activity today, what are the achievements in this area? The growth of gold and foreign exchange reserves, the decline in inflation, the budget surplus and other financial and economic achievements. And what, is this really the end result of public administration, and not the quantity and quality of goods and services sold in the domestic and foreign markets and the population's ability to pay to purchase these goods and services? And, ultimately, not the quality of life of the population of the country?

Therefore, it is quite natural today that the task is set for all levels of the executive and legislative authorities - to improve the quality of life of Russian citizens.

Let us carry out an enlarged factorial analysis of the problem of "quality of life". The quality of life of citizens depends on the quality of goods and services consumed in a full range - from birth to ritual services, as well as on the solvency of citizens, which allows them to purchase quality goods and services. These two factors (quality and solvency) depend on the state of the country's economy, which, in turn, depends on the efficiency of enterprises in various sectors of the economy, including light industry. The efficiency of the work of enterprises depends on the state of management, on the level of application of modern management methods, on the implementation of production quality requirements.

The problems of improving the quality, competitiveness of materials and products at the present stage of development of the Russian economy are becoming increasingly important. As the experience of advanced countries that at one time emerged from such crises (the United States in the 1930s, Japan, Germany in the post-war period, later South Korea and some other countries) shows, in all cases the basis for industrial policy and the rise economy was put a strategy to improve the quality, competitiveness of products that would be able to win both domestic and foreign markets. All other components of the reform - economic, financial and credit, administrative - were subordinated to this main goal.

Positive changes in the quality of goods require qualitative changes in engineering, technology, organization and management of production. Production must improve, which does not mean becoming more costly. Absolutely right, attention was drawn to one phenomenon that usually slips away in the bustle of the problem - the historicity of the economy. The way it is perceived now, the economy has not always been and will never remain. Economic life changes over time, which forces one to tune in to its changing existence. The modern economy is built on a market foundation and the laws of the market dictate its own rules. In the foreground are profit, competition, efficiency, unity of command. How long will this continue? Analysts say the symptoms of a

new economic order are already on the rise. The next turn of the economic spiral will also spin around the market core, but the significance of the market will not remain total. The priority of market competition, aggressively marginalizing the "social sector", is not compatible with the prospect of economic development, as evidenced by the steady desire of social democracy in the West to turn the economy on the front for social security, a fair distribution of profits. The new economy is called temporarily "prudent". It requires humanization not only in the distribution of national wealth. The production itself is also being humanized, including the management system. The current principle: "survival of the strongest, most adapted", will replace "social production partnership - the manager and the manufacturer will become members of the same team. Mass production will give way to organization, appropriate implementation of the principle - "the manufacturer produces exactly what the consumer needs." A "thrifty" economy will be focused on resource-saving technologies and environmental friendliness of production. She demanded a new look at the root concepts. Therefore, the philosophy of quality must also change. We must be prepared for the coming events.

The problem of ensuring the quality of activities is not just universally relevant, it is strategic. The dilemma in relation to quality is reasonable only within the limits of the opposition of the ratio of actions "immediate" and "indirect". The saying "it's all about him" owes its origin to quality. The problem of quality can be "forgotten" only because every fruitful and luminous activity is ultimately aimed at improving quality. Quality is either "on the mind" or "implied". From the relationship in the dynamics of these projections, quality problems in creative thinking are built into an appropriate schedule that reflects the relevance and profitability of activities aimed at developing production.

The most significant and global in nature are international standards for quality management. The use of modern methods in them allows us to solve not only the problem of improving quality, but also the problem of efficiency and productivity. That is, today the concept of "quality management" is moving into the concept of "quality management".

Thus, solving the problem of increasing the efficiency of the economy, and ultimately the quality of life, is impossible without the implementation of a well-thought-out and competent industrial policy, in which innovation and quality should become priority tasks.

The nature of the new competition in the modern world economy, due to the processes of globalization, places high demands on manufacturers to increase the competitiveness of goods and enterprises. Increasing the competitiveness of enterprises and industries is one of the most important areas of real economic

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
ПИИИ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

growth, both in Russia and in the regions of the Southern Federal District and the North Caucasus Federal District, which is reflected in the program document, namely: in the strategy for the development of Russian industry for the period up to 2025.

In this regard, the problem of the competitiveness of domestic footwear requires the development of conceptual foundations for theoretical, methodological and practical recommendations that are adequate to the upcoming changes in the organizational and economic mechanism for the functioning of the entire industrial complex of the country.

In modern conditions of market relations, a competitive environment and direct interaction between Russian and foreign manufacturers, solving the problem of combining state and market mechanisms for managing competitiveness becomes a strategic resource for the economy of the regions of the Southern Federal District and the North Caucasus Federal District. In the world economy, the place of price competitiveness has been taken by the competitiveness of quality levels, which will increase its relevance with Russia's entry into the WTO. The increase in the quality factor of the results of the production of light industry products in the strategy of competition in world markets is a long-term trend

In Russia, as in most Russian regional entities, there are all the necessary conditions for the development of production in the national interests. If somewhere something is not enough, then this does not serve as a basis for a recession and recession.

In the mid-2010s, the country found itself in an economic situation similar to the end of the 1920s - the beginning of the 1930s. Then the question arose: to be or not to be a new social order, a desired people (for the "chosen ones" always adapt to any situation). The answer was not hidden in the maze, and L.M. Kaganovich did not need Ariadne's thread to get to the secret source in search of the key to solving the problem. He needed the leader's blessing. JV Stalin agreed that "cadres decide everything." From ourselves we will specify - "professionally trained and politically responsible for the result." The explanation is important, because The democratic reforms in Russia miraculously removed, first of all, professional responsibility for obvious defects in politics.

Politics has always been understood by everyone as an activity in the interests of the state. Political responsibility in a democratic society is the highest expression of professionalism. Failure to fulfill political promises and statements indicates either an inability to engage in politics, or the use of political management in private interests. 85 years ago, what was obvious to consciousness was such in practice. In vain, speaking of the cruelty of I.V. Stalin, they forget that every miscalculation in politics is reflected in the position of the people, and not politicians, managers, consultants, advisers.

In the interests of restructuring the economy on the path of increasing the share of added capital in commodity production - in fact, modern industrialization, it is necessary to start not with economic and not with scientific and technical actions - with a political renaissance. Of course, the new time requires other tools, different from the measures of the second half of the 1930s, but the essence must be invariant. Political efficiency is the highest criterion of professionalism. It is better to interpret this conclusion by contradiction. The actual reality did not reach the declared changes - the resignation of managers with subsequent public characteristics, depending on the specific conditions and the size of the inconsistency.

In Soviet times, party slang was common - "put in a responsible position"! No one really knew what and how to do it, but everyone knew that if you didn't do it, it would be bad. For some reason, we shifted the responsibility to the market. Responsibility for the implementation of specific political directions, losing its personalized form, ceases to be a responsibility. The Duma is not responsible for anything. The Government is responsible to the President and the Duma. The President is solely responsible to the people. Hence the only worthy rating of the national poll. Undoubtedly, his patriotic policy - consistent, active - helped the President. But, it seems that the main factor, albeit not obvious, of the popularity of the President, unlike everyone else in power, is his practical capacity,

Unfortunately, as long as the knots tied by economic incapacity and impunity will be unleashed by the President, and those responsible for solving the problems facing society will continue to frankly play for time, hiding behind the uncertainty of the interpretation of modernization, our general task is to "get off the dependence on raw materials" - 55% of tax revenues, will not be resolved.

The personification of responsibility does not mean the search for someone who is responsible for everything. Personification implies the delegation of responsibility for obtaining the desired result. Here it is essential to realize that a "team" is not a company of like-minded people, colleagues, partners; "team" - a chain of responsible, due to the specifics of the object and the problems of its modernization being solved. Responsibility for the result should not be smeared in the bowels of the team. Responsibility even for a team result always has a personal expression, which our high managers do not want to recognize point-blank. It is this desire - to "push" everything to the specifics of the management object, the unpredictability of demand, the volatility of the currency, the incomprehensibility of tariff changes, etc., that can explain the pressure "from above", with the help of which they prove to us that management is a professional direction,

Impact Factor:

ISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	PIHIQ (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

An interesting fact, though not from the history of "light" industry. DI. Mendeleev at the beginning of the 20th century received the task of the Government to figure out the secret of the modernization of gunpowder in Germany. Lacking direct access to German technology, the chemical scientist requested monitoring of the movement of freight trains in those places where gunpowder is produced, tracking the beginning and end of routes. Based on the information received, he deciphered the German recipe and developed recommendations for the Russian Government. If there had been a pure economist in his place, a modern top manager, the result would have been completely different. He would get bogged down in statistical and financial calculations of expenses and incomes, leaving the political and scientific and technical components. The most serious methodological mistake is to reduce economic policy to economic analysis.

Economic science arose and developed in the context of politics, like political economy. Today, economists in politics are guided not by political economy, but by economics in politics. Instead of investing in the development of production, they hide money in foreign banks, reduce funding for education and self-education, increase the number of the poor, do not index pensions, refuse to help farmers, etc. The "manilov" nineties were replaced by the "buns" of the tenths. For a particular enterprise (better associations, groups of enterprises), the prospects for promoting marketable products on the market are associated with the development of resources for understanding quality in the coordinates of production - to seek a qualitative compromise, and educating your consumer.

It is easier for European and North American manufacturers to establish themselves in the market with their goods. The experience of communicating with the consumer has been accumulated over the course of two or three centuries; the market has balanced, adapted to the requirements of the legislation; the state does not put pressure on the market, the manufacturer and the buyer, but where it is present, it does it harshly. Corruption, raids, and monopoly claims have not been eliminated, but the struggle is real, not decorative, sham, which greatly facilitates the accessibility of the market, unifies the conditions of competition.

Among the main problems of European theorists and practitioners is satisfaction with the quality of consumer goods. The problem, in a schematic expression, is simple - it is necessary to qualitatively satisfy the need of the end buyer for the product. Upon closer analysis, simplicity turns out to be conditional - composite, in order to obtain the desired result, it is necessary to build an ensemble on the market from the value of the product (1), price (2) and the consumer's purchasing readiness. In this sense, the market really acquires a nodal significance for economic

development. This emphasis on the economic policy of producers can explain the concentration of interests on the consumer. It is not important to wait for the consumer, he must be actively sought and "converted to one's faith."

In foreign analytical reviews, information has appeared that avant-garde marketers representing large companies producing consumer goods are proposing to significantly expand the format of complicity with product consumers, up to discussing the recommended price for an economy-class product. The idea is quite reasonable and practically feasible without much cost. Buyer conferences are not very realistic here, but the extended practice of holding promotions, advertising actions with a device for displaying goods, reporting a settlement price and asking for a consumer assessment of plans are quite promising and can be effective. One should not underestimate the modern buyer, his financial readiness, just as one should not force him to pay for the unqualified policy of the manufacturer with overpricing. Agreed prices are also not fatal for the enterprise. There are always unused resources: materials science, technological, organizational, by activating which the manufacturer makes the process profitable. For a stable position in the market in the face of increased competition and volatility, you have to pay. Perhaps it makes sense to rationally modernize what is called "bargaining" in a "market" like a bazaar.

The quality of a product, in practical terms, is determined by its ability to meet the needs and expectations of a particular consumer. The quality of the product consists of many useful properties.

The concept of "product value", new for economic theory, is defined as "a set of quality parameters expected by the consumer of the product he needs". From the concept of "product value" "grew" "Tree of consumer satisfaction".

The value of a product is made up of the degree of need for its consumer and the level of quality (the presence of the required characteristics of the product). Buying decisions are also influenced by:

- buyer's confidence in the supplier;
- confidence in the manufacturer;
- information from other consumers;
- accumulated experience of using such a product.

The consumer makes a decision to purchase a product by weighing the ratio of the offered price of the product to the expected costs. The higher the level of customer satisfaction, the more opportunities for business development, the more stable its market position. And I would also like to draw attention to one phenomenon that usually slips away in the bustle of problems - the historicity of the economy. The way we perceive it now, the economy has not always been and will not remain forever. Economic life changes in time, which makes us tune in not to its changing existence. The modern economy is built on a market

Impact Factor:

SISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	PIHIQ (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

foundation, and the laws of the market dictate their own rules to it. In the foreground are profit, competition, efficiency, unity of command. How long will this continue? Analysts say the symptoms of a new economic order are already on the rise. The next turn of the economic spiral will also spin around the market core, but the significance of the market will not remain total. The priority of market competition, aggressively marginalizing the "social sector", is not compatible with the prospect of economic development, as evidenced by the steady desire of social democracy in the West to turn the economy on the front for social security, a fair distribution of profits. The new economy is called temporarily "prudent". It requires humanization not only in the distribution of national wealth. The production itself is also being humanized, including the management system. The current principle: "survival of the strongest, most adapted", will replace the "social production partnership" - the manager and the manufacturer will become members of the same team. Mass production will give way to organization, appropriate implementation of the principle - "the manufacturer produces exactly what the consumer needs. A "thrifty" economy will be focused on resource-saving technologies and environmental friendliness of production. It will require a new look at the root concepts. The philosophy of quality will also change. We must be prepared for the coming events. To the best of their competence and interests, the authors tried to share with you, dear readers, their thoughts, entrusted you with their judgments about the past, present and future of the cause to which they devoted their lives.

The validity of the main provisions, conclusions and recommendations formulated in this work is confirmed by the use of simulation methods and research tools that correspond to the current state of science. To achieve this goal, namely, to ensure the competitiveness of footwear produced in the regions of the two districts, the effectiveness of the use of innovative technological processes, modern technologies, mathematical models, application software packages, theories of synergy, network cooperation, immanent consciousness about the motivation of business leaders in the manufacture of demanded and competitive products

The authors outline the concept of import substitution of light industry products through the competitiveness of enterprises and through the competitiveness of products, providing it with demand, attractiveness and pretentiousness in order to create prerequisites for sustainable demand among consumers of the Southern Federal District and the North Caucasus Federal District. This is possible if manufacturers will ensure demand for products based on assortment policy with social protection of consumers' interests, guaranteeing them a stable financial position, a price niche and a policy of

efficient cash flow, creating enterprises to obtain stable technical and economic indicators.

Logic shows that the task of creating in the country its own raw material base for the development of the light industry should be a priority. Technical and technological equipment, personnel training should be carried out in the context of it. Of course, all the presented actions are interconnected. The base will have to be built and improved by specialists, without modern equipment and technologies it will not be possible to provide production with raw materials. Clusters will remain good dreams without a balanced system of building that direction in the economy, which someone mockingly called "light" industry. Difficult years await the light industry, but in Russia "hard" and "successful" have always been in the same team.

The desire of researchers to draw the attention of federal, regional and municipal branches of government to the revision of the concept of the road map and the strategy for the development of light industry in Russia until 2025, approved by the government, is justified. Unfortunately, it does not contain the main thing - the role and significance of participation in its implementation by the authorities at all levels, without whose support both the road map and the strategy for the development of light industry are only intentions and nothing more. The absence of promises and responsible ones deprived them of being binding on these very branches of power, and without their interested participation, it is simply impossible to achieve the declared results. Another weighty doubt about its performance is not to have a significant impact on the restoration of light industry enterprises in the regions and municipalities as city-forming.

The implementation of all the proposed measures presupposes the active participation of these same branches of government, but especially regional and municipal ones, in order to create new jobs in small and medium-sized towns and guarantee their population all social conditions for a decent life, providing them with funding, including work, preschool and school organizations, medical and cultural institutions, distracting young people from the street and other undesirable phenomena. And the appearance on the demand markets of demanded products with a price niche acceptable for most consumers in these regions will reduce the migration of the population from these regions precisely by financing all socially significant institutions.

Forming import substitution, regional and municipal authorities, supporting the heads of enterprises in the implementation of their tasks and filling the markets with products in demand, especially for children and socially vulnerable groups in these regions, they - these same authorities - will directly realize their promises to voters that they have made and create confidence among the population of these regions in their future, which, ultimately, will

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	PIHIQ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

provide the population of small and medium-sized cities with a decent life. The main and invariant superiority of Russia lies in the geographical position, combined with the absence of the danger of overpopulation of our space due to natural growth. We have a natural and solid margin of safety for centuries. Instead of putting pressure on the past for unreasonableness in politics and economics, our ancestors should have been rewarded according to their real merits, who managed to gather Russia and the peoples around Russia. It is not so much the decline in production itself, the squandering of what historically manifested its national specificity, folk traditions, that is worrying, but the possibility of losing the labor talent of the peoples of Russia, the systemic inefficiency of economic policy is alarming.

There is no progress without setbacks, slowdowns, recessions. The policy is called upon by active, purposeful actions to help overcome the obstacles that arise in development. Politicians must stay ahead of the economic movement and direct it, stimulate domestic economic factors with political levers, clear economic paths to efficient production. Instead, politicians continue to tie development plans to the price of oil, the ruble value of the European and American currencies, referring to the integration trends in the world and globalization.

The integration of transnational relations is an objective reality, but for all its objectivity, it does not negate the specifics of national economic advancement. Moreover, integration is objectively designed to promote national development. Why don't we get it right then? This question arises from a logical comparison of the policy in the field of strengthening the defense capability, restoring the country's international prestige in the most difficult circumstances of the formation of a new world architectonics with the fact that from year to year the Russians observe and fully feel for themselves in the rest of the economy - we accidentally do not two governments? The second "presses on the gas and slows down" at the same time.

The protracted recession in the Russian economy has two ways of explanation. The first is that the people have lost the ability to work well, they have wasted "human capital", the second is that the managers are helpless. The media assures that politicians know their business, keep events under control, take the necessary measures and promise changes for the better in the near future. Therefore, the reason is the poor work of the performers and the unfavorable world conjuncture.

How naive do you need to be in order to rely on sincerity, disinterestedness, and the sympathy of competitors when planning your economic policy? The President of the Russian Federation has long stated that our Western partners do not want the strengthening of Russia, they need an obedient Russia, like the Baltic Republics, formerly part of the USSR.

I didn't want to sadden the politicians responsible for the economy, but, following Aristotle, we are forced to state: "Friends in the East are also on their minds" - in the sense of "Plato is my friend, but the truth is dearer." They will help us to the extent that they benefit from such assistance.

It is time to understand that all economic and political unions in the modern world space are an attempt to achieve national gain in the environment of transnational relations, i.e. partners can be counted on as long as this cooperation is profitable for them. From which the conclusion follows - it is necessary to face your own economy. Only in this way, albeit with great tension, will it be possible to solve your problems. For example, there are no such objective reasons that would justify the decline in production in light industry over a quarter of a century. Light industry, closely connected with agriculture, is really dependent on the work of the latter. Only such interaction should be approached historically concretely, relying on scientific and dialectical analysis. There are old meteorological calculations showing that out of 10 calendar years in Russia 5 are unfavorable for the development of agricultural production (2 + 3 and 3 + 2). When defining the "five-year plan" as a planning measure, they relied on this pattern.

The problems of agriculture and light industry are not their specifics; they have always been political. In the US and Europe, farmers have a lot of our problems. The difference is that there the farmer is one of the most important, basic national problems. Its consideration is relevant for the existence of politicians. From how politics contributes to resolution, the public place of the politician is assessed. Farmer and politician are bound by economic policy. They are teetering on the same tightrope of viability stretched by economic tension.

There is nothing similar in Russia. Let us recall the history of the last ministers of agriculture. In the USSR, there was a Ministry of Light Industry, which emphasized the importance of the industry. What prevents in the conditions of import substitution and declarations about the importance of developing our own production to restore equality in industrial management. The "calico region" without light industry is the same as native nature without birch groves or lyric poetry without the work of S. Yesenin.

The reformers of the 1990s were least concerned about the fate of the Fatherland and domestic industrial originality. They built a business on the ease of obtaining maximum profit and placed the walrus far from the land of their ancestors. Light industry has traditionally been a difficult problem to manage. Managers must be, first of all, patriots, otherwise light industry cannot be raised. It is also necessary to understand the national importance of "long money". Compensation for the difficulties would be the stability of demand.

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHII (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

What is the essence of policy inefficiency in the economy of the end of the last and the beginning of the new century? This is question number 1, and it's not so much about who is to blame. We are interested in the essence of the political paradigm developed by those who were "at the helm". Question number 2 - what should be changed and how, apparently, it should be done in order to raise the national industry, the production of clothing, shoes, leather goods, textiles, accessories, not least?

The answer to question No. 1 is simple - no one was going to develop an economic policy paradigm aimed at a radical transformation of the basis. It was decided to choose the method of reforming (not without outside help) from ready-made samples. It was proposed to take the Swedish experience, the Polish "shock therapy", reforms in Portugal and Argentina as a model.

Politics is not done according to the state of the senses. Like or dislike - the level of everyday perception of the world. It is harmful to be in the "political kitchen" with such an approach. Economic policy does not qualify as "good" or "bad", "effective" or "ineffective". It has the right to be called either "useful" or "harmful." The price of such a policy is too high, and, accordingly, the responsibility is not limited to the professional form. Politics is politics. It is anti-political and unprofessional to make politics a source of one's own income.

Whatever the economic situation is, it is extremely dangerous to absolutize the importance of economic criteria, endow them with the property of universality. F. Engels spoke out sharply against attempts to reduce K. Marx's theory of social development to "economic materialism", "economic determinism". The economic basis is the basis of social organization, but by no means a system-forming factor in its improvement.

Society is a system of human relations carried out in the dynamics of economic activity. Activity is a means of social life of people. Activity that determines the need for various kinds of relationships is a way of manifestation and development of a person. Relationships are designed to provide such human development. At the end of the 20th century, only dumb people did not talk about the need to change the form of ownership, but the fact that the relations born by the form of ownership entail the distribution of the produced product, or its monetary equivalent, that the exchange cannot be completely trusted in the market, control functions should be reserved for the state, reorganized democratically, that in a perverted bureaucratic form the state remains a generator of corruption, they tried to keep silent, understanding the delicacy of reforming property.

For the majority of the population there is no relevance in who the owner is, not everyone wants to try on the functions of the owner - to spin, spin, fight,

take risks. Distribution, on the contrary, concerns everyone, both the poor and the non-poor.

The most difficult component of economic reforms is to achieve satisfaction in society with the distribution of the national product. The health of society depends on this satisfaction, and not on the form of ownership. And we have come to an important conclusion - the quality of reforms is assessed not by the changes themselves, but by the ability to give social life features of stability.

Integration and globalization are not a panacea for development. They do not cancel the competitive struggle, in which there are more than one winners. There are more losers. Hence the relevance of the old truth, the meaning of which became clear in dialectics. Movement under any conditions becomes self-movement. The Chinese rationally shut themselves down and won. Their victory was ensured by Eastern caution and skepticism about unification. They realized before us that integration and globalization are varieties of "pyramids" and are conditionally useful for national development. From the outside, it might seem that the Chinese reformers abandoned the mentality of the curse: "to live you in a time of change." From the inside, everything looked traditional - politicians did not betray with a sharp movement on a national scale, they were in a hurry, but with a constant binding of actions to the state economic structure, reforms in the economy were subordinated to traditional political dominants, did not repent and did not try to please. Nobody seriously thought about any economic shocks. Finance, as the circulatory system of the economic organism, was taken into "hedgehog state mitts", they introduced toughening for economic and corruption crimes, equating many of them with dangerous actions against the state, they did not come up with new parties - they updated the existing one, as before, they paid special attention to personnel policy. The Chinese took into account the Soviet party experience of "cultivating" personnel, which was based on the principle of progressive promotion depending on business efficiency and lifestyle. Finance, as the circulatory system of the economic organism, was taken into "hedgehog state mitts", they introduced toughening for economic and corruption crimes, equating many of them with dangerous actions against the state, they did not come up with new parties - they updated the existing one, as before, they paid special attention to personnel policy. The Chinese took into account the Soviet party experience of "cultivating" personnel, which was based on the principle of progressive promotion depending on business efficiency and lifestyle. Finance, as the circulatory system of the economic organism, was taken into "hedgehog state mitts", they introduced toughening for economic and corruption crimes, equating many of them with dangerous actions against the state, they did not come up with new parties - they updated the existing one, as

Impact Factor:

ISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	PIHIQ (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

before, they paid special attention to personnel policy. The Chinese took into account the Soviet party experience of "cultivating" personnel, which was based on the principle of progressive promotion depending on business efficiency and lifestyle.

In the seventy years of Soviet history, there were isolated cases when random people found themselves in the management of the economy. They could turn out just by chance, confirming by their exclusivity, the viability of the political personnel paradigm. Taking into account the economic disadvantages of excessive centralization in the management of the national economy, one can afford the following thesis - the socialist economy of the Soviet type was not rationally built, but it contained a significant reserve, which made it possible for new revolutionaries not to repeat the old Bolshevik methods - to help one and rob others.

The Bolsheviks in the image of revolutionaries, despite the odiousness of the policy of nationalization of property, look in a more favorable light in comparison with those who squandered the national treasure in the 1990s and are extremely reluctant to change their interested attitude towards what is happening today. The result of the revolution of 1917 was industrialization and the rise of light industry, folk crafts, the result of the counter-revolution was a 25-year depression of the economy, the struggle for the existence of textile, footwear, clothing production, a decline in the organization of training qualified personnel across the spectrum - from working specialties to engineering. In such conditions, it is time to step back from the abstract political ideals of the democratic reformers and come to grips with developing a "road map" for the revival of the light industry, in the expectation that that the crisis highlights the relevance of the rationality of "brainstorming" as opposed to "economic schools" in the trend. What kind of "road map" does this look like, based on the historical experience of the 20th century, when all the main events took place.

1. The interests of national advancement must be a priority. I would very much like to talk about development, but it is not possible to get it on a national scale now. You need to lick your wounds. Today, the most optimistic estimate is economically within the framework of achieving sustainable stabilization of economic indicators. Doctors in such a situation are reassuring: the condition is "stably severe." Unfortunately, the economy cannot be put into an "artificial coma" that helps to overcome the crisis through a more economical use of vitality. We are interested in the first point of the "road map" here. Doctors strive to mobilize the vital potential of the body, to help reveal the reserve of the will to live. Our economy is able to fight for survival, there are many smart, knowledgeable, dedicated patriots in it, however, with each lost year their number decreases. According to V. Inozemtsev, Doctor of Economics,

professor at the Higher School of Economics, one of the regular contributors to the AIF, about 400,000 people leave the country every year. Naturally, not everyone is on permanent residence, someone works under a contract, in search of temporary work. First of all, you need to help energetic people, light them a green light at the end of the tunnel. It is not necessary to count on officials of the type that has developed over a quarter of a century, who are sure that not the sword of justice hangs over them, but the safe of a senior bureaucrat to receive remuneration. Possible option - ONF. The President of the Russian Federation regularly and interestedly communicates with his activists. Communication is productive. looking for temporary work. First of all, you need to help energetic people, light them a green light at the end of the tunnel. It is not necessary to count on officials of the type that has developed over a quarter of a century, who are sure that not the sword of justice hangs over them, but the safe of a senior bureaucrat to receive remuneration. Possible option - ONF. The President of the Russian Federation regularly and interestedly communicates with his activists. Communication is productive. looking for temporary work. First of all, you need to help energetic people, light them a green light at the end of the tunnel. It is not necessary to count on officials of the type that has developed over a quarter of a century, who are sure that not the sword of justice hangs over them, but the safe of a senior bureaucrat to receive remuneration. Possible option - ONF. The President of the Russian Federation regularly and interestedly communicates with his activists. Communication is productive.

Academician A.G. Aganbegyan testified that a year of economic recession due to mismanagement takes much longer to restore the economy. It is necessary to act on the starting segment in such a way that there will be enough strength to finish and there would be some left for the next stage. Don't expect great things either. Miraculous transformations can be expected in private enterprise. Here the case is quite capable of appearing. In the general process, the role of chance is insignificant. Refusing to believe in luck, however, is unwise. There is an opinion that "lucky" those who are lucky. A successful alignment can be induced through professional activity, character, faith in a successful outcome and even in higher justice. Faith that accompanies reason has not yet prevented anyone from striving to do a good deed.

All interstate unions must be considered solely in the national interests, otherwise you will lose. An economic agreement is an international condition that you can really try to use for your own promotion, both at the level of a company and an industry. However, it should be understood that if you fail to benefit from the terms of the contract, you will receive it from your competitors, who turned out to be smarter. A compromise option is not excluded, when the profit is mutual and temporarily divided in proportion to

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIIHQ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

participation. The main thing to know is that an agreement in any form leaves competitors competitors, it gives competition a civilized look, limiting arbitrary actions. Production speaks for the leaders of the PRC. In 2016, the Chinese made about 14 billion pairs of shoes - 2 pairs for every inhabitant of the Earth. Chinese leaders therefore in meetings, when signing protocols, are laconic. Ours has a harder time - in the absence of similar indicators, they are expected to give assurances of friendship and mutual assistance. Good, neighborly, mutually beneficial relations are the only real reality of the progressive movement. Everything else is virtual reality.

2. The stake on all-round support for the light industry, like most areas of investing public funds (financial, legal, political, humanitarian), contains risks, but within acceptable limits. History has tested Russia both as an independent state and as part of the USSR for the ability to create diverse and high-quality consumer goods in sufficient quantities. The strengths of domestic light industry products: the quality of the material, hygiene, compliance with national ergonomic and climatic conditions, a variety of assortment.

In Russia, it is possible to produce almost all types of materials needed for the light industry. The production of certain types of raw materials is limited in volume, which in principle is regulated by scientific and technological progress. The development of science and technology has supplemented natural materials with artificial, synthetic ones. Scientific schools were formed in the country within the framework of agricultural production and light industry, a system of specialized vocational education was created. Personnel were trained in schools, technical schools, universities, some of the educational institutions disappeared in the course of democratic reforms, but the training experience remained. It is easy to revive him. Industrial centers and enterprises have been preserved. Just in those places where the percentage of unemployed is high. The revival of light industry enterprises will lead to the activation of the socio-cultural environment, regional traditions, faith in the future of the population. People's social optimism will return.

In favor of the purposefulness of developing the production of goods necessary to satisfy the physiological needs of man, the size of the consumer market also serves. They guarantee the stability of the production load with orders for the relevant goods.

3. The creative potential of specialists is still high. He is quite competitive. Domestic artists, fashion designers, engineers, organizers have a high international rating. Often they are more and better known abroad than in their native country. Like all creative people, they strive to diversify the development of production, taking into account the specifics of the market, they are aware of the importance of monitoring the interest and capabilities

of the mass consumer. We left the state regulation of the quantity, quality, price of manufactured products, which was quickly taken advantage of by people random in the industry. Those who, having privatized enterprises, understood this as a way to improve their personal incomes and sought to squeeze out the maximum margin, are guilty of the collapse of the industry no less than their "senior" partners, who determined the fate of the economy created by the people with the help of mediocre reforms. Oligarchs and oligarchic capitalism are also a historically developing phenomenon. It is a mistake to reject the socially positive meaning of their existence. It is one thing for oligarchs-financiers, oligarchs-media tycoons who made their fortunes on speculation, brokerage, wild mining of carbon raw materials, and another for those who developed real production with a significant share of added value, i.e. thought about the future.

After the Gaidar Economic Forum and the Congress of Industrialists (2016), the oligarch O. Deripaska spoke very politically maturely: "2016 is the last year when the state will be able to use reserves to help production, from next year we must start helping the state." There is confidence that the opinion of one of the most active and experienced domestic oligarchs is not his exclusive view of the interaction between the state and business entities.

Fleeing Russia in anticipation of the future is the fate of those who are opposed to Russia, hiding in the "white fluffy fur" of the abstract democratic idea of world unity, along with their greed. The West does not need them, their finances are in demand there - not as impressive by Western standards as in the plundered fatherland, and "anti-Putin views"

The history of Russia is rich in examples of a smart, patriotic economic policy, namely, large owners who were ahead of the actions of state administration bodies, endowed with professional political responsibility for the development of production. It seems that those who are directly responsible for financial and production policy, having studied historical experience, are waiting for the production itself to put forward "locomotives" to advance the existing composition. G. Gref, who came out of the said sector of the government as the head of Sberbank, openly spoke at the aforementioned Gaidar Forum about the need for an active government policy to plan to overcome the crisis in the economy, invest finance in real production, and control the use of state loans by banks. Frightened by the "wrong" - not the cyclical crisis, banks do not want to risk even "short" loans in the interests of production. They "protect" speculators in the market and have themselves become ordinary speculators, putting state loans into financial circulation, leaving producing enterprises without credit, or setting deadly calculation rates for them.

It is somewhat easier for light industry enterprises to act in such a situation. First, the

Impact Factor:

ISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	PIHII (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

replacement of equipment is not so expensive. For example: equipping a physical laboratory with elementary modern equipment costs 5 million dollars. Secondly, you can get by with "short" money, which joins the interests of the financier and the manufacturer. But at the same time, light industry enterprises are more dependent on the rapidly changing market conditions, therefore, you need to be able to spin quickly, be able to use centrifugal forces - to diversify production. "Diversification" is a multidisciplinary word. In dictionaries, 4-5 values are distinguished. In the context of our study, three are relevant: "Diversification of production" as the expansion of economic activity into new areas, branching of production, expansion of the range of products; type of marketing strategy

Diversification currently "works" in the "most favored nation" mode, of course, with creativity, balanced risks and skillfully built monitoring. We mean the beginning of the transition in the development of mass production from the first type to the second - "lean production", which can be translated as "sparing" or "lean production".

This type of production fundamentally changes the very purpose of the production process. At the same time, the traditional task of manufacturing a large number of similar products that meet the requirements of regulatory documentation, from which the consumer must choose the most suitable for him, is replaced by the task of manufacturing exactly the product that this consumer needs and in the required volume and at a certain time.

A new type of organization of mass production shifts the study of planning optimization to the study of the peculiarity of market demand as a summary expression of individually differing wishes. The market is personified depending on the large number of indicators involved, which requires increased diversification of production. The nature of the market is changing, and entrepreneurs are obliged to adequately and quickly respond to this transformation.

To change the paradigm that integrates the policy of organizing and managing production, its ongoing restructuring is not enough, but a serious modification in the planning of enterprises has long been needed. And it began, maybe for the time being in the minds of production workers and owners, but this is a natural introduction to practice. The study of the mosaic of market demand has become more complicated by the search for new markets. The desire to capture the market in 2016 is unreasonable, as well as the dream to overtake China, we can only catch up with it in a dream. Fortunately, you can distill in different ways. The most primitive option is to do something more, the more promising one is to get ahead, to squeeze into the structure of the market, where its density is not so great. The general director of the Novosibirsk enterprise "Clothing Factory" N. Treshchev is sure that that it is realistic to squeeze into

the ranks of products "tailored with high quality" from fairly expensive fabrics, interesting design. In the 1990s, Russia was filled with "Bush legs", and it seemed that nothing could force them out of the market. Nowadays, they are not even remembered. Our poultry industry won. Why should we be afraid of the intervention of Chinese consumer goods? We need protectionist measures within the framework of the WTO, the SCO, but in principle they are not the essence of the matter. The movement is productive due to its independence from external factors. Sustainable development is a consequence of self-propulsion. If the existing conditions do not contribute to the development, it is necessary to look for reserves in the process itself, "removing" the negative effect of external circumstances. Our poultry industry won. Why should we be afraid of the intervention of Chinese consumer goods? We need protectionist measures within the framework of the WTO, the SCO, but in principle they are not the essence of the matter. The movement is productive due to its independence from external factors. Sustainable development is a consequence of self-propulsion. If the existing conditions do not contribute to the development, it is necessary to look for reserves in the process itself, "removing" the negative effect of external circumstances. Our poultry industry won. Why should we be afraid of the intervention of Chinese consumer goods? We need protectionist measures within the framework of the WTO, the SCO, but in principle they are not the essence of the matter. The movement is productive due to its independence from external factors. Sustainable development is a consequence of self-propulsion. If the existing conditions do not contribute to the development, it is necessary to look for reserves in the process itself, "removing" the negative effect of external circumstances.

The state is obliged to make a change in the decline in the prestige of professions related to the light industry, to create an attraction for those who decide to devote themselves to this interesting business. The owners are looking for reserves to raise wages. According to the VAT in 2020, it did not exceed 14 thousand rubles, which is half the salary of the average salary for the regions. The director of the group of shoe companies A. Titov sees a way out in the transition of production to automated complexes. Companies spent 2.3 billion rubles on the purchase of Italian and Taiwanese equipment, which made it possible to attract qualified specialists, retrain the backbone of the staff and increase salaries to an average of 45 thousand rubles. A. Titov connects the forecast for the development of production with an increase in the production of footwear in the mid-price segment. In favor of A.

It should also be taken into account that China's economic growth will inevitably lead to higher wage costs. This will emphasize the relevance of logistics calculations. As a result, the Chinese will lose their

Impact Factor:

ISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	PIHIQ (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

economic attractiveness, and it will be possible to compete with them in the segment that interested A. Titov. Russian industrialists also have such a trump card as their raw materials of natural origin. We hope that the promised investments in agricultural production will reach farms and fields.

The market for the light industry is also growing due to socio-cultural progress, in particular, due to the development of professional sports, an increase in demand for those who choose sports as a path to a healthy lifestyle. At the end of 2021, the newspaper "Sportexpress" published an interview with the chairman of the Board of the Russian Outdoor Group A. Grebtsov. "The outdoor goods market serves mountaineering, tourism, extreme sports, special forces, rescue formations, polar services and troops. These are areas that require heavy-duty, frost-resistant, waterproof equipment that meets the latest international standards of safety and comfort." A. Grebtsov reported interesting details, in particular, he compared the technological base for the production of high-quality products in Russia, Europe and Asia. According to him, we are "somewhat behind" the Asian potential, but "We can definitely compete with Europe... there are about 30 companies in Russia that know how to sew well." After the introduction of the import ban for state orders and state defense orders, the share of materials from the Customs Union member states supplied to the country's law enforcement agencies increased from 30% in 2019 to 83% in 2021. In 2022, the trend of increasing the share of materials produced by the CPEC countries used for the production of personal belongings should be about 85 – 90%. The reversal of the state order in the direction of domestic production will open up opportunities for related chemical industries (raw materials for thread, fittings, membranes, insulation materials). It will increase the production of fabric, tailoring, which will pull the development of equipment. A. Grebnev believes that it is important to consolidate the achieved results: make it clear to large retail chains the importance of acquiring and distributing goods produced in Russia, of course, taking into account their proper quality;

- to place first of all orders for production from those "who have already got on their feet and know how to sew." They have proven their worth;

- assist companies in obtaining European certification of materials, otherwise foreign firms will not be interested in them, and the goods produced by us will not get to the West;

- actively support companies with collective stands at international exhibitions;

- provide such enterprises with subsidies on loans for the purchase of raw materials and materials. The share of these loans in total lending should be from 50 to 85%;

- exempt modern imported equipment from import duties and VAT. The equipment used in sewing shops is 90% imported;

- implement preferential leasing.

As you can see, the program of A. Grebnev systematizes the main and primary steps in the direction of the light industry in order to regain its former importance. However, Heraclitus was right when he said that you cannot step into the same river twice. The rise of the light industry should be carried out on a new technological, economic and legal basis. It's bad if A. Grebnev's good intentions remain only intentions and nothing more

4. In modern times, it is necessary to work in detail on the culture of consumer demand - to educate the buyer. We have repeatedly emphasized in our publications that understanding the quality of natural and artificial phenomena is not identical. Consumer goods are produced by man and for man. It alienates the human essence, including the socio-cultural status of the individual. Therefore, the understanding of quality should include the subjective perception of the properties of the product through feelings and reflection. The perception of quality should not be allowed to "run its course", given to the sensual elements or simplified thinking. It is important to learn not only the art of modern design, but also to sew high-quality shoes and clothes, it is necessary to help the consumer understand all this, direct his aesthetic and hygienic ideas, make him empathize,

The wise Buddha laid down four key steps in the eightfold path: correct understanding; making the right decision; finding the right words and, finally, the right actions aimed at implementing the right decisions. The fate of the light industry now depends on what this last step will be. Its execution is the function of the Government. The political paradigm is extremely simple - we should not compete with anyone in the struggle for the global market, especially with the Chinese. The Chinese rightfully want to shoe and clothe the whole world. One fifth of the world's population lives in China. Our task is quite different. We need to make sure that the Chinese do not shoe or dress us. To transfer the purchasing demand to our own Russian production, to interest in goods produced in the country. Such a task is quite within our power, as the manufacturers say. And the Government needs to do its direct work consistently and in a timely manner, that is, to think, make a decision, bring everything to a result, work in a team and, most importantly, respect each other in this team. But first it is necessary to name to this team the problems themselves, which are characteristic today, but what is especially important, tomorrow, for the light industry. The emergence of systemic problems in the industry is due to internal and external industry reasons. They are connected both with the activities of the industry itself, and with ongoing institutional changes and changes in the national economy, in the

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
ПИИИ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

sphere of the country's legislative and foreign economic policy, as well as with changes in the global economy. respect each other in this team. But first it is necessary to name to this team the problems themselves, which are characteristic today, but what is especially important, tomorrow, for the light industry. The emergence of systemic problems in the industry is due to internal and external industry reasons. They are connected both with the activities of the industry itself, and with ongoing institutional changes and changes in the national economy, in the sphere of the country's legislative and foreign economic policy, as well as with changes in the global economy. respect each other in this team. But first it is necessary to name to this team the problems themselves, which are characteristic today, but what is especially important, tomorrow, for the light industry. The emergence of systemic problems in the industry is due to internal and external industry reasons. They are connected both with the activities of the industry itself, and with ongoing institutional changes and changes in the national economy, in the sphere of the country's legislative and foreign economic policy, as well as with changes in the global economy.

Basically, this is due to structural imbalances in the light industry - a mismatch at the moment in the scale and capabilities of the industry to qualitatively meet the growing demand for products, stop the critical drop in the share of domestic goods in the domestic market and prevent the threat of loss of national security of the country.

The reasons for the first group of problems - the technical and technological backwardness of light industry from foreign countries are:

- low potential of equipment installed in the industry, most of which is morally and physically obsolete. The share of equipment in the machine park of the industry (according to Rosstat) operated up to 5 years was only 1.2% at the beginning of 2021, 6-10 years already 39.6%, 11-20 years more than 45.4%, and more than 20 years - 13.8%.

Worn-out and obsolete equipment is not only unable to produce a modern range of high-quality products, but also creates unsatisfactory working conditions, leading to increased industrial injuries. As a result of this factor, the specific labor intensity of production in the industry is 3-5 times higher than abroad;

- lack of modern technological repartitions and automated production management systems;
- lower, in comparison with the world's accepted standards, the pace of technological renewal. The equipment renewal ratio at Russian enterprises is 1-2% per year and is carried out at the expense of credit and own funds, at foreign firms this figure is 16-19%, which is largely due to investment support from their states interested in the development of light industry. The low level of equipment renewal leads to a reduction in production capacity (due to a significant

excess of the output of obsolete and physically worn out equipment over the commissioning of new equipment).

Over the past 5 years, production capacity has decreased:

- for cotton gray fabrics by 14 percent;
- for linen fabrics by a third, and for woolen fabrics by almost 4 times;
- for knitwear by 1.8 times, hosiery by 10 percent;
- shoes by 62 percent.

Summary: the state of fixed assets, especially their active part, does not meet modern requirements in terms of indicators characterizing the competitive and technical level of the industry's production potential;

- a significant lag behind foreign enterprises in the level of organization of production, in the operational control of the technological process, in the efficiency of the marketing services of enterprises and a long 2-2.5 times the duration of the execution of orders for the manufacture of products.

As a result of the impact of these causes, there is high dependence of textile enterprises on the quality of raw materials, dyes and textile auxiliaries (TVA) and, as a result, high production costs due to the high cost of raw materials, dyes, fuel and accessories (a large share of which are imported from abroad), and high energy costs, the prices of which are growing unreasonably at an ultra-fast pace; and weak competitiveness in the domestic and European markets of Russian goods in comparison with imported ones, both in terms of quality, design and price, and in terms of assortment, which is the main obstacle to the successful competition of domestic producers with foreign ones.

The second group of problems is the low level of innovation and investment activity due to the following reasons:

- the lack of investments necessary for the modernization of the industry and the introduction of "breakthrough" innovation and investment projects that make it possible to remove structural restrictions on the development of the industry and enter the production of completely new (in terms of consumer properties) types of products that are in demand in the foreign and domestic markets. At the same time, it is important to keep in mind that if today the domestic light industry can cover the needs in the public procurement sector, then tomorrow, when the demand for products will increase, domestic production will not be able to satisfy the growing demand even in this segment - which is unacceptable. In this regard, the development of import substitution through an increase in the production of quality products is the only possible way to solve the problem of production potential, the growth of which, having begun in the public sector, will move to the market as a whole;

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIIHQ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

• a reduction in the volume and effectiveness of research and development due to a decrease in the volume of budgetary financing of R&D (in 2019, R&D was performed at the expense of the budget by 22.7 million rubles, in 2020 - by 25.0 million rubles - which, of course, negligible). To the greatest extent, this affected fundamental and exploratory research. Many scientific developments able to form a new technological basis for the industry to expand the production of competitive science-intensive products, not brought to completion and require continuation and deepening of developments. Scientific organizations are not allocated funds for the development of their experimental base, which reduces the effectiveness of scientific developments. And this, despite the fact that the achievements of Russian scientists are not inferior and even many of them surpass the world level in the field of creating new technologies and a new competitive range of products.

Traveling foreign countries invest 6-9% of the funds from the turnover of products for the development of science and its experimental base, which allows them to consistently achieve high achievements in science, increase the technological level of production and the competitiveness of goods in accordance with the requirements of the world market.

Failure to take measures to solve problems related to the development of science and the effectiveness of scientific support for the industry will inevitably lead to the emergence of possible risks of an economic and social nature in its work. Deprived of the influx of new technologies, the industry will no longer be able to compete with foreign firms, which will affect the ability of Russian producers to maintain their positions in the domestic market and conquer new segments in foreign markets. The technological backwardness of the industry in the foreseeable future may become an irreversible process, which will increase the strategic and economic danger of Russia.

The low level of assimilation in industry of the positive results of scientific developments and innovations (less than 1 percent of enterprises) - this negatively affects technological modernization, expanding the range of products (both civil and strategic) and quality, the ability to give it new functional and consumer properties, using modern technologies, including nanotechnologies.

Without taking effective measures to improve the current situation in the industry, its condition can reach a critical level. The task of increasing competitiveness is especially urgent for shoe enterprises, which, due to external factors (increased competition due to globalization, the global financial crisis) and internal (inefficient management), have lost their competitive positions in the domestic and foreign markets. In response to negative processes in the external environment, the processes of regionalization and the

creation of various network structures are intensifying, one of which is the union of commodity producers and the state.

There are three main variants of the concept of enterprise in a developed economy: neoclassical, agency (stock) and the concept of partnerships.

The concept of partnerships, or stakeholder theory, considers the dependence of the company's actions on the interests of a wide variety of stakeholders, which include consumers, suppliers, shareholders, managers, employees, etc. At the same time, each of the partners has certain rights to control the enterprise, therefore, the concept implies the need to make decisions taking into account their interests.

The theory of strategic management is one of the most difficult sections of management science. In a fairly short period of existence, characterized by the rapid development of a number of concepts, it managed to turn into an independent scientific discipline with its own academic infrastructure. The most important question that the theory must answer is to determine the sources of long-term competitiveness of enterprises. These sources are determined by the strategy of the enterprise and, accordingly, raise the question of its nature.

Reliability and universality are signs of the quality of knowledge. Reliability allows you to minimize risks, universality relieves stress from the search for new solutions to the problem - "they don't look for good from good." You have to pay for quality. The fee is generally considered to be financially dependent, but this does not always appear directly. In the history of civilization, there are two outstanding achievements at the level of revolutions that clearly have not received equivalent evaluation, namely:

- discovery of the price of knowledge, comparable to the price of things for a person, "knowledge is power";

- awareness of the special significance of theoretical knowledge in the form of concepts and related forms of abstract thinking - judgments, conclusions. This naturally led to the need to develop a specific technology for their production - a methodology for understanding the essence of the relationships of existing phenomena. The visible part of the world is "designed" for the consumer, the invisible - for the manufacturer. The competition of producers can be formalized as a simple technical task - to penetrate through the chaotic multitude of phenomena of the visible part of the world into its hidden part, to understand it, in order to return and understand chaos as an order of coexistence and development of phenomena. Order is a pattern. Laws exist only in textbooks on their own, separately. In reality, law is stability, generality, and necessity of the order

Economic science in the 20th century found itself in a difficult situation, which by the end of the century became critical. The theory of A. Smith and

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIIHQ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

the method of K. Marx did not fit into the contours of the ideology of developed capitalism. In Europe and North America, the very idea of the historicity of capitalism was seen as heresy. The history of capitalism has a beginning, but the presence of a beginning cannot be the basis for a conclusion about finiteness. Mathematics is an exact science, it allows infinity in one direction. The dialectical interpretation of infinity is metaphysical, abstracted from real history. The salvation of economic science must be sought not in the historical, but in the formal-logical understanding of reality, that is, in mathematical calculations and statistics.

We will stop diving into the philosophical, or rather, into the methodological foundations of science, but not because it is necessary to quickly plunge into practical matters, but because of the importance for the successful understanding of the production of goods of understanding that any production involves the reproduction, along with the goods, relations. Production begins with the achievement of certain relationships and leads to the development of these relationships - between producers, producers and consumers. Understanding such a complex structure of production is possible only with the involvement of scientific analysis based on conceptual thinking.

Further we quote: "For sewing school clothes, fabrics made from natural fibers, such as wool, linen, cotton, should be used. These fabrics are the most hygienic, have high hygroscopicity and good thermoregulating properties." According to the results of the study, out of 98 manufacturers of school trousers, only 14 (!) Products corresponded to the quality mark, were safe for health in accordance with the requirements. Of the 30 shirt manufacturers, 28 had violations."

It is unlikely that anyone from those who were initiated into the state of the domestic light industry expected different results. What is striking is not so much the depressing statistics as the expert's comments addressed to the consumer of garment production. The specialist advises through a journalist: "If the label does not contain information about the manufacturer - its name and location, fabric composition, release date - then only this is a reason to think, but the fact that such products cannot be produced is silent."

The transition to independent standardization of technical characteristics is really possible within the boundaries of objective quality parameters only if there are two conditions:

- development of modern production technologies;
- the existing high professional culture, the system-forming factor of which is the personal responsibility of performers at all levels.

Of course, non-state control over production, a kind of people's control, must be added to the basic conditions. The ONF can be the center of such

people's supervision, but there is a danger of its formation as a party. The real strength of the ONF lies precisely in its status of being independent of inter-party relations, and may be an organization directly subordinate to the President. Top management, unfortunately, has gained experience in taming those who show independence.

In the USSR in the 1950s and 1980s, a quality management system was formed, which was not much inferior to foreign experience. This system was constantly improved, taking into account the received positive and negative experience, until the end of the 1980s. Everything began to collapse in the waves born of the "new political thinking". Finally, the democratic tsunami of the nineties swept the systemic policy regarding the organization of quality management. The crisis and "shock therapy" removed the relevance of the problem for the next decades. The reasons for the de-actualization of interest in quality lie in plain sight, namely:

- The achievements of the quality management policy of the Soviet period were associated with the features of the socialist type of planning, built on the principle of directiveness, in which, unlike indicative planning, economic incentives were directly subordinated to political goals. When the administrative-command practice of enterprise management became unnecessary, the practice of quality management went down in history along with it;

- It is no secret that with the collapse of the USSR, the future of Russia was looked at in a completely different way - "systemically". They tried not to integrate the Russian economy into world production, but to attach it in the interests of the existing architecture. We were given the place of producers and suppliers of raw materials, mainly of natural origin. The quality of such products is not due to production. The quality of production depends on the amount of added value - the lower the costs, the greater the difference between price and cost, the higher the profit. The production of a barrel of oil in Qatar and Saudi Arabia costs significantly less than in Russia. By relinquishing control over the market, the state has consistently freed itself from the obligation to control the production process. And this happened despite the fact that the bureaucratic apparatus and the costs of its maintenance increased by an order of magnitude. The very concept of "quality management" was lowered to the level of "quality control", after which each manufacturer could manage quality himself. In the end, quality was simplified to technical regulation;

- the quality of production and the product of production are functionally related to the quality of the market, while the quality of the market, in turn, depends on the willingness to purchase products marked with a quality mark. A high-quality product is in demand under two mandatory conditions: the

Impact Factor:

SISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHIIQ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

effective demand of the mass buyer and the seller's conscientiousness. Neither one nor the other is available on the domestic market. Even in boutiques and elite stores, the buyer does not feel guaranteed to be protected from counterfeit products and the manufacturer's deceiver.

The market is an integral part of society. The order in the market reflects the state of society, and the manufacturer focuses on the state of the market. For him, the barometer is not the national interest - the opportunity of the market. The market is the driving force behind production. If the culture of the market were truly ahead of the culture of production, then the objections to the consumer approach to production would be reduced to a minimum. In fact, the culture of the market in Russia was not laid down by manufacturers, much less consumers with their skinny wallets. From the very beginning, intermediaries and speculators dominate our market. Legislation is also built under them, allowing a lot of different interpretations of actions and the same number of opportunities to avoid criminal liability. Quality management in such a situation has turned into the manipulation of quality in the interests of the market owners.

The manufacturer is currently not interested in producing a quality product, the costs are high, the cost of products will increase, the real price will be significantly increased by the intermediary and the seller. As a result, the market for such a product will not "digest" and the manufacturer will be struck by the deadly disease No. 1 according to E. Deming. On a limited scale, clearly scanty for Russia, quality things are guaranteed to be made, manufactured, but this practice has nothing to do with the situation in production, it is exclusive.

Attempts by the executive branch in the 2000s to activate interest in TQM were again a local and temporary success. In Soviet times, orders from above looked logical and forced to reckon with them. The reality, which had changed from socialist to capitalist, reacted sluggishly to these initiatives, without any enthusiasm, one might say purely educational, but not practically. Not surprisingly, faulty rockets were added to the peeled off soles of the shoes, unable to rise into space.

To the above causal factors, let's add an old disease inherited by Russian management from the socialist period. "The creation of a quality system in Russia stumbles upon another problem typical of our country," writes B.S. Aleshin with co-authors. It consists in the fact that instructions are written for someone, and not for a specific employee. Therefore, the usual situation has become a simple violation of instructions. This is fundamentally unacceptable at enterprises using a quality management system. Not trusting top management to solve this problem, B.S. Aleshin is looking for support at the corporate level - "...when preparing and creating a quality system in

Russia, it is useful to expand the scope of the problem and consider creating a system of corporate standards that supports the quality system."

B.S. Aleshin is a well-known specialist in the field of management, he held the highest positions in the Russian Government and knows the matter from the inside. He should be familiar with the history of the problem of training managers, rooted in Soviet times. A.G. tried to solve it. Aganbegyan when he was the director of the Institute in the system of SOAN of the USSR. He did this very seriously, initiating the creation of the Board of Directors of the largest enterprises in Siberia. Outwardly, the question looked simple: an economist-manager (then the overseas "manager" was not used) is a "free artist", or his professional training should be built as a superstructure on a production-oriented foundation, i.e. first professionally oriented education, only then economic education. There was a formal solution to the problem in departmental universities,

A discussion with A.G. Aganbegyan ended as expected - the majority considered it expedient to associate economic preparation with production specifics. Only in this way can it be given the necessary level of specificity. The reforms of the 1990s canceled the developed scheme, brought the training of managers in our country in line with the procedure established by them, whose economy was defined as a benchmark. The illogicality of economic policy was not concealed; on the contrary, it was extolled. Absolutization in science is not allowed as a brake on scientific creativity. Nevertheless, recognizing the need for a transitional stage, the economists who came to power took as teachers those who, from history textbooks, knew what to do during the transition. They wanted to be in the post-industrial economy, bypassing the developed industrial one, at the expense of "one-two". With all the defects of socialist industrialization, it became an objective historical fact in two five-year plans, and in five "five-year plans" even reindustrialization was not carried out. As a result, we returned to the previous logic of development. The military-industrial complex and Roskosmos made the locomotives of industrial progress, hoping that they would pull the development of the rest of the industry with them. But, not being confident in the ability of the rest to cope with new tasks, because they do not fulfill the old ones either, the government called on the military-industrial complex to expand the production of an assortment of mass consumer goods in order to meet the household needs of the population. hoping that they will pull the development of the rest of the industry. But, not being confident in the ability of the rest to cope with new tasks, because they do not fulfill the old ones either, the government called on the military-industrial complex to expand the production of an assortment of mass consumer goods in order to meet the household needs of the population. hoping that they will pull the

Impact Factor:

ISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	PIHIQ (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

development of the rest of the industry. But, not being confident in the ability of the rest to cope with new tasks, because they do not fulfill the old ones either, the government called on the military-industrial complex to expand the production of an assortment of mass consumer goods in order to meet the household needs of the population.

One of the main rules of quality management experts consider the return to the original position, if the process has not started. Therefore, the restoration of the past model of economic recovery should be recorded as an asset of the authorities. The principle of consistency in the implementation of the socialist imperative about the unity of theory and practice should also be applied to this. Soviet VIPs from the Politburo did not develop a solution. They agreed and accepted them. Draft solutions were prepared by professionals, consultants, "subcontractors" and "initiators", they had scientists from the Academy of Sciences of the USSR and the most successful production managers. A random person could get into the industrial departments of the regional party committees, the Central Committee of the CPSU, only by being Stirlitz. Party and people's control was established. Naturally not perfect, but effective. The decomposition started when, with the advent of M. Gorbachev, his proteges declared themselves both scientists, and experienced production workers, and prophets, having lost their critical ability. Dialectics in management gave way to the desire to find an existing example, which gave rise to the rebirth of dialectical thinking, built on the basis of the historical concreteness of true knowledge, into the primitive eclecticism of E. Gaidar and K.

On the natural desire of A. Aganbegyan and his associates to combine scientific knowledge of the economy with common sense and practically verified experience, the liberal abstract fantasy washed away.

The criterion for the level of subject-oriented knowledge is the quality of management of the corresponding area of subject reality.

The paradox of economic management lies in the specifics of the movement of social production. In order to manage competently, we need theoretical, therefore, general scientific knowledge produced by economic science, but almost always it is necessary to manage a single enterprise that closes the economic chain. In this sense, economic management already acts as an art, it is akin to medicine, the principle of which is also superficially simple: we define the disease, but we treat the patient, so the algorithms are good in the process of theoretical training of the doctor, but they are limitedly applicable in the treatment of the patient. Something close to economic management and fashion. High fashion determines the style, color preference, the specifics of the shape of the product, the nature of its combination with decoration and accessories, the type of material. As for the individual product, then its specificity is

approved by the customer, based on the constitution and financial capabilities. Usually they think that fashion enslaves, they do not agree. Fashion provides just enough freedom of action in the given parameters. It experiences the cultural development of the consumer's personality. The manager of an enterprise also has freedom, including in determining the attitude to product quality. The manager's dream is to get quality by reducing costs, the dream is understandable, because otherwise the selling price will have to be raised, which is wrong from the point of view of quality management theory. The authoritative Japanese management specialist I. Ishikawa has repeatedly said that it is immoral to talk about raising the price while improving the quality of products, since the improvement in quality is associated with the stabilization of production, a decrease in defectiveness, costs, and consequently, with a decrease in cost and price. According to I. Ishikawa, it is justified to judge a price increase only when the consumer receives a product of a new technical level.

Given the poor organization of the transition period to a modern high-tech economy, aggravated by a global recession and the Western policy of sanctions against Russia, it is hardly realistic to count on the professional responsibility of a particular manufacturer for the quality of its products. Morality was born before commodity production, but then economic development put morality under its control, securing a new relationship ideologically. Moral development only in novels is controlled by the internal forces of the characters. In economics, morality exists like a precious stone in the vise of a ring clamp. Why do ISO standards emphasize three points of application of forces - the responsibility of the manager, cost reduction and personnel policy? There are three "golden truths" of quality policy in quality management:

- ignorance - the root cause of all troubles in management, in the economy above all;
- quality is a source of income, as it is associated with a reduction in production losses, in addition, it guarantees economic stability, improves the image;
- a careful policy towards professionally trained personnel, such people are the main wealth of any production.

The rules are valid when there is no reason not to comply with them - each violation is more expensive for yourself. In our country, in conditions of selective control over the rules, rare manufacturers follow the rules, they act much more according to concepts, that is, under the guise of imperfect rules and agreements with officials. And here we can formulate the essence of the political moment, as the leaders liked to say not very long ago. So what do we have?

First, it is no coincidence that economic theory was unhooked from politics, political economy was

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHLI (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

neutralized in economic science. To God - God's, to Caesar - Caesar's. Gaidar and the oligarchs really liked American economic liberalism, and they reflected it in a specific way. The freedom of enterprise was accepted with a bang, and they forgot to tell the people about the American draconian measures for violating the rules of economic activity. It was not profitable. They began to remember only after everything was divided, and the question arose of redistributing the products of privatization.

In an effort to purify economic theory from the political burden, a practical, managerial component was hidden. Economic management was separated from the subject specifics of production, so that it was like in theoretical mechanics, physics, and chemistry. The next step after the abolition of political economy and the priority in the management of production of its subject orientation was the ascension of economic management as a universal factor.

Economic managers have become legislators of order in the development of production. Many economic advisers and consultants came to Russia in the 1990s, and almost the main financial speculator Soros became more active. The question is, why was all this necessary and who benefits? The answer is not so complicated - these changes provided a cover for the transition from a policy of managing the quality of production to a policy of manipulating quality. Quality parameters began to be determined by economic managers, naturally, based on managerial interests. K. Marx pointedly called the attempt of the economist Proudhon to understand the philosophical foundations of poverty "the poverty of philosophy." Liberal economists stepped on the same "economic" rake as their French predecessor. The result was the same. Removing subject specificity, economists - managers - restored the scholastic philosophy of the "realists". Instead of moving towards the concreteness of true knowledge, they absolutized the abstraction of general ideas. Economics is called upon to reconstruct an objective, objectively defined reality, and not to be a producer of knowledge that is convenient for calculation. This is how the functions of science and philosophy were interpreted by theologians in the Middle Ages. However, apparently, there is a special interest in such a status of science, otherwise how can one explain the departure from the objectification of the criteria for scientific assessments. This is how the functions of science and philosophy were interpreted by theologians in the Middle Ages. However, apparently, there is a special interest in such a status of science, otherwise how can one explain the departure from the

objectification of the criteria for scientific assessments.

"Quality" is a philosophical category that, together with "quantity", forms a dialectical pair, that is, they are interdependent. In one of our publications, we identified three fundamental features of "quality":

- "quality" is a system of defining properties of a phenomenon;
- in the definition of "quality" quantity is always implied in one of its manifestations - wholeness, intensity;
- reflecting the subject diversity of the world, the quality reproduces in itself the objectivity of the difference of phenomena, it is structured.

"Quality management" is a concept of political economy, it allows for the variability of development, but within the limits of the objectivity of quality characteristics. Manipulation of quality is a definition of quality attributes free from actual characteristics in general, - theoretical and particular, - practical scales. In economic theory, until the 1950s, there was no specific procedure for estimating quality costs. The "traditional approach to determining the "optimal" cost of quality" dominated. 100% compliance of the product with the specifications was considered unattainable, so the price of quality was put into the after-purchase perspective. It was believed that the cost of the consumer for the operation of the goods is inversely proportional to the quality of the goods. They decrease as the quality of the goods, tending to zero. The concept of "optimum quality level" has appeared. It corresponded to the minimum cost of quality for the supplier and the consumer. The total costs were defined as the sum of the costs of the producer and the consumer.

A new economic reality emerged in the 1970s under the direct influence of the scientific and technological revolution. The technical complexity of the product has increased, the warranty period has increased. The changes that have taken place forced us to abandon the simplified model for determining the cost of quality. The concept of the cost of quality was born, based on reducing the cost of quality through more rational financing and reducing the overall cost of producing a product. They tried to make the economy economical. The emphasis in quality management has shifted towards solving common problems of production development and its standardization. G. Taguchi generally called its cost a measure of quality and gave the following calculations: one wash of a shirt costs 250 yen, usually a shirt is washed 80 times during the service. Laundry costs are 20,000 yen. If they can sew a shirt, wrinkled and soiled twice as slowly, the consumer's savings reach 10,000 yen. Suppose a new shirt costs the manufacturer 1,000 yen more, and sales increase by 2,000 yen, the manufacturer will receive 1,000 yen in revenue, and the consumer will benefit 8,000 yen. Society will save 9,000 yen plus reduced

Impact Factor:

ISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	PIHIQ (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

environmental spending because there will be less laundry waste. We are not against quality manipulation. Within certain limits, this is a forced measure, indicating the limitations of cognitive and other possibilities. The theory need not be conservative, but quality manipulation is a tactical level of management as opposed to the strategic value and significance of quality management. Manipulation is one of the tools of government, and it must remain private,

The second thing to keep in mind when analyzing the perspective of private self-quality control. Private initiative is conditioned by the general political and economic situation. Socialism could be built in a single country, but it turned out to be impossible at this historical time to ensure the competitiveness of socialism. Capitalism is still strong. The same situation awaits private producers. He delivers a quality product. Will he be able to work sustainably in an environment that is not ripe for such a practice.

It is not enough to be able to produce a quality product. It should be in demand by the mass buyer, and such an alignment is already a socio-economic policy. Everyone wants to have quality products and always. Only - this is an abstract desire. It exists like a dream, a fairy tale. Only as abstract desires acquire the status of concreteness of real possibilities will favorable conditions arise for the priority of "good taste", and the buyer will look for a quality product, and not look with envy into the basket of a rich but obvious minority. There are also Higgs fields in the producer-buyer relationship. In nature, passing through them, particles are endowed with mass and turn from energy particles into "real" particles. In the goods market, the product passes through the fields of sellers of various ranks and acquires an unrealistic price, which is advertised as genuine, corresponding to the quality. Until the domestic market is brought to a normal market state, which will have to wait a very long time, there will be no interest in the production of a quality product. It is quite acceptable to believe that among Russian manufacturers there are many honest entrepreneurs who have a sincere desire to feed, clothe and put on their fellow citizens in the best possible way. Who will let them do it. The market rejects them as "violators of the convention." Legislators will pass laws in accordance with the procedure and cost of lobbying - it exists legally; officials will make their comments through recommendations, instructions, etc. there will be no interest in the production of a quality product. It is quite acceptable to believe that among Russian manufacturers there are many honest entrepreneurs who have a sincere desire to feed, clothe and put on their fellow citizens in the best possible way. Who will let them do it. The market rejects them as "violators of the convention." Legislators will pass laws in accordance with the procedure and cost of lobbying -

it exists legally; officials will make their comments through recommendations, instructions, etc. there will be no interest in the production of a quality product. It is quite acceptable to believe that among Russian manufacturers there are many honest entrepreneurs who have a sincere desire to feed, clothe and put on their fellow citizens in the best possible way. Who will let them do it. The market rejects them as "violators of the convention." Legislators will pass laws in accordance with the procedure and cost of lobbying - it exists legally; officials will make their comments through recommendations, instructions, etc. Legislators will pass laws in accordance with the procedure and cost of lobbying - it exists legally; officials will make their comments through recommendations, instructions, etc. Legislators will pass laws in accordance with the procedure and cost of lobbying - it exists legally; officials will make their comments through recommendations, instructions, etc.

Of course, there is a certain niche in our market, it is used by the most respectable part of the middle class. The niche is insignificant due to the skinny social stratum and its instability in the context of the volatility of economic development. Nevertheless, this sector exists, and under its requests, manufacturers of quality products, for example, sausages at 1,500 rubles per kilogram, shoes for 5,000 or more, suits from 15,000, also exist. But what does this market exclusivity have to do with the characterization of our economy as a whole? Unless, it serves as an exception to the rule, which only confirms them. The problem of the status of a manufacturer of quality goods - a national scale and the potential of individual, relatively prosperous stratos, relates to it like the fate of passengers escaping in a boat after what a storm did to their large ship.

We did not say everything about our market, but we highlighted the main thing. We have power in the market with intermediaries and speculators, often appearing in one person. Corrupt officials are connected with them. Therefore, the proportions shown on the right side of the diagram look different in our market. Especially in terms of the cost of goods sold. This part of the Klondike is for everyone who feeds on the market, and a headache for real workers. Just like that, no one has yet refused their advantages. Without market regulation, no good intentions will find a quality road to the buyer, because it is known where such a road leads.

The main reasons for the absence of a civilized consumer goods market are:

- poor development of market infrastructure, interregional and intersectoral commodity distribution network and commercial relations with countries near and far abroad;
- imperfection of legislation in the field of production, export and import of Russian products. Given the complex and multifaceted nature of the

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHII (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

problems of this group, cardinal measures are needed to solve them, including state support, as is done in foreign countries. For example, the recognition by the governments of China, Turkey and some other countries of light industry as a strategic industry allowed them to quickly turn outdated industries into modern ones and promote the powerful development of raw materials, chemical and machine-building complexes in these countries.

In Russia, in recent years, some steps have been taken by the state to normalize the situation in the light industry. The Government of the Russian Federation has provided a number of preferences to enterprises in the industry. For the third year now, technological equipment has been imported into the country at zero import duties and without VAT. There is a mechanism for subsidizing interest rates on loans for the purchase of raw materials and supplies. Since 2014, this mechanism has been extended to loans received for technical re-equipment. Support and incentives are provided for exporters of industrial products by reimbursement from the federal budget of part of the cost of paying interest on loans received for the production of export products. Although not large, funds are allocated from the federal budget for R&D in the interests of light industry.

Efficiency of preferences: each ruble invested in the industry in the form of subsidies on loans provides additional revenues to the budgets of all levels and state off-budget funds from 6 to 7 rubles, and for individual enterprises - from 20 to 30 rubles.

Operative and preventive measures "Counterfeit" were carried out to curb the illegal circulation of light industry goods. In particular, in 2020, as a result, more than 700 crimes were identified, for which material damage in criminal cases amounted to more than 2.7 billion rubles. In the course of the investigation of criminal cases, property worth more than 73 million rubles was seized, property, money, valuables were confiscated and damages in the amount of more than 57.6 million rubles were voluntarily repaid.

To reduce counterfeit products, the government of the Russian Federation has provided for an increase in liability from January 1, 2022 for false chipping of fur and light industry products in order to protect the consumer from products that are not of good quality and do not comply with regulatory documents, government leaders, together with manufacturers, hope that these measures have been introduced significantly reduce counterfeit products and allow consumers to buy high-quality products.

Using the created marking system, you can see the structure of the industry online, as well as track cases of understating the customs value, tax evasion schemes and violations of the order of goods circulation. On the example of the fur industry, where labeling was introduced in 2020: more than 9,000 participants (2,500 business entities) are registered;

retail sales grew by more than 51.7 billion rubles. (908 thousand pieces); legal introduction (production/import) of fur products into circulation increased by 57% (the number of goods in legal circulation increased by 5 times); 3.9 million products were marked (forecast - 2.5 million products); more than 20% of the project participants legalized their business.

It is possible to change the current situation and revive the light industry, and this was confirmed by the experts - respondents, showing unanimity, according to the main criteria for assessing the competitiveness of light industry enterprises, the list of which, approved at the end of the meeting, is given below:

1. To the Government of the Russian Federation:
 - a) provide for, when drafting the federal budget for 2021 and for the planning period of 2022 and 2025, the provision of state support to light industry enterprises annually in volumes not lower than the level of 2020.
 - b) provide for, within the framework of the State Program for the Development of Agriculture and the Regulation of Agricultural Products, Raw Materials and Food Markets for 2016-2025, the formation of a subprogram aimed at providing light industry with high-quality agricultural raw materials, as well as the implementation of anti-epizootic measures in order to eliminate hypodermatitis in cattle.
 - c) to consider the issue of establishing at the federal level incentives for corporate property tax in relation to movable property in order to stimulate the modernization of production and ensure that appropriate changes are made to the legislation of the Russian Federation;
 - d) take measures to mitigate, within the framework of bilateral international agreements with the central veterinary authorities of foreign countries, veterinary requirements for raw hides imported into the territory of the Russian Federation;
 - e) determine the sale of fine and semi-fine wool, long flax fiber to processing enterprises located on the territory of the Russian Federation, as a prerequisite for the provision of state support to agricultural producers engaged in the production of these products, and ensure that appropriate changes are made to regulatory legal acts;
 - f) provide for the introduction of amendments to the legislation of the Russian Federation aimed at developing a system for ensuring the traceability of the turnover of light industry goods;
 - g) to consider the issue of the expediency of introducing a recycling fee for footwear;
 - h) jointly with the Russian Export Center joint-stock company, submit proposals to promote the development of exports of Russian light industry products, including by compensating for the costs associated with the entry of these products to foreign markets. I am glad that they are expected to be

Impact Factor:

ISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	PIHIQ (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

implemented in full and on time, understanding the responsibility of these persons and their motivation for action.

In many constituent entities of the Russian Federation, there is also a wider list of benefits, including property taxes, land taxes, and others. At the same time, the existing preferences and the problems of the industry being solved to some extent at the federal and regional levels are not yet sufficient to eliminate the influence of negative factors on the development of the industry and turn it into a competitive and self-developing sector of the country's economy, and for domestic producers to strengthen their positions in domestic market and compete on an equal footing in the world market not only with the EU and the USA, but also with manufacturers in China, Turkey, India and a number of other countries. Hence, the key task is to accelerate the qualitative modernization of the industry and its supporting infrastructures using cluster approaches,

Social and personnel problems are caused by the state of the qualitative component of the personnel potential, which at many enterprises is in the zone of critical values, and for some it is already beyond them.

The deteriorating situation in the professional and qualification training of workers, low wages and the prestige of work lead to an annual reduction in the number of, mainly, young and promising workers under the age of 30-40 years. Over the decades alone (from 1990 to 2008), the number decreased by 3 times, and over the next nine years -2.8 times which led to a decline in output. At the same time, the measures taken for anti-crisis management of unprofitable enterprises by the state administration and management failed to influence the course of development of structural imbalances in the industry.

Failure to solve the problems of this group will significantly affect the ability of the industry to boost its economy and increase the production of competitive products in the volumes necessary to ensure the national security of the country. In addition, all of the above problems are exacerbated by the impact of the global financial crisis. In the context of the crisis, the light industry, like no one else, begins to feel its effects. Even those enterprises that in recent years have achieved positive results in innovative development, paying considerable attention to the modernization of production, are already forced and will be forced in the coming years to reduce production volumes and abandon long-term investments. This is due to the difficulties related to attracting bank loans (the share of borrowed funds in working capital in recent years has reached 40 percent), on the one hand, an increase in the volume of official imports, counterfeit and contraband products, a drop in demand and a slowdown in the sale of many types of goods, a reduction in workers and specialists, on the other sides. At some enterprises, delays in the payment of wages from 2 weeks to 1.5

months began to arise, temporary suspensions of work began, and according to experts, by the end of 2017, a reduction in the number of employees by 10-15% is possible. This is especially true for the three federal districts - the Central Federal District, the Volga Federal District, the Southern Federal District, which are the most significant in social terms. The capital structure of the industry, being concentrated in these districts, makes their territories the most critical in terms of the consequences of a deepening decline in production, which increases the significance of the social consequences arising from the shutdown of production. The share of Russian goods in the domestic market will decrease even more and may be less than 20% in 2022.

It is possible to change the current situation only by developing and implementing anti-crisis measures aimed at intensifying innovative activity, increasing production efficiency at a new technical and technological level and creating favorable conditions that ensure a stable growth over the years in the production of competitive goods. It is encouraging that all expert respondents are unanimous in assessing the role of assortment policy and the need to use effective innovative technological solutions to guarantee manufacturers the manufacture of such products that would be in demand by consumers in the regions of the Southern Federal District and the North Caucasus Federal District and would provide them with effective technical and economic performance indicators their activities, and products - its demand not only in the domestic, but most importantly, in foreign markets. The fact was again confirmed that there is every reason to trust the results of a priori ranking, and the software developed by the authors for assessing the competence of survey participants - a long life. This use of software is especially justified in assessing the competence of expert respondents invited by customs committees to work in customs commissions. Customs managers receive an objective assessment of each expert-respondent based on the results of their participation in the work of customs commissions, since in this case the expert cannot but agree with the received objective assessment of his competence, and customs committees receive a ranking methodology, giving preference to the most qualified and objective experts to ensure that only high quality products enter the domestic markets,

I would like to warn the customs committees about the haste in making decisions about the competence of experts if they do not have an objective testimonial received from highly qualified specialists. All this presupposes a correct attitude not only to one's duties, but also to the invited specialists, creating a trusting atmosphere and interest in obtaining positive results of the examination. If we sum up the effectiveness of the software for assessing the competence of respondents participating in the survey, then the researcher has a tool for selecting

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIIHQ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

those respondents whose opinion has a high degree of confidence, confirmed by the value of the concordance coefficient (W), which tends to unity. Thus, summing up the effectiveness of a priori ranking and the software developed by the authors,

Roadmap for the implementation of the strategy for the development of light industry until 2025

As part of the implementation plan of the Strategy, cross-cutting activities are envisaged to be implemented throughout the entire period of its operation:

- support for the creation and development of Russian clothing and footwear brands;
 - combating illegal and illegal turnover of light industry goods;
 - promotion of exports in competitive segments of the light industry;
 - preservation of leather raw materials for own production of leather and footwear;
 - formation of personnel potential of the industry;
 - promotion of R&D and technology transfer;
 - information and marketing support for the development of the industry;
 - monitoring the effectiveness of the implementation of the strategy and adjusting the plan
- in addition, a number of strategic initiatives will be implemented in stages:

Stage 1. The main activities are being implemented in the period 2016 - 2019:

- preparation for the implementation of the strategy;
- stimulating the development of the production of synthetic textiles (synthetic fabrics);
- stimulating the growth of consumption of technical textiles;
- creation of an eco-system of enterprises for the production of technical textiles and nonwovens within clusters / industrial parks;
- stimulation of demand for special and protective clothing and footwear;
- creation of favorable conditions for contract clothing and footwear production;
- reorientation of clothing production to competitive products with advantageous access to materials and a low share of manual labor;
- support for the creation of a production infrastructure within the shoe industry cluster;
- providing profitable access for manufacturers to the functional components of clothing and footwear;
- stimulating the production of automotive leather and increasing the degree of localization of auto components.

Stage 2. The main activities are being implemented in the period 2020 - 2023:

- ◆ formation of demand for chemical fibers;

- ◆ support for projects to localize the production of chemical fibers;

- ◆ stimulating the processing of leather production waste and the introduction of new technologies to improve the environmental safety of production.

Stage 3. Monitoring of results and implementation of cross-cutting initiatives in the period 2024-2025

Detailed plan for the implementation of the Strategy, indicating the list of activities, expected results.

If customer satisfaction is formed at the expense of the level of the manufacturer, i.e. its test level is formed by the affordability of the product, which is offered by the assortment range, of course, by quality, and at the expense of the level of the consumer, i.e. its test level implies the existence of a culture of customer service, the attractiveness of the product, customer satisfaction, and, of course, the solvency of the consumers themselves, then the respondents who took part in the survey believe that consumer satisfaction will be provided with the reliability of the product, its affordability, the availability of buyers make purchases, i.e. their ability to pay. The natural quality of products, the diversity of the product range, the attractiveness of the design solution, i.e. fit the fashion products should have a sufficiently long warranty period, and interestingly, all respondents are unanimous that manufacturers should fight for respectful attitude of buyers towards them, win their trust and desire to buy exactly the products of these enterprises, i.e. the brand and image are always in demand, which together solves the main problem - providing consumers with domestic products in the framework of import substitution.

Rationality is the ability of a person, within the framework of systemic relations with the natural environment, to complete the animal (biological) form of subordination to nature not only by the art of adaptation, but also of transformation.

Planning arose in the process of mastering by a person those advantages that rationality provided him. And here it is necessary to clearly dialectically oppose rationality and consciousness as specific characteristics of modern man. Intelligence is predominantly a biological feature, consciousness is its specific historical development in the conditions of the social form of human life, a kind of way to realize the potential of intelligence. In this connection, the systemic use of the concepts of "consciousness" and "reasonableness" differs. "Reasonableness" is included in the composition of consciousness as a tool for building the latter. Intelligence singled out a person from the totality of biological species, consciousness allowed him to develop into a modern person and build his human, social structure of relations, thanks to the ability to foresee and plan, and, planning,

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHII (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

Planning is an attribute of activity, one of its qualitative features. It is twice qualitative: both as a qualitative sign of activity, and as a measure of measuring the level of perfection of activity. The art of planning shows the active side of homo sapiens. To a certain extent, this is a sign of the highest state of activity. Attempts to oppose planning and creativity are something else than a desire to limit the universality of planning, to simplify the nature of human intelligence. It is also wrong to oppose planning to freedom of competition. Both creativity and competition are ways of manifesting activity, therefore, all its attributes must be present in them. Another thing is that the general is realized through the special and therefore in its reality it is specific, concretized. S.V. Kovalevskaya ventured on an original solution to the problem of describing the rotation of a rigid body with a shifting center of gravity - aerobatics in mathematics, according to the Paris Academy of Sciences, accessible to her only by L. Euler and J. Lagrange, planned her actions both objectively and in time, meeting the deadline. Even the ancestors of the current apologists for the fight against the planned economy, the pioneers of the development of the wealth of North American lands, the cowboys, who are considered to be free from everything, planned their actions within the limits of available knowledge.

At the beginning of the third millennium, the most urgent question is: how to optimize the organization and management of production development in the priority of consumer interests and environmental safety.

The underestimation of the strategic scope of planning reveals the flaws that are born from the understanding of rationality, and ultimately the defects of the rational ability of those behind the attacks on the universality of planning. In relation to planning, one can easily trace, firstly, the lack of panoramic thinking, and secondly, its ideological orientation towards the narrow format of utilitarianism as a perverted pragmatism

The outstanding achievements of the classics of political economy should include exactly what scientists economists who are guarding the interests of the current heirs of the revolutionaries, the bourgeois of the eighteenth and nineteenth centuries, are striving to carefully disguise:

- the fundamental position in the production of that labor that can be concretely measured in the product produced;
- developing a theory of value in relation to such labor;
- freedom of the producer as a necessary condition for the development of production;
- the decisive factor in the development of production is labor productivity, and the improvement of labor productivity is due to the division of labor,

which also facilitates the introduction of scientific and technological achievements into production;

- the goals of the economic movement are only partly within the development of production, the main goal is determined by the systemic position of production itself in the life of man and society. Production is a tool for solving problems of social and personal development, hence planning must be socially and culturally oriented.

Planning reveals the level of depth of knowledge of the economic process that requires management, and the degree of rationality of managerial actions. The latter needs a special explanation.

Intelligence, as a phenomenon, has a twofold interpretation. In the philosophy of the past and in the new century, "reasonableness" was understood and is understood as an independent phenomenon that realizes the identity of thinking and being, for example, in Hegel the expression of this was the absolute idea; or is considered as a unique ability of the subject - the highest level of the ideal ability to reflect reality. The characteristic of such a level is determined by the adequacy of reproduction by thinking of what is happening outside it.

Reasonableness is a guarantee of the possibility of obtaining an ideal copy of objective reality. The task of thinking, which has reasonableness, is to transform the possibility into a corresponding result. The process of cognition - reflection of reality by thinking is natural, therefore it can and should be planned. Here the main condition for obtaining a product is to match the actions to the nature of the object. There are many obstacles on the way to the truth, connected both with the peculiarity of the planned action and with the specifics of the thinking itself. Thinking is capable of knowing the truth, but it is also characterized by movement in a false direction, which may be a delusion, or may be deliberate in order to fit someone's interests into the result, be a consequence of moral dishonesty.

Human intelligence has its own history, but it is absurd to understand it separately from biological evolution and the sociobiological continuation of natural history. Before human rationality appeared as the special ingenuity of learned liberal economists infected with the idea of reformism, it was itself a derivative product of labor activity, that is, the formation of economic reality.

The real history of the mind is built into the history of the development of what was eventually called the economy by a natural-historical process, therefore, sociocultural progress, revealing the potential of human intelligence, must immanently belong to the economic movement. The concept of "superstructure" characterizes not some artificial constructive addition to the main structure, it helps to understand the architecture of a monolithic structure. No matter how you depict the first floor and do not call the second the first, you will not be able to get rid

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHII (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

of their structural unity - the second will be considered above the first and the second will be, thanks to the first: there will be no first, there will be no second. But the first without the second is quite independently real.

Optimization in planning destroyed the system of organization of health care, education; forest fires became regular disasters, floods were added to them, significantly different from the usual and known for a long time. The authorities are trying to blame them on the "natural disorder" provoked by climate change, but few people already believe in such an explanation. The population migrates from the Far East, Eastern Siberia, Western Siberia is next, and some 50 years ago people actively went to these places to build, raise science and culture. BAM was built by the whole world, finances were limited, but they found money for social and cultural life, albeit on a modest scale.

Those who developed plans understood from real experience the impossibility of implementing projects without something that serves the development of the personality, satisfies its cultural needs, and warms the soul. After all, people went to large construction sites from places inhabited and equipped. To the question: what's the matter? The answer is simple. At the described time of rise, with all the punctures and costs, the goal was universal - the well-being of the Fatherland. Of course, even at that time the benefits were not shared equally - there were both rich and poor, the main thing - the goal seemed to be the same and the opportunity to make a career was equal. They built and produced not for the pleasure of "golden paratroopers", they promoted the country and themselves along with it.

Capitalism, we repeat, by the 20th century completed its "classical" history and was forced to rebuild, refusing under compulsion what had once helped it quickly increase its advantages: the colonial system collapsed as a result of a long struggle for independence; wars with the aim of redistributing property became a dangerous business - they could return like a boomerang; had to accept the idea of peaceful coexistence; it was necessary to strengthen the social direction in economic policy; the question of the maximum load on the natural habitat arose sharply. There have already been different stages in the history of capitalism: the primary accumulation of capital; revolutionary activity; monopolization of capital; concentration and dominance of finance capital.

Speculative thinking is a well-known phenomenon that arises in philosophical reflection or in the course of scientific discourse. Its epistemological nature is well studied - the non-systemic assessment of individual aspects of the subject of thinking and, as a result, the absolutization of the meaning of these aspects. Mental speculation falsely reflects objective reality, so it can be qualified as a cost in the production of the required knowledge. Very rarely has speculation been the product of

artificially inducing the process of cognition in the wrong direction. The "scientific permissibility of speculation" (by liberal economists) has a completely different epistemological mechanism of education, indicating that there is nothing related to postulates, delimiting the scientific way of cognition from non-scientific ones, in their thinking. We must always clearly differentiate philosophical reflection, scientific thinking and non-scientific ways of knowing the world. The problematic nature of philosophical knowledge is logically compatible with the subjective costs of thinking. The falsifiability of philosophically identified problems is limited, since philosophical knowledge is conditionally standardized.

Scientific knowledge, on the other hand, must be subject either to strict verification or equally severe falsification. It does not reproduce in consciousness its attitude to the object (subject), it is, in content, a completely objectified process. Even the choice by the subject of thinking of a coordinate system, a reference point, etc. is regulated at all stages of cognition. When scientific knowledge is "enriched" by the "permissibility of speculations", then such an addition testifies to one thing - the desire to modernize the post-non-classical stage of the history of science with something that has nothing to do with the current time or with scientific history in general. Allowing speculation not as a cost, but as a scientific phenomenon in the knowledge of economic movement, innovator economists want to squeeze a subjective action in nature into the chain of objective reflection of the developing reality, sliding into solipsism in perspective. Scientific knowledge is objective, the characteristic of the scientific nature of knowledge begins with objectivity, if economic thinking strives to be scientific, it must filter knowledge on the basis of objectivity. "The admissibility of speculation" is tantamount to its legalization in scientific knowledge. This is nonsense for legal sciences, logic, ethics, aesthetics, cultural studies, a negative phenomenon for historical science, political science, and sociology. As a fact of objective reality, speculation undoubtedly exists, therefore, the scientific - economic, political science, psychological, legal interest in it is justified, however, it is one thing to pay attention to the fact, and quite another - the desire to substantiate the regularity of the system belonging of speculation to economic science as a necessary condition its development. Scientific knowledge is objective, the characteristic of the scientific nature of knowledge begins with objectivity, if economic thinking strives to be scientific, it must filter knowledge on the basis of objectivity. "The admissibility of speculation" is tantamount to its legalization in scientific knowledge. This is nonsense for legal sciences, logic, ethics, aesthetics, cultural studies, a negative phenomenon for historical science, political science, and sociology. As a fact of objective reality, speculation undoubtedly exists, therefore, the

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHII (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

scientific - economic, political science, psychological, legal interest in it is justified, however, it is one thing to pay attention to the fact, and quite another - the desire to substantiate the regularity of the system belonging of speculation to economic science as a necessary condition its development. Scientific knowledge is objective, the characteristic of the scientific nature of knowledge begins with objectivity, if economic thinking strives to be scientific, it must filter knowledge on the basis of objectivity. "The admissibility of speculation" is tantamount to its legalization in scientific knowledge. This is nonsense for legal sciences, logic, ethics, aesthetics, cultural studies, a negative phenomenon for historical science, political science, and sociology. As a fact of objective reality, speculation undoubtedly exists, therefore, the scientific - economic, political science, psychological, legal interest in it is justified, however, it is one thing to pay attention to the fact, and quite another - the desire to substantiate the regularity of the system belonging of speculation to economic science as a necessary condition its development. the characteristic of the scientific nature of knowledge begins with objectivity, if economic thinking strives to be scientific, it must filter knowledge on the basis of objectivity. "The admissibility of speculation" is tantamount to its legalization in scientific knowledge. This is nonsense for legal sciences, logic, ethics, aesthetics, cultural studies, a negative phenomenon for historical science, political science, and sociology. As a fact of objective reality, speculation undoubtedly exists, therefore, the scientific - economic, political science, psychological, legal interest in it is justified, however, it is one thing to pay attention to the fact, and quite another - the desire to substantiate the regularity of the system belonging of speculation to economic science as a necessary condition its development. the characteristic of the scientific nature of knowledge begins with objectivity, if economic thinking strives to be scientific, it must filter knowledge on the basis of objectivity. "The admissibility of speculation" is tantamount to its legalization in scientific knowledge. This is nonsense for legal sciences, logic, ethics, aesthetics, cultural studies, a negative phenomenon for historical science, political science, and sociology. As a fact of objective reality, speculation undoubtedly exists, therefore, the scientific - economic, political science, psychological, legal interest in it is justified, however, it is one thing to pay attention to the fact, and quite another - the desire to substantiate the regularity of the systemic affiliation of speculation to economic science as a necessary condition its development.

reality, speculation undoubtedly exists, therefore, the scientific - economic, political science, psychological, legal interest in it is justified, however, it is one thing to pay attention to the fact, and quite another - the desire to substantiate the regularity of the system belonging of speculation to economic science as a necessary condition its development. it must filter knowledge on the basis of objectivity. "The admissibility of speculation" is tantamount to its legalization in scientific knowledge. This is nonsense for legal sciences, logic, ethics, aesthetics, cultural studies, a negative phenomenon for historical science, political science, and sociology. As a fact of objective reality, speculation undoubtedly exists, therefore, the scientific - economic, political science, psychological, legal interest in it is justified, however, it is one thing to pay attention to the fact, and quite another - the desire to substantiate the regularity of the system belonging of speculation to economic science as a necessary condition its development. a negative phenomenon for historical science, political science, sociology. As a fact of objective reality, speculation undoubtedly exists, therefore, the scientific - economic, political science, psychological, legal interest in it is justified, however, it is one thing to pay attention to the fact, and quite another - the desire to substantiate the regularity of the system belonging of speculation to economic science as a necessary condition its development. a negative phenomenon for historical science, political science, sociology. As a fact of objective reality, speculation undoubtedly exists, therefore, the scientific - economic, political science, psychological, legal interest in it is justified, however, it is one thing to pay attention to the fact, and quite another - the desire to substantiate the regularity of the systemic affiliation of speculation to economic science as a necessary condition its development.

Speculation is persistently tried to be presented as a necessary link in scientific thinking, and this is done in the interests of that minority that controls distribution, and does not produce a real product. Within the framework of artificially constructed relations in the superstructure of production, speculation has long been legally flourishing, but it is unnatural within the framework of the established system of production itself, where everyone, regardless of their position, is a participant and has the right to count on their legitimate share in the product produced. The order of distribution is determined mainly by property, and only then by the share of participation in the production of goods. The gap between the two realities - labor and property, formed in connection with the pattern of development of production and social superstructure, the direct creator of a real product and its real owner opens up a real opportunity to supplement the objectively natural reality, the conditionally existing, virtual or

Impact Factor:

ISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	PIHII (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

speculative reality. It is she who is considered as a way of movement to property.

Speculation is a roadmap to the capital that may be sufficient to start a real business. And in this version, speculation has a real meaning, it can be a conditional fact of scientific research. But under the dominance of financial, essentially speculative capital, speculation has become a steadily autonomous variety of activity, divorced from the production of a real product. Speculation in the market is an excessive form of intermediary activity. It has already become an obstacle to the development of production. And so it began to concentrate the costs of the social movement. By and large, speculation has matured, blossomed and outgrown the limits of law enforcement reality.

The "specialist" displaces the individual from the goals of social development. Economists need a specialist, sharpened by the technology and organization of production, personal development for liberal economists seems to be transcendent for the purposes of production. Production requires for its development not a person, but a knowledgeable and able to work specialist. They build the functions of culture and education for the training of a specialist. You don't have to go far for arguments, there is no need to dive into the history of the United States, you just need to turn towards the modernization of domestic special education - secondary and higher, displacing from the programs everything that contributes to personal development in order to focus the process on training a specialist in the direction. The personal model of education has given way to a competency-based one.

Globalization of the economy is a policy that uses the objective trend of integration of national economies. This is clearly seen in the example of the WTO. The WTO, on the one hand, stimulates a planned form of managing economic movement, on the other hand, it strictly regulates the possibilities for planning the development of the economy on a national scale, subordinating national interests to global goals, the justification of which, from a scientific point of view, looks insufficient, politically biased. Meanwhile, having joined the WTO, the country is forced to accept the conditions of this, to a large extent, political game.

National economic development projects are increasingly loaded and adjusted not in the national interest, which has to be put up with as the costs of globalization. At the same time, it should be borne in mind that there is no alternative to integration. Homo sapiens exists as a universal species. The earth is his common home, development is a common interest, synthesizing biological evolution and socio-cultural arrangement.

When planning, it is necessary to proceed from the dialectical requirement of a comprehensive objective analysis of reality, once and the need to act

together in the common interest, two. States have something to share, but you can't test history for strength, humanity has no other and never will. Dialectics has opened up to us the range of confrontation, both practical and theoretical. The struggle is reasonable only within the boundaries of unity, therefore, contradictions should be filtered through the need to obtain a common result that corresponds to the laws of motion of the human reality of being.

Conclusion

Today, scientific, philosophical and practical interests in competition have become aggravated. The scale, content, forms and significance of competition have put it among the global problems of human development with one important clarification: it is not humanity itself that benefits from achievements in the competitive struggle, but individual subjects of human activity, starting with the personality of the performer and manager, and up to those states in whose interests they work. Therefore, the organization of effective participation in competition should be considered as a leading indicator of professional competence, spiritual maturity and political consciousness, bearing in mind, of course, economic policy.

With regard to the production in general and consumer goods, in particular, the conclusion is even more simplified to the creation in a specific production of technical, economic and humanitarian conditions aimed at a high-quality, popular and affordable product. The organization of production can be considered reasonable only if it is subordinated to a single goal - the satisfaction of the consumer's needs. Unfortunately, our modern organization of the economy opposes the producer and the consumer, turning them into opponents, instead of stimulating them to act as a single team.

Where are the reasons for such an anomaly, in what? Is this due to objective factors, whose resistance we have not yet been given to overcome, or are the braking forces still of inertial nature, inherited from us, introduced in the course of modernization and we are able to deal with them, and not with the consumer on the market? What are our reserves?

Answers to the questions posed must be sought in system analysis, which requires an appeal to scientific and philosophical theory.

In economics and politics, many phenomena are known that contradict the nature and functions of these spheres of public life. Practical development does not always coincide with historical logic. History, contrary to its rational basis - the history of the implementation of the activities of a reasonable person, often drives the reflection of the mind into a dead end. In this connection, a problem arises: if the history of the sociocultural activity of a "reasonable person" should be at least no less reasonable and logical than the individual mind of a person subject to

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHLI (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

chance incomparably more than the socialized mind of mankind, then how to explain the existence of social anomalies, a kind of "jams"?

They are historical blind alleys from which we must regularly get out, or the product of the costs of underdevelopment of the organization of social relations and management, including here a limited knowledge of historical patterns. In other words, we have before us the riddle of history and should we determine where to look for the keys to its solution - in consciousness or in objective reality? What exactly to focus on? We don't have an answer that could be adequately substantiated. Moreover, it seems to us that it would be more legitimate to study the nature of this problem in parallel - both in social life and in public consciousness.

The improvement of production is due to the transformation of science into a direct productive force, technical progress, but the productivity and quality of productive activity depend no less on the moral factor - the attitude of a person to work. In this light, the Japanese mentality, developed by the original economic policy, linking the interests of owners and employees, is indicative. Its core is a national tradition that goes back to the history of Confucianism. Confucius taught: "When running a state ... constant attention to business and sincerity in relation to people, moderation in spending and love for the people are necessary. And it is no less important to encourage people to work ...".

In Japan, China and other countries of the East, one can find examples of moral disorder, but they do not so much testify to a sociocultural reorientation in a national format, but to the historical costs of developing a national culture. There, the vast majority of the population continues to listen to the words and reasoning of teachers. "Wealth and nobility, explained Confucius, are the subject of human desires, but a noble husband does not use them if they have been acquired illegally ..." How can a noble husband bear such a high name if he has lost his philanthropy? A noble husband does not part with humanity for an hour, it will certainly be with him: both in trouble and in worldly fuss. E

The quality of production and the quality of the product of production depend on the technical conditions - technology, technical means, organization of production, professional qualifications of organizers and performers and attitude to work. The last two components form the content of the concept of "subjective factor" or "human capital". Based on the achievements of the scientific and technological revolution, entrepreneurs are trying to minimize the complicity of the "subjective factor" due to its volatility. Without advertising, the "subjective factor" refers to the conditions of uncertainty and risk.

The problem here is that all attempts to limit the presence of the subjective factor in production and,

mainly, in its technological component, inevitably lead to the absolutization of the technical component. It becomes a total means of increasing labor productivity, production safety and profitability. Thus, the management of the organization of production development is delegated to artificial intelligence, built on the laws and rules of formal logic, expressing one of the aspects of development - conservatism.

The original law, and, in essence, the principle of this logic is the law of identity. The subject and the subject, their relationship are recognized as immutable. Movement is reduced to its relative moment - rest. Peace replaces movement and with it change as the essence of any movement.

Starting with handicraft labor and the guild form of its organization, the quality of the goods pushed all other signs of production into the background. As long as the division of labor had a shop form, and inside the shop everyone produced the goods up to the final commodity form and fully guaranteed the quality with his brand, the quality of production and the quality of the goods remained in the unity of existence, and the problem of the quality of the goods was simplified, reduced to the observance of the technological standard of production. Production was a way of life support for the manufacturer, so the relevance of the quality of the product was removed by the specifics of its relationship to production.

On the market, the goods were of high quality, one should only be afraid of counterfeiting, which did not have the current scale and was resolutely suppressed by both the state and self-regulation of trade. For mass production, which was the main consequence of the industrial revolution, the problem of the producer's interest as a commodity was not noted among socially significant ones. It undoubtedly existed, but the nature of production did not allow it to leave the sphere of private consciousness and materialize in the product range.

The inclusion of a person as a factor in the production of the quality of goods enhances the influence of the subject of labor on the quality of production and the quality of the goods produced. As a result, the burden on the management process increases.

Management is subject to the solution of the problem of sustainable production of a quality product. As in any task, here you need:

- clearly define what "quality" is?
- understand what is specific to the quality of the goods?
 - to understand how the "quality" of commodity production and its mass character are connected, to trace the mechanism of interaction of qualitative changes with quantitative.
 - reveal the systemic position of the quality problem of mass production in the context of a developing economy.

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIIHQ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

Only having received answers to the listed questions, we will be able to productively investigate the problem: "How realistic is our desire to give the mass producer the need for the quality of the product result", in other words, "is it possible to sufficiently motivate the receipt of a quality product from within mass production?". So far, unfortunately, quality management is carried out by bringing into production ideas developed not in it, but in the "pure" theory of management.

In the definition of quality, the most common shortcoming is the lack of consistency. Quality is defined as a set of essential properties. The usual method of selecting such is the method of pyramidal arrangement of the properties of the object. Important, but not decisive, remain at the base, and as you climb to the top, a hierarchy of the remaining properties is formed. At the top, we get the sum of the main properties, which are included in the definition of the quality of the item. G. Hegel at one time wittily defined quality from the contrary - "quality is that, losing what, the object ceases to be itself."

Following the example of the great thinker, let's define "shoes" as "clothing for the feet." How accurate is this definition? For shoes, probably yes. Not for the quality of the shoes. If you deprive shoes of the ability to be "clothing for the feet", then it really will not be a shoe. If, however, only the ability inherent in footwear is preserved, then the required quality of the product will be indefinite. "Clothes for the legs" can be dangerous due to the toxicity of the material, the means of fastening, and the construction that is inconvenient for movement. A formally constructed requirement for an item does not coincide with the quality of the item. It is significant as a prerequisite for the qualitative certainty of the product. To determine the quality of a product, one must proceed from its functional purpose.

The consumer with his interest as a product is theoretically not excluded from the development of strategy, tactics and advertising. Let's refer to B.S. Aleshina and co-authors: "For a quality strategy to be successful, both internal and external consumers must not only be satisfied and involved in the process that provides this satisfaction, but also take a direct part in the continuous improvement of the quality of this process" improved the Kaizyo system for this purpose; replacing it with a new edition of Kaizen. Changes in the organization of quality management have revealed the advantages of those countries where the mass consumer, who is also the production worker, feels more comfortable, feels his complicity in the development of production. In the second half of the 1980s, Japanese companies received 40 times (!) more suggestions to improve the production process from their employees than US companies (40 million vs. 1 million). It is also indicative that over 90 percent of the proposals, one way or another, were used.

The dialectic of the market that unites the producer and the consumer is simple - they are opposites that exist exclusively in unity, therefore, it is necessary to look for a balance of interests of both subjects in order to give the production of quality goods a sustainable character that serves as protection against recessions and crises. The crises of overproduction, which were classic for capitalism in the 19th and first half of the 20th centuries, have become history. They were replaced by financial systemic shocks. Specialists are looking for a panacea in a high-quality, smart, lean, lean economy. "Historical experience shows that with increased attention to quality, a way out of crisis situations began in many countries. The large-scale crises in Japan and Germany at the end of the 1940s were overcome with the help of a state policy focused on improving quality.

The change in the qualitative strategy of economic policy from incitement to quality production to the formation of a need for a quality product is not another attempt to revive economic romanticism and not communist nostalgia for the need of a cultured person for work, as it may seem to those specialists who have rebuilt from political economy to economics, reducing dialectical analysis to statistical, adapted to the volatility of modern production. We are talking about solving the system-forming problem of history - about the relationship of the individual to society and society to the individual, who is more impressed by which side of this contradiction, but in principle this is just a double spiral of social progress. A developed society is being tested as a condition for the development of the individual.

You can, of course, squeeze every last ruble out of the developed assortment and established production technology. Question: Should it be done? Time moves forward in a certain mode, "in its own way", objectively tailored "schedule". If you don't get into the rhythm, you fall behind, you stop meeting the changed requirements. The art of management - production management is no exception, consists in the ability not to "fall out" of modernity, then you will always do it in accordance with reasonableness. Intelligence will protect you from most problems. E. Deming's "Seven Deadly Diseases" will fit into one - not to fall out of the time cycle with the definition of the product and the organization of production.

Only those who are able to mobilize human capital and correctly concentrate financial and technical resources on solving this problem are capable of doing this. Without the ability to control the "pulse" of time - to understand the specific economic and socio-cultural situation, the state of consumer interests, the real possibilities of production, there is no chance to gain a stable position in the face of increasing competition in the market. Let us make one more addition - to the qualitative orientation of the development of production, and the general

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHII (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

conclusion will become clear: the path of economic rationality lies through the creation of real conditions for the formation of a demand for quality products. This need should be tested by responsibility to the consumer as to oneself. Ancient Confucius Wisdom: Treat others the way you want them to treat you

The concreteness of achieving rationality in modern, qualitatively oriented production is in the solidarity of human capital:

- internal solidarity of producers, their need for quality,
- external solidarity with the consumer, taking into account the interests of the latter,
- solidarity in understanding quality based on a combination of economic and socio-cultural approaches,
- consistency and balance of the economic policy of the state in terms of market orientation, inducing the interests of quality in the development of the market by the tools of the economic mechanism.

We have tried to define and summarize the basic conditions for achieving solidarity. As far as the analysis of literature data allows us, this is done for the first time, so clarifications and additions will be received positively.

So, what should be considered as the necessary conditions for achieving a radical change in relation to the quality of production of a truly high-quality product - the transition from the stage of external audit to the stage of internal guarantee, which is formed through the formation of the need to create a product of the required quality by the consumer.

1. The presence of competition in the market of high-quality professional labor, so that there is a clear understanding of the need to work in accordance with the needs of the commodity market. Otherwise, the market will not allow you to take a stable place on it.

2. Significant increase in purchasing power. Achieving the level that allows you to select the right product. A quality product cannot, by definition, be cheap, but it can be made available through market mechanisms.

3. A high level of professional training of producers, provided on the basis of the formation of a professional culture and national identity. The main

thing should be the education of attitude to work as a deed that has dedicated one's life. Expanded education of consumers, their perception as subjects of a common cause.

4. Overcoming the feeling of conscious and unconscious alienation of the ability of the individual in labor and its products with the help of the following tools:

- achieving symmetry of the quality of work and remuneration;
- reduction to a reasonable ratio of the difference in the amount of remuneration of managers and performers, the clarity of the grounds for such proportionality;
- dependence of remuneration on the dynamics of advanced training and on participation in the improvement of the production process;
- full use of socio-cultural mechanisms to stimulate the individual to the general corporate movement, entry into command forms of movement;
- sustainability of corporate activities;
- formation of relations according to the type: "One for all, all for one." Active promotion of the command form of responsibility for the results of work;
- organization of a systematic competition for the quality of work;
- striving for national and international recognition of the quality and range of products;
- the formation of labor dynasties, participation in the distribution of profits.
- understanding the quality of the product as a comprehensive assessment of the product;
- awareness of the fact that it is the "little things" that reveal the perfection of quality, therefore, the little things should be treated as the building material of quality.

Shoes, by their quality, by definition, should ensure the interaction of two fundamental competencies - safety and comfort in use. The aesthetic properties of shoes are subordinated to them and packed in them. With their help, the producer "lures" the consumer, like the flowers of plants, calling for insects, performing the work of pollination through consumption.

References:

1. (2014). *Quality revolution: through advertising quality or through real quality*: monograph by V.T. Prokhorov [and others]; under total ed. d.t.s., prof. V.T. Prokhorov; ISOiP (branch) DSTU. (p.384). Novocherkassk: YuRGPU (NPI).
2. (2015). *Advertising as a tool for promoting the philosophy of quality in the production of competitive products* / Kompanchenko E.V.,

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHII (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

- [and others]; under total ed. d.t.s., prof. V.T. Prokhorov; Institute of Service and Entrepreneurship (branch) Don State Technical University in Shakhty: ISO and P (branch) DSTU, (p. 623).
3. Rebrin, Yu.I. (2004). *Quality Management: Textbook*. (p.174). Taganrog: Publishing House of TRTU.
 4. (2001). *Efficiency and quality management. Modular program: Per. from English.* / ed. I. Prokopenko, K. Norta: at 2 pm - Part 1. (p.800). Moscow: Delo.
 5. Feigenbaum, A. (2006). *Product quality control*. (p.471). Moscow: Economics.
 6. Salimova, T.A. (2005). *History of quality management*. (p.256). Moscow: Knorus.
 7. Ponomarev, S.V. (2012). *Product quality management. Introduction to quality management systems* / S.V. Ponomarev, S.V. Mishchenko, V.Ya. Belobragin. (p.332). Moscow: RIA "Standards and Quality".
 8. (2005). *Imai, Masaaki Gemba kaizen: A way to reduce costs and improve quality.* / transl. from English. (p.346). Moscow: "Alpina Business Books".
 9. Porter, M. (2005). *Competition* / Per. from English. (p.608). Moscow: Ed. house "Williams".
 10. (2004). *What is Six Sigma. Revolutionary method of quality management* / Pande P., Kholp./ per. from English - M.Zh Alpinina. - Business Books. (p.158).
 11. Womack, J. P. (2005). *Lean manufacturing: How to get rid of losses and achieve prosperity for your company [Text]* / James P. Womack, Daniel T. Jones / transl. from English. - 2nd ed. (p.473). Moscow: "Alpina Business Books".
 12. Michael, G. L. (2005). *Lean Six Sigma: Combining Six Sigma Quality with Lean Speed [Text]* / Michael L. George; per. from English. (p.360). Moscow: "Alpina Business Books".
 13. Singo, S. (2006). *Quick changeover: revolutionary technology for optimizing production [Text]*. (p.344). Moscow: "Alpina Business Books".
 14. Vader, M. (2005). *Lean Tools: A mini-guide to implementing lean production methods [Text]* / M. Vader; per. from English. (p.125). Moscow: "Alpina Business Books".
 15. (2005). *Imai, Masaaki Gemba kaizen: A way to reduce costs and improve quality [Text]* / Masaaki Imai; per. from English. (p.346). Moscow: "Al-pina Business Books".
 16. Porter, M. (2002). *Competition: per. from English.* / M. Porter. (p.496). Moscow: Williams Publishing House.
 17. Minin, B.A. (1989). *Quality level*. (p.182). Moscow: Publishing house of standards.

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHLI (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

SOI: [1.1/TAS](#) DOI: [10.15863/TAS](#)

International Scientific Journal Theoretical & Applied Science

p-ISSN: 2308-4944 (print) e-ISSN: 2409-0085 (online)

Year: 2022 Issue: 02 Volume: 106

Published: 05.02.2022 <http://T-Science.org>

QR – Issue



QR – Article



Zokir Mekhrikulovich Bazarov

Samarkand State Institute of Foreign Languages
Doctor of Philosophy (PhD) in Philological Sciences,
Associate Professor, Uzbekistan

ON COGNITIVE MODELING OF INTUITION AND CREATIVITY IN TRANSLATION: AN INTERPRETIVE-SEMIOTIC APPROACH

Abstract: The article proposes a detailed cognitive model of the translation process, in which a special role is given to its didactic potential, which allows empirically following the indicated stages of translation during the training of this type of intellectual activity. A detailed introspective procedural scheme of conscious mental actions of the translator, described in the study, is built considering the creative component of his/her professional work. At the first stage, the translator forms the background of the cognition process, which contains a whole complex of necessary diverse knowledge of linguistic, metalinguistic and extralinguistic types. At the second stage, various elements of the accumulated source knowledge are combined - compared and sorted out — in order to formalize the idea of all acceptable and hypothetical versions of the translation. At the third stage, the final choice, adoption and execution of the optimal translation solution takes place.

The novelty of the research lies in the attempt to describe the intuitive component present in the course of making an individual translation decision. To this end, domestic and foreign approaches to the study of creativity within the concepts of philosophy and psychology of giftedness are critically generalized and analyzed. Then the achievements in these sciences related to the theory of translation are compared with the theories existing today in the world of translation studies. On this basis, the article considers the expediency of applying the basic foundations of semiotics and the theory of interpretation to the study of the multifaceted processes of perception of the original text and the subsequent generation of the translation text.

The methodological basis of this interdisciplinary research is represented by the methods of logical reasoning, analytical modeling, cognitive analysis, comparative analysis, synthesis of the studied information with its subsequent critical generalization, and also includes reflection and the method of deductive-inductive conclusions.

Key words: translation creativity, intuition in translation, translation process, cognitive modeling, interpretive theory of translation, semiotic approach.

Language: English

Citation: Bazarov, Z. M. (2022). On cognitive modeling of intuition and creativity in translation: an interpretive-semiotic approach. *ISJ Theoretical & Applied Science*, 02 (106), 48-51.

Soi: <http://s-o-i.org/1.1/TAS-02-106-4> **Doi:**  <https://dx.doi.org/10.15863/TAS.2022.02.106.4>

Scopus ASCC: 1203.

Introduction

1. The degree of study of the research problem

At the present stage, translation studies are experiencing a new round of its development in a variety of directions: in theory, methods of teaching translation, in applied fields related to IT technologies and the emergence of a number of programs and platforms for machine translation and auxiliary services for it. In this regard, perhaps in contrast to the numerous online and electronic "friends of the translator", true and false, scientific interest is

growing in the study of anthropocentric phenomena of translation in the light of such paradigms of linguistics as the relationship between language and consciousness, language and thinking, considering modern concepts of natural intelligence and its direct implementation in language. This suggests that linguistic translation studies, which emerged in the last century, acquires a new perspective on the study of translation problems, considering its cognitive, interpretive and creative aspects.

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHIQ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

In the light of this approach, it makes sense to take a different look at the issues of the interaction of the concepts of translation and reflection, translation intuition, translation creativity, therefore, we consider it appropriate to focus on one of the above-mentioned phenomena - the question of the translator's intuition, as well as his ability to create new translation options.

The article offered to the reader's attention is an attempt to theoretically construct a universal logical model of the translation process. At the same time, the simulated analytical operations are considered in this case regardless of the differences in specific types of translation, including such basic ones as oral and written translation, and are based on the starting points of cognitive theory, semiotics and interpretation theory. Variants of interpretation of the meaning of the original and the version of its transmission in the target language are investigated with an emphasis on the presence and possible development of intuitive and creative skills of the translator, ways of their initiation and actualization in professional activity. The research is interdisciplinary in nature, since the author's conclusions are not only based on the experience gained in this field by the world translation science, but also consider the achievements of scientists in related fields: philosophy, psychology, methodology. The article includes an analysis of the relevant literature on the subject, the theoretical and methodological basis of the study, the results and didactic recommendations of the author.

A successful translation process, as is known, is based on a solid foundation of linguistic and metalinguistic knowledge; expressed in terms of modern linguodidactics, on skills and professional competencies formed during purposeful training in this type of creative activity. This process combines the features of artistic and scientific creativity.

The interpretive paradigm in translation studies should be based on the initial position that the concept of creativity first of all implies either the choice of one of the several available probable solutions, the most acceptable in a particular situation, or the creation of a fundamentally new linguistic translation solution. In both cases, the choice is determined by the translator's individual interpretation of the conceptual associative-semiotic complex to be translated. Interpretation, in turn, depends both on the general set of standards, universal knowledge necessary for the translator to make a correct decision regarding the choice of the final version of the translation, and on the purely individual perceptual characteristics of the translator as a person.

Translation creativity can and should be taught, and translation intuition can and should be developed. Both are based on mastering the skills of individual interpretation of objects of the surrounding reality, i.e. the skills of reflection, conscious goal-setting in the formulation of a translation task and a consciously justified, motivated choice of a translation solution. At

the moment of deciding, a previously repeatedly conscious, purposeful action, often carried out logically thought-out mental operation, with the strain of all intellectual efforts of a creative linguistic personality, will contribute to the initiation of an unconscious, instantly unconscious, but adequate intuitive decision in a new communicative situation.

The critically studied diverse literature on the research topic makes it possible to formulate the main theoretical axioms that form the basis of the creative model of the translation process proposed in the article.

1. A significant part of the object of study in translation studies is occupied by the sphere of intuitive, subjective, individual.

2. The translation process is heuristic and includes a sequence of stages of choosing options among other possible ones. These stages are mental operations (of a creative nature and often carried out subconsciously (intuitively)), which are performed by the translator, based on their knowledge, communicative competence and ability to evaluate cognitive and cultural features of translation receptors.

3. In translation as a creative process, it is possible to distinguish two types of intuition: conceptual and eidetic.

4. In order to detect and describe the mental processes leading to the choice and interpretation of language units, it is necessary to try to describe the process during which the translator forms an idea of the translation options, resulting in the adoption of a translation decision.

5. The analysis of the causes, methods, stages and varieties of choice in the mental operations of the translator has important theoretical and applied significance, as it involves an attempt to look into the so-called black box of the translator in order to observe the processes of his brain.

Translation is a creative intellectual activity consisting in the transfer of some cognitive information from the source language to the target language. In the process of transmitting such information, the main function is performed by the translator as a linguistic person who owns both languages necessary for the implementation of interlanguage and intercultural communication.

2. Starting theoretical and methodological provisions of the study

Since the processes of generation and perception of texts (speech) have long been studied in linguistics and psychology, translation studies can use the data of these sciences in the study of the translation process, assuming that the course of these processes in the translator may be fundamentally different from their course in other, "ordinary" people. No matter how trivial it sounds, the translator must understand the translated text more deeply than the average reader, for whom the original language is his native language,

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHII (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

usually does. This additional depth of understanding is connected with the need, firstly, to draw final conclusions about the content of the text and, secondly, to consider the requirements of the translation language.

In its most essential part, the translation process takes place in the translator's brain and therefore is not available for observation without special equipment. Moreover, many mental actions of the translator (sorting out options with a gradual approach to the optimal one) occur beyond the threshold of his consciousness, so even self-observations of experienced translators-practitioners and translation theorists with a wealth of practical experience cannot give a real picture of what is happening. For this reason, it is possible to talk about the nature of translation actions and operations only hypothetically, relying mainly on the results of comparing the texts of the original and the translation, while predicting how and by what techniques the translator comes from the source material to the final one. This method of studying processes that are inaccessible to direct observation is quite common in modern science and has received the name of the method of logical modeling.

However, one of the first researchers of creative activity as a psychological process, the philosopher P.K.Engelmeyer divided its implementation into three parts: 1) the act of putting forward a hypothesis; 2) the act of creativity; 3) the act of a logically elaborated idea [Engelmeyer].

Three stages of translation were distinguished by Yu.Nayda and his school's translation specialists: analysis (reduction of the original to nuclear constructions); switching (transfer of meaning to the translation language based on these constructions); change of structure (generation of stylistically and semantically equivalent expression in the translation language) [Nayda].

Below is a diagram of the translation process proposed by the translation theorist Ernst Gutt:

1) stimulus — a linguistic utterance to which a specific semantic design is attributed;

2) context — a certain number of options that are selected from the "cognitive environment", the whole sum of the translator's knowledge;

3) interpretation — formation of the final version based on semantic design and context [Gutt].

Thus, all the authors mentioned above point to three or four mental operations that, according to their assumption, occur during the creative process in the translator's head. In their view, the stages of

translation creativity are similar in many ways. The first is the comprehension of the text and the identification of individual words and phrases. Further — a deeper understanding of the meaning of both individual units of the text and its larger segments. The third stage is the reconstruction of what is understood. And finally, the last stage is a control check or so-called self-editing.

3. Results and didactic recommendations

Considering the above, our proposed cognitive scheme of the processes leading to the adoption of a translation decision claims to be a more complete and detailed description of the stages of the translator's creative search for the optimal solution.

The basis for the development of creative and interpretive skills of a translator is the initiation of that mysterious translation intuition, which, in our opinion, is nothing more than the actualization of the accumulated and compactly folded in memory, consciousness and subconscious cognitive experience of a person. This experience includes, among other things, a certain typologized instrumental set of already mastered empirical solutions. In terms of synergetics, this process is realized as a self-building structure (visual and mental images, ideas, representations) on the field of both the brain and consciousness, at least at its two stages, namely, combination (comparison) and final decision-making. At the same time, it is possible to explain why this choice was the best in an uncertain situation only after the fact, when a specific result is known, but not at the time of the so-called intuitive premonition.

To conclude, this article attempts to demonstrate that, in comparison with traditional linguistic methods, the cognitive model of translation seems to be the most adequate when describing both the creative component of the translation process itself and the elements of intuitive insight that often accompany it. Explication of the stages of making translation decisions and conscious motivations of individual translation choice can and should be the basis for didactic recommendations for teaching translation, methodological algorithms for the development of linguistic and translation creativity, and ways to train intuitive language skills. From our point of view, cognitive, neuro-linguistic and psychophysiological approaches to its modeling using the entire modern arsenal of neuroscience methods can be promising areas of future research of the creative translation process implemented in the human brain.

Impact Factor:

ISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	PIHII (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

References:

1. Apresyan, I.D. (1995). *Izbrannye trudy: V 2 t. [Selecta: In 2 vols.]. Vol. 1: Leksicheskaia semantika. Sinonimicheskie sredstva iazyka [Lexical Semantics. Synonymous Resources of Language]*. (p.480). Moscow: Jazyki russkoj kul'tury, Vostochnaia literatura Publ..
2. Bazylev, V.N., & Sorokin, I.A. (2000). *Interpretativnoe perevodovedenie: propedevticheskii kurs [Interpretive Translation Studies: a Propaedeutic Course]*. (p.183). Ulyanovsk, Ulyanovsk State Univ. Publ..
3. Bell, R.T. (1998). *Psycholinguistic / cognitive approaches. Encyclopedia of Translation Studies*. (pp.185-190). London, New York, Routledge.
4. Bell, R.T. (1991). *Translation and translating theory and practice*. (p.318). London, New York, Longman.
5. Cherniakhovskaia, L.A. (1983). *Informatsionnyi invariant smysla teksta i variativnost' ego iazykovogo vyrazheniia [Information Invariant of Text Message and Language Variety of its Verbalization]*. PhD dissertation (Philology). Moscow State Pedagogical Institute of Foreign Languages (now — Moscow State Linguistic University), (p.321). Moscow.
6. Chomsky, N. (1971). *Deep structure, surface structure and semantic interpretation. An Interdisciplinary Header in Philosophy, Linguistics and Psychology*. (pp.183-216). Cambridge, Cambridge Univ. Press.
7. Engel'meier, P.K. (1910). *Teoriia tvorcestva [Theory of Creativity]*. (p.210). St. Petersburg, Obrazovanie Publ..
8. Gasparov, B.M. (1996). *Iazyk, pamiat', obraz. Lingvistika iazykovogo sushchestvovaniia [Language, Memory, Image. Linguistics of Language Being]*. (p.352). Moscow: New literary observer Publ..
9. (2010). *Gustav Shpet i ego filosofskoe nasledie. U istokov semiotiki i strukturalizma [Gustav Shpet and his Philosophical Heritage. Origins of Semiotics and Structuralism]*. Ed. by T.G. Shchedrina. (p.527). Moscow: ROSSPEN Publ..
10. Gutt, E. (2000). *Translation and Relevance: Cognition and Context*. (p.279). Manchester, Boston, St. Jerome Pub., Routledge Publ..
11. Iarkho, B.I. (1969). *Metodologiya tochnogo literaturovedeniia [Methodology of Accurate Literature Studies]*. *Uchenye zapiski Tartuskogo gosudarstvennogo universiteta*, no. 326, pp. 515–526.
12. Ilyin, E.P. (2009). *Psikhologiya tvorcestva, kreativnosti, odarennosti [Psychology of Creation, Creativity, Giftedness]*. (p.448). St. Petersburg, Piter Publ..
13. Karmin, A. S., & Khaikin, E.P. (1971). *Tvorcheskaia intuitsiia v nauke [Creative Intuition in Science]*. (p.48). Moscow, Znanie Publ..
14. Kazakova, T.A. (2006). *Khudozhestvennyi perevod: teoriia i praktika [Literary Translation: Theory and Practice]*. (p.535). St. Petersburg, Inyazizdat Publ..
15. Khomsky, N. (1972). *Iazyk i myshlenie [Language and Mind]*. (p.122). Moscow, Moscow State Univ. Press Publ..

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
ПИИИ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

SOI: [1.1/TAS](#) DOI: [10.15863/TAS](#)

International Scientific Journal Theoretical & Applied Science

p-ISSN: 2308-4944 (print) e-ISSN: 2409-0085 (online)

Year: 2022 Issue: 02 Volume: 106

Published: 05.02.2022 <http://T-Science.org>

QR – Issue



QR – Article



Firuz Mukhiddinovna Abdurakhmanova
Samarkand State Institute of Foreign Languages
teacher of English, Uzbekistan

PSYCHOSEMANTIC FEATURES OF TRANSLATION INTO ENGLISH IN THE SCIENTIFIC LITERATURE

Abstract: *The purpose of this article is to study the influence of psychosomatic factors on translation from Uzbek into English and to identify the subject in the scientific literature. The article is devoted to the psycholinguistic approach to translation, which can form the basis for further theoretical and experimental research in this field.*

Key words: *psychosemantics, psycholinguistics, linguistic difficulties, subject of activity, subject of translation.*

Language: *English*

Citation: *Abdurakhmanova, F. M. (2022). Psychosemantic features of translation into English in the scientific literature. ISJ Theoretical & Applied Science, 02 (106), 52-55.*

Soi: <http://s-o-i.org/1.1/TAS-02-106-5> **Doi:**  <https://dx.doi.org/10.15863/TAS.2022.02.106.5>

Scopus ASCC: 1203.

Introduction

Psychosomatics (other Greek Ψυχή - soul and σῶμα body) - a direction in medicine (psychosomatic medicine) and psychology that studies the influence of psychological factors on the occurrence and course of somatic (bodily) diseases.

Psychosomatics is the influence of human mental processes on the physical body, causing psychosomatic reactions. One of the reactions is body language, in some situations the body physically reflects the state that could be expressed by one of the figurative phrases of the series: "this is one big headache", "I can't digest it", "because of this I have a heart out of place", "my hands are tied". Then a certain organ hurts, it is difficult to breathe, migraines occur, the work of the gastrointestinal tract is disturbed, and so on.

If we talk about the influence of psychosomatic features in linguistics, then there is a section of psycholinguistics that studies language, first of all, as a phenomenon of the psyche. Psycholinguists note that language is an activity of the spirit and a reflection of the culture of the people. At the same time, they note that language contains not only a physical, but also a mental component, and thus belongs to the individual. Being a condition of communication and regulating human activity, language restricts knowledge of the world and makes it impossible to fully understand another person.

The relevance of this article is due to the fact that psycholinguistics is a certain, one of the most important stages in the development of the psychology of speech. Psycholinguistics can have a great influence on linguistics in the future, since there is something other than experimental linguistics.

It arose with the need to give a theoretical understanding to a number of tasks for which the linguistic approach, initially associated with the analysis of the text, and not the speaking person, turned out to be insufficient. For example, in teaching a native language, and especially a foreign language; in the field of speech education of preschoolers and speech therapy; in the problems of speech influence (especially in propaganda and media activities).

If we speak about translation as a speech activity, it is implied that this activity itself is understood not as individual and "interindividual", but as social in nature, and not only in appearance. Any human activity is a relationship in reality. Each act of translation is inevitably "embedded" in a broader activity (professional, educational, cognitive, etc.), occupies a certain place in it and performs a certain function subordinate to the purpose and structure of this activity. It is necessary to consider what broader activity of an individual translation may include and on what rights, and what functional connections translation may have with this broader activity as a whole and with its other individual components. This

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHII (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

larger system of activities, which includes translation, will be further referred to as behavior for brevity.

At the same time, we always mean that the subject of activity acts as an individual, a representative of the human race, endowed with universal and national culture, his behavior is carried out according to the laws of the psyche and under the control of society during emotional and evaluative experience. Thus, translation is built into two dynamic systems – external (activity, behavioral) and internal (mental, personal). By and large, translation studies should study the role of translation within the framework and structure of these two dynamic systems in their interaction.

We use the word psycholinguistics and cognates with it as synonyms of the phrase theory of speech activity, referring mainly to domestic developments in this field, which seem to us the most promising. In this case, language is considered by us not as a linguistic construct, but as an individual's property.

There is a translation model (a psycholinguistic model), as well as a language model, and it is purposeful in nature, the description of the translation depends on why it is described. The psycholinguistic model is based on the psycholinguistic model of speech activity. It presupposes the presence of a motive, a goal, an internal program of the future utterance, the construction of an utterance in internal speech and its verbalization in oral or written speech. The translator's internal program represents the compressed content of the original, since in the course of his activity the translator does not create his own speech utterances. According to this model, the transfer is carried out in two stages:

1) the translator "translates" the content of the original understood by him into his "brain language" in the form of his internal program;

2) he deploys this program in another language, as does anyone who speaks that language.

The psycholinguistic model of translation fully corresponds to the understanding of translation as a type of speech activity. Unfortunately, this model is unable to explain how such "folding" and "unfolding" occurs, which elements of content are stored in the internal program and how one of the possible ways of implementing such a program in the translation text is chosen. Further elaboration of the psycholinguistic model of translation is an important task of translation theory.

Thus, psycholinguistics and translation theory have common points of contact. The object of psycholinguistics is speech activity, and the object of translation theory is a special type of speech activity – translation. Consequently, the tasks of these disciplines largely coincide. Psycholinguistics data on the mechanisms of generation and perception of speech utterance, on the structure of speech action and on models of language ability are quite applicable to the theory of translation. A.A. Leontiev's model of

speech generation is quite detailed and can be used to explain the process of perception and generation of a new text by a translator. This model includes 5 interrelated stages:

1) the appearance of a motive;

2) the stage of the idea (for the first time, the theme and rhema of the future speech utterance are highlighted);

3) internal programming: the process of constructing a semantic scheme, operating with units of subjective code;

4) lexical and grammatical deployment: translation of the compiled semantic program from subjective (individual) code to objective (commonly used) language code;

5) implementation of speech utterance in external speech.

This article discusses the written translation of scientific literature from the native language into a foreign language. This type of translation differs from oral translation by a number of features: the absence of a rigid time frame, the presence of the entire original text, the absence of direct or feedback from communicants.

In the process of translation, the translator faces both linguistic and psychological difficulties. Linguistic difficulties include: selection of the appropriate unit in the language translation (LT); translation without equivalent vocabulary; translation of new, unfamiliar and missing terms in the language translation.

Psychological difficulties include: perception and understanding of a text into a foreign language(s); overcoming the "language barrier"; generating a text in LT.

We will consider these difficulties. Starting with the linguistic difficulties. Selecting the appropriate unit in the LT. It should be noted that even with a good and excellent command of the topic and terminology, the translator faces the task of choosing the most optimal variant of the language unit in LT, since many terms have several correspondences in LT. For example, for the medical term childbirth, seven meanings are given in the Uzbek-Russian-English medical dictionary, and for the English term examination in the ABBYY electronic dictionary – eight, among which the translator must choose the only one that would be understandable to most readers, as L. Korman wrote in his article. Such terms in the language of medicine, as a rule, are Latin-Greek borrowings, or terms created on the basis of Latin-Greek elements [5].

Each branch of science develops its own terminology in accordance with the subject and method of its work. Terminology is the core of the scientific style, the last, the innermost circle, the leading, the most essential feature of the language of science. It can be said that the term embodies the main

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIIHQ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

features of the scientific style and is extremely consistent with the tasks of scientific communication.

The term is a word or phrase that accurately and unambiguously names an object, phenomenon or concept of science and discloses its content; the term is based on a scientifically constructed definition. M.M. Glushko states that "the term is a word or phrase for expressing concepts and designating objects, having, due to its strict and precise definition, clear semantic boundaries and therefore unambiguous within the appropriate classification system." A.A.Reformatsky defines terms "as unambiguous words devoid of expressiveness" [1].

In each article on a narrow technical specialty, the number of terms does not exceed 150-200 units. With the development of science and technology, unambiguous special (nomenclature) terms may acquire additional meanings and become polysemantic general scientific and technical terms, and polysemantic terms may lose their meanings and become unambiguous. Both words used almost exclusively within the framework of this style and special meanings of national words can be used as terms. For example, lexical units such as coherence, keraumophone, klystron, microsyn, etc., widely used in texts on electronics, are difficult to find outside of scientific and technical materials. At the same time, such words as dead, degeneracy, ripple, rope, etc., which have well-known common meanings, also act as terms in these texts. The terms should provide a clear and accurate indication of real objects and phenomena, establish an unambiguous understanding of the transmitted information by specialists. Therefore, special requirements are imposed on this type of words.

First of all, the term must be precise, i.e. have a strictly defined meaning, which can be disclosed by a logical definition that establishes the place of the concept designated by the term in the system of concepts of a given field of science or technology. If some quantity is called scalar, then the meaning of this term should exactly correspond to the definition of the concept (a quantity that has magnitude but no direction), which connects it with other concepts contained in the definition (magnitude, direction) and contrasts the concept of vector (a quantity which is described in terms of both magnitude and direction). If a part of an optical device is called a viewfinder, then this term should mean only this part that performs certain functions, and no other parts of this device or any other device.

For the same reasons, the term should be unambiguous and, in this sense, independent of the context. In other words, it must have its exact meaning, indicated by its definition, in all cases of its use in any text, so that the user of the term does not have to decide each time in which of the possible meanings it is used here. The requirement that only one term corresponds to each concept is directly

related to the accuracy of the term, i.e. that there are no synonymous terms with the same meanings. It is clear that the exact identification of objects and concepts is difficult when the same thing is called differently.

The term must be part of a strict logical system. The meanings of terms and their definitions should obey the rules of logical classification, clearly distinguishing objects and concepts, avoiding ambiguity or inconsistency. And, finally, the term should be a purely objective name, devoid of any side meanings that distract the attention of a specialist, introducing an element of subjectivity. In this regard, the term "contraindicated" emotionality, metaphoricity, the presence of any associations, etc.

However, terms, of course, are not the only component of the vocabulary. Quite a clear division of the lexical composition of English scientific and technical literature has been revealed into: a) proper terms; b) words and combinations that are "official": articles, service verbs, adjectives, adverbs, conjunctions, pronouns, prepositions, that is, words independent of the style of speech and which are present in any style; c) general scientific vocabulary.

A certain difficulty in translation is the non-equivalent vocabulary, which in the translation of scientific literature is equivalent to the translation of new and missing terms in the LT. These may be terms denoting newly discovered phenomena, concepts, or developed devices, tools, etc. In this case, the translator must either create his own term, having previously given a definition, or make a descriptive translation without giving any specific meaning for this term.

Considering psychological difficulties. First of all, the translator must be competent in the problem described in the article in his native language. He must have background knowledge in order to understand the essence of the issue, correctly understand the content of the article, interpret (decode) it in his mind in his native language, and then generate a new text that fully and accurately conveys the information of the FL in LT.

The "language barrier" refers to the uncertainty, the fear of the translator to distort the meaning of the text of FL in the LT. This is primarily due to the fact that most translators do not have special education in various fields of science. As a rule, these are linguists with a professional linguistic education. Working with a professional text in an unfamiliar or unfamiliar field of scientific knowledge, they face certain psychological difficulties.

The translator must also be familiar with the style of scientific presentation. This primarily concerns non-linguist specialists who translate their works into a foreign language.

In general, the issue of non-linguistic translators requires special consideration. On the one hand, they are well aware of the issues that are described in their

Impact Factor:

ISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	PIHII (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

own articles and in the articles of their employees or specialists working in this field of scientific knowledge. They write them themselves and, accordingly, understand what they want to say, but often do not know how to do it correctly in a foreign language.

Linguists, on the contrary, know how to translate correctly, but, as already noted, it is not always in the topic of the issue under consideration, i.e. the very content of the article and the way the author expresses his thoughts sometimes causes great difficulties. Therefore, the best option when translating a scientific text is the close cooperation of a linguist-translator and a specialist who is well-versed in the issues discussed in the translated article.

Conclusion.

It should be noted that the psycholinguistic features of the translation of scientific literature are not only in the linguistic features and erudition of a specialist translator in certain fields of science, but also in psychological features.

Thus, the psychosomatics of translation represents a translator as a subject who acts according to an algorithm: perceives the original text, "translates" the content of the original understood by him into his "brain language" in the form of his internal program, deploys this program in another language, as does any speaker of this language.

References:

1. Reformatskij, A.A. (1995). *Vvedenie v jazykoznanie*. Moscow.
2. (1961). *Webster's Third New International Dictionary*.
3. Gorelikova, S.N. (2002). Priroda termina i nekotorye osobennosti terminoobrazovanija v anglijskom jazyke. *Vestnik OGU*, №6.
4. Alekseeva, I.S. (2008). *Professional`nyj trening perevodchika: Uchebnoe posobie po ustnomu i pis`mennomu perevodu dlja perevodchikov i prepodavatelej*. (p.288). SPB.: Izdatel`stvo «Souz».
5. Min`jar-Beloruhev, R.K. (1999). *Kak stat` perevodchikom?* (p.176). Moscow: «Gotika».
6. Hajrullin, V. I. (2009). *Perevod i frejmy: ucheb. posobie*, (p.144). Moscow: Librokom.
7. Cokely, D. (1992). *Interpretation: A Sociolinguistic Model*. (p.199). Burtonsville, MD: Linstok Press.
8. Duran, A., & Fabb, N. (1990). *Literary studies in action*. (p.240). L.-N. Y.: Routledge.
9. Kirchhoff, H. (1976). Das dreigliedrige, zweisprachige Kommunikationsystem Dolmetschen. *Le Langage et l'Homme*, № 31, pp. 21-27.
10. Kondo, M. (1988). Japanese Interpreters in their Sociocultural Context. *Meta*, № 33 (1), pp.70-78.
11. Poyatos, F. (2002). *Nonverbal Communication in Simultaneous and Consecutive Interpretation: A Theoretical Model and New Perspectives*. The Interpreting Studies Reader / Ed. by F. Pöchhaker, M. Schlesinger. (pp.235-246). L.-N. Y.: Routledge.

Impact Factor:

ISRA (India) = 6.317
 ISI (Dubai, UAE) = 1.582
 GIF (Australia) = 0.564
 JIF = 1.500

SIS (USA) = 0.912
 ПИИИ (Russia) = 3.939
 ESJI (KZ) = 9.035
 SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
 PIF (India) = 1.940
 IBI (India) = 4.260
 OAJI (USA) = 0.350

SOI: [1.1/TAS](#) DOI: [10.15863/TAS](#)

International Scientific Journal
Theoretical & Applied Science

p-ISSN: 2308-4944 (print) e-ISSN: 2409-0085 (online)

Year: 2022 Issue: 02 Volume: 106

Published: 05.02.2022 <http://T-Science.org>

QR – Issue



QR – Article



Bokhodir Elbekovich Sultonov

Namangan State University (NSU)

Professor of Department of Inorganic Chemistry,
 130100, Republic of Uzbekistan, Namangan, Uychi str., 316,
bse-chemist-68@mail.ru,

Akmal Abdurakhmanovich Saparov

Jizzakh State Pedagogical Institute (JSPI)

Teacher of Department of Chemistry,
 130100, Republic of Uzbekistan, Jizzakh, Sh. Rashidov str., 4.

Gulchirov Abdurasul qizi Isaqova

Namangan State University (NSU)

Teacher of Department of Inorganic Chemistry,
 130100, Republic of Uzbekistan, Namangan, Uychi str., 316.

INFULIENCE OF SPECIFYING THE TYPE OF PRECIPITATING AGENTS TO QUALITATIVE CHANGES OF FERTILIZER PRECIPITATES, OBTANED ON BASE PHOSPHORITIES OF CENTRAL KYZYLKUM AND NITRIC ACID

Abstract: The influence of the nature of the precipitating agents on the degree of precipitation of nitric phosphoric acid suspensions obtained from mineralized mass of phosphorities of Central Kyzylkum (Uzbekistan) and nitric acid has been studied. The effects of the norm of precipitating agents and concentration of nitric acid on the degree of precipitation and the degree of CaO passage into liquid phase were also studied. The optimal precipitation parameters are defined. The obtained precipitates under optimal conditions contain as 23.75-24.75% P_2O_5 total (t.), 20.95-21.92% P_2O_5 acceptable by citric acid (a.c.a.), 25.16-28.19% CaO total (t.), 22.60-23.70% CaO acceptable by citric acid (a.c.a.). The degree of precipitation under optimal conditions is 93.92-100%. The rate of filtration of precipitate suspension is within 350-500 kg/m³ an hour for wet precipitate.

Key words: Mineralized mass, nitric acid, norm of precipitating agents, concentration of nitric acid, precipitate, degree of precipitation, precipitate suspensions, rate of filtration.

Language: Russian

Citation: Sultonov, B. E., Saparov, A. A., & Isaqova, G. A. (2022). Infulience of specifying the type of precipitating agents to qualitative changes of fertilizer precipitates, obtaned on base phosphorities of central Kyzylkum and nitric acid. *ISJ Theoretical & Applied Science*, 02 (106), 56-63.

Soi: <http://s-o-i.org/1.1/TAS-02-106-6> **Doi:** <https://dx.doi.org/10.15863/TAS.2022.02.106.6>

Scopus ASCC: 1500.

ВЛИЯНИЕ ПРИРОДЫ ОСАДИТЕЛЕЙ НА КАЧЕСТВЕННЫЕ ИЗМЕНЕНИЕ УДОБРИТЕЛЬНЫХ ПРЕЦИПИТАТОВ, ПОЛУЧЕННЫХ НА ОСНОВЕ ФОСФОРИТОВ ЦЕНТРАЛЬНЫХ КЫЗЫЛКУМОВ И АЗОТНОЙ КИСЛОТЫ

Аннотация: Изучен влияние природы осадителей на степень преципитирования азотнофосфорнокислотных суспензий полученных из минерализованной массы фосфоритов Центральных Кызылкумов и азотной кислоты. Также изучены влияние нормы осадителей и концентрации азотной кислоты на степень преципитирования и степень перехода CaO в раствор. Определены оптимальные

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	РИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

параметры преципитирования. Полученные образцы преципитатов при оптимальных условиях содержат в своем составе 23,75-24,75% $P_2O_{5\text{общ.}}$, 20,95-21,92% $P_2O_{5\text{усв.}}$ по 2 %-ной лимонной кислоте, 25,16-28,19% $CaO_{\text{общ.}}$, 22,60-23,70% $CaO_{\text{усв.}}$ по 2 %-ной лимонной кислоте. Степень преципитирования в оптимальных условиях равна 93,92-100%. Скорость фильтрации преципитатной суспензии находятся в пределах 350-500 $кг/м^3$ час по влажному осадку.

Ключевые слова: минерализованная масса, азотная кислота, норма осадителей, концентрация азотной кислоты, преципитат, степень преципитирования, преципитатные суспензии, скорость фильтрации.

Введение

Для выращивания высоких и качественных урожаев сельскохозяйственных культур исключительно большое значение приобретает интенсификация сельскохозяйственного производства, в частности, его химизация. С целью получения более дешевой сельскохозяйственной продукции, увеличения её объёма, с сохранением и улучшением её качества, следует уделять внимание местным природным минералам, которые несут разнообразные элементы питания, что позволит экономно использовать минеральные удобрения и в полной мере обеспечить достаточным количеством и оптимальным соотношением элементами, находящимися в доступной для растений форме.

В настоящее время в нашей республике производят следующие фосфорсодержащие удобрения: аммофос, супрефос-NS, PS-Агро, нитрокальцийфосфатное удобрение (НКФУ) и простой аммонизированный суперфосфат. Из этого видно, что ассортимент фосфорсодержащих удобрений невелик.

В данный момент фосфориты Центральные Кызылкумов является основным сырьем для производство фосфорных удобрений. Кызылкумский фосфоритовый комбинат обеспечивает сырьем заводы, производящие фосфорсодержащие удобрения. С 2015 г. комбинат ежегодно производит 716 тыс. тонн мытого обожженного фосфоконцентрата (МОФК) со средним содержанием 26% P_2O_5 , который является фосфатным сырьем, пригодным для производства сложных высококонцентрированных фосфорсодержащих удобрений, таких как аммофос (10% N, 46% P_2O_5) и супрефос-NS (8-15% N, 20-24% P_2O_5). Однако объем МОФК не может обеспечить потребность производства концентрированных фосфорсодержащих удобрений. Также известно, что при производстве МОФК образуются фосфорсодержащие отходы – минерализованная масса и фосфоритовый шлам, где в них находятся около 42% P_2O_5 от общего фосфора, который ни как не перерабатывается, а складывается.

Основными актуальными задачами в области производства фосфорсодержащих удобрений являются следующие: увеличение объема их производства, расширение их ассортимента, вовлечение в переработку более бедное сырье и снижение себестоимости производимой

продукции. В условиях острого дефицита фосфорных удобрений, обусловленного ограниченностью объема высококачественного фосфатного сырья, необходимо найти эффективные способы утилизации фосфорсодержащих отходов и вовлечения бедного фосфатного сырья в производство квалифицированных фосфорных удобрений.

В связи с дефицитом серной кислоты интересным в промышленном масштабе представляется процесс солянокислотной переработки низкосортных фосфоритов Центральные Кызылкумов с получением концентрированного одинарного фосфорного удобрения преципитата – $CaHPO_4 \cdot 2H_2O$. Преципитат - хорошее удобрение, пригодное для использования на любых видах почв и под все сельскохозяйственные культуры. Применяют преципитат только для основного внесения. У нас производство одинарных фосфорных удобрений, таких как преципитат, обогащенный и двойной суперфосфаты отсутствуют.

В работах [1; С.99-101, 2; С.29-32, 3; С.67-70, 4; С.163-168, 5; С.30-36] изучены процессы получения удобрительного преципитата на основе солянокислотного разложения минерализованной массы и фосфоритовой муки из Кызылкумских фосфоритов, а также из МОФК. В работах [1; С.99-101, 2; С.29-32, 3; С.67-70] для получения удобрительного преципитата использована минерализованная масса (14,60% P_2O_5 , 43,99% CaO; 14,11% CO_2 , 1,58% SO_3 и 10,82% н.о.). Определены оптимальные параметры преципитирования в зависимости от нормы и концентрации соляной кислоты, также от природы осадителя. В работе [4; С.163-168] для получения удобрительного преципитата была использована фосфоритовая мука (17,09% P_2O_5 , 45,36% CaO; 14,89% CO_2 , 1,60% SO_3 и 7,8% н.о.). Для выщелачивания хлорида кальция из влажного преципитата была применена двухкратная промывка водой при соотношении сухой осадок: H_2O =1:2,5 и 1:2,0. Определены оптимальные параметры разложения фосфоритовой муки и преципитирования солянофосфорнокислотной суспензии с карбонатом кальция. В работе [5; С.30-36] приведены результаты получения преципитата из МОФК, производимый на основе высококарбонизированных фосфоритов Центральные Кызылкумов термическим

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
ПИИЦ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

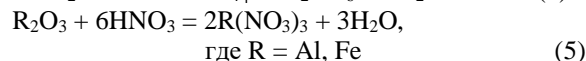
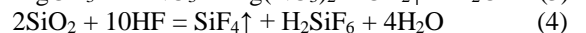
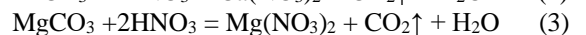
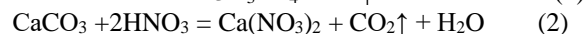
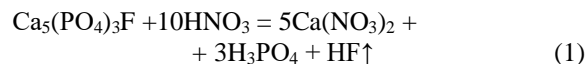
обогащением. Изучено влияние pH среды на состав преципитатов. Получены образцы преципитатов без выделением и с выделением нерастворимого остатка. Основным сдерживающим фактором солянокислотной переработки является образование огромного количество растворов хлорида кальция. В таком плане азотнокислотная переработка имеют свои преимущества. Ранее нами изучены [6; С.15-19, 7; С.67-71] получение удобрительного преципитата на основе минерализованной массы (ММ) и азотной кислоты. В работе [6; С.15-19] были изучены получение удобрительного преципитата из азотнофосфорнокислотных суспензий, полученных путём разложения ММ азотной кислотой с последующей нейтрализацией Ca(OH)₂ без выделения нерастворимого остатка и определены оптимальные pH, где переход (потеря) P₂O₅ в жидкую фазу будет минимальными. Работа [7; С.67-71] посвящена влиянию нормы осадителя на процесс преципитирования азотнокислотной вытяжки фосфатов. Определены оптимальные параметры преципитирования, где степень преципитирования будет максимальными.

В настоящей работе мы изучили влияние различных видов осадителей (CaCO₃, Ca(OH)₂ и газообразный аммиак) на степень преципитирования азотнокислотной вытяжки полученного на основе ММ и азотной кислоты.

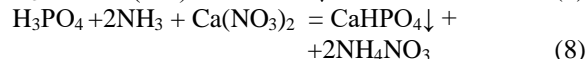
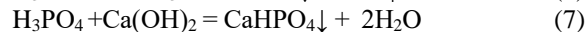
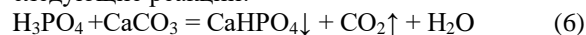
Цель и методы исследования.

Целью исследования является получение удобрительных преципитатов на основе минерализованной массы и азотной кислоты, а также изучение влияния природы осадителей на качественные параметры получаемых одинарных удобрений. Для проведения лабораторных экспериментов использовали забалансовую руду (минерализованная масса), содержащая, вес.%,: 14,60 P₂O₅, 43,99 CaO, 14,11 CO₂, 1,58 SO₃; 10,82 н.о.; CaO : P₂O₅ = 3,01 и азотную кислоту. Концентрацию азотной кислоты варьировали от 45 до 55%. Нормы азотной кислоты брали 100% от стехиометрии на CaO в исходном сырье. Нормы нейтрализующих веществ – CaCO₃, Ca(OH)₂ и NH₃(газообр.) для осаждения P₂O₅ (в виде CaHPO₄) использованы 95, 100 и 105%. Применение более концентрированной азотной кислоты обусловлена, тем что при разложении высококарбонатных фосфоритов наблюдается обильное пенообразование, которое препятствует введению нормального технологического режима. При этом значительно снижается производительность оборудования. Методика проведения экспериментов была описана в работе [6; С.15-19, 8; pp.1263-1270].

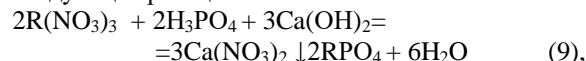
При разложении ММ азотной кислотой в основном происходит следующие реакции:



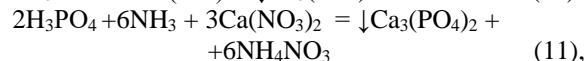
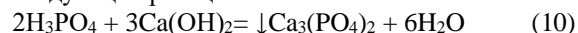
При нейтрализации азотнофосфорнокислотных суспензий происходят следующие реакции:



Кроме того в суспензии происходит следующая реакция:



которая уменьшает качество преципитата. По мере увеличения pH среды будет происходить следующие реакции:



которая уменьшает усвояемую форму фосфора. В зависимости от нормы осадителей pH среды колеблется от 4,0 до 5,5. Полученный влажный преципитат двукратно промывался горячей водой при соотношениях сухой осадок : H₂O = 1:2,5 и 1:2,0. Влажный осадок высушивался при температуре 80-90°C.

Образцы удобрительных преципитатов были подвергнуты химическому анализу следующим путём: содержание всех форм P₂O₅ (общая, усвояемая по 2%-ой лимонной кислоте и водорастворимая) были определены калориметрическим методом на калориметре КФК-3 (l=440 нм) в форме желтого фосфорванадиймолибденового комплексного соединения [8; С.16,22]. Общее количество (общ.), усвояемая по 2%-ой лимонной кислоте (усв.) и водорастворимая (водн.) форма CaO были определены комплексонометрическим титрованием ионов кальция с 0,02н раствором ЭДТА в присутствии индикатора флуорексона [9; С.16, 22, 10; 20 с.]. Общий азот определяли методом отгонки аммиака по Кьельдалю и хлораминовым методом [11; 7 с., 12; 302 с.]. pH суспензии измеряли ионометром-150Мп (Российская Федерация, 2013).

Результаты и их обсуждение.

Результаты лабораторных экспериментов по получению образцов удобрительных преципитатов из минерализованной массы, приведены в таблице 1.

Из данных табл. 1 видно, что с увеличением нормы нейтрализующего агента при одной и той же концентрации кислоты наблюдается

Impact Factor:

ISRA (India) = 6.317
 ISI (Dubai, UAE) = 1.582
 GIF (Australia) = 0.564
 JIF = 1.500

SIS (USA) = 0.912
 ПИНЦ (Russia) = 3.939
 ESJI (KZ) = 9.035
 SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
 PIF (India) = 1.940
 IBI (India) = 4.260
 OAJI (USA) = 0.350

увеличение $P_2O_{5\text{общ}}$ и $CaO_{\text{общ}}$ в полученных образцах преципитата.

Например, при 45 %-ной концентрации азотной кислоты с увеличением нормы $Ca(OH)_2$ от 95% до 105%, содержания $P_2O_{5\text{общ}}$ и $CaO_{\text{общ}}$ в полученных образцах преципитатов повышается от 22,79 до 23,34% и от 25,07 до 28,00% соответственно. Аналогичная картина наблюдается и при других концентрациях азотной кислоты. При одинаковых нормах осадителя, с увеличением концентрации азотной кислоты наблюдается некоторое увеличение $CaO_{\text{общ}}$ и незначительное повышение $CaO_{\text{водн}}$ в полученных продуктах, а содержание $P_2O_{5\text{общ}}$ немного уменьшается. Например, при применении 45%-ной азотной кислоты при норме осадителя 100% (осадитель- $CaCO_3$) содержание $CaO_{\text{общ}}$, $CaO_{\text{водн}}$ и азота соответственно равны 26,57; 1,83 и 0,56%, при использовании 50%-ной кислоты они равны 27,00; 1,87 и 0,63%, а при использовании 55 %-ной кислоты они равны 27,20; 1,90 и 0,65%. При этом содержание $P_2O_{5\text{общ}}$ в полученных преципитатах равны 23,11; 23,08 и 23,05%, соответственно для

концентрации кислоты 45, 50 и 55%. Использование более концентрированной азотной кислоты, приводит к незначительному ухудшению качества преципитата. Это обстоятельство объясняется тем, что при применении более концентрированной азотной кислоты происходит плохая промывка $Ca(NO_3)_2$ от влажного удобрительного преципитата. А также из этих данных видно, что природа осадителей существенно влияет на качественные параметры удобрительных преципитатов. Например, при использовании в качестве осадителя $CaCO_3$ содержания $P_2O_{5\text{общ}}$ колеблется от 22,79 до 23,34% с увеличением нормы осадителя от 95 до 105% при концентрации кислоты 45%. При использовании в качестве осадителя $Ca(OH)_2$ содержания $P_2O_{5\text{общ}}$ колеблется от 23,75 до 24,41% при тех же условиях, а при использовании NH_3 содержания $P_2O_{5\text{общ}}$ колеблется от 24,43 до 24,75%. Аналогичная картина наблюдается при других концентрациях азотной кислоты.

Таблица 1. Химический состав преципитатов

№ опытов	Норма осадителя, %	Основной химический состав, %					
		$P_2O_{5\text{общ}}$	P_2O_5 уств. по лим. к-те	$CaO_{\text{общ}}$	$CaO_{\text{уств}}$	$CaO_{\text{водн}}$	$N_{\text{общ}}$
Концентрация азотной кислоты – 45%							
CaCO ₃							
1	95	22,79	20,26	25,07	22,26	2,02	0,56
2	100	23,11	20,04	26,57	23,09	1,83	0,59
3	105	23,34	19,84	28,00	23,83	1,72	0,63
Ca(OH) ₂							
4	95	23,75	20,95	26,01	23,04	1,88	0,49
5	100	24,32	20,90	26,95	23,25	1,60	0,53
6	105	24,41	20,50	27,84	23,52	1,51	0,58
NH ₃							
7	95	24,43	21,96	25,16	22,60	1,82	0,50
8	100	24,79	21,74	26,03	22,88	1,58	0,54
9	105	24,75	21,28	26,48	22,80	1,49	0,59
Концентрация азотной кислоты – 50%							
CaCO ₃							
10	95	22,70	20,20	25,42	22,62	2,06	0,58
11	100	23,08	20,08	27,00	23,49	1,87	0,63
12	105	23,30	19,85	28,19	24,07	1,75	0,66
Ca(OH) ₂							
13	95	23,66	21,03	26,22	23,33	1,92	0,52
14	100	24,22	20,89	27,21	23,54	1,66	0,56
15	105	24,35	20,57	27,42	23,31	1,54	0,61
NH ₃							
16	95	24,39	21,83	25,36	22,62	1,84	0,53
17	100	24,72	21,70	26,20	23,06	1,61	0,57

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

18	105	24,69	21,28	26,66	23,03	1,51	0,62
Концентрация азотной кислоты – 55%							
CaCO ₃							
19	95	22,65	20,21	25,59	22,85	2,09	0,61
20	100	23,05	20,10	27,20	23,80	1,90	0,65
21	105	23,26	19,89	28,38	24,35	1,78	0,68
Ca(OH) ₂							
22	95	23,57	21,02	26,35	23,61	1,96	0,56
23	100	24,16	20,99	27,29	23,70	1,74	0,59
24	105	24,29	20,65	27,47	23,49	1,58	0,64
NH ₃							
25	95	24,35	21,92	25,57	22,88	1,87	0,57
26	100	24,68	21,72	26,41	23,32	1,63	0,60
27	105	24,66	21,33	26,88	23,33	1,54	0,64

Таблица 2. Химический состав фильтратов (I, II и III -фильтраты), %

Номер опытов	P ₂ O ₅ водн.	CaO водн.	N общ.	Степень перехода P ₂ O ₅ в раствор	Степень перехода CaO в раствор
Концентрация азотной кислоты – 45%					
CaCO ₃					
1	0,51	9,03	6,72	7,19	66,11
2	0,48	8,72	6,41	5,25	63,84
3	0,44	8,48	6,32	4,84	62,11
Ca(OH) ₂					
4	0,45	8,99	6,63	6,08	65,86
5	0,41	8,82	6,32	3,70	64,58
6	0,38	8,63	6,24	2,74	63,18
NH ₃					
7	0,31	9,08	6,78	2,02	66,51
8	-	9,04	6,73	-	66,15
9	-	8,94	6,49	-	65,49
Концентрация азотной кислоты – 50%					
CaCO ₃					
10	0,49	8,89	6,62	6,41	65,09
11	0,46	8,50	6,34	4,89	62,24
12	0,41	8,47	6,29	4,72	62,01
Ca(OH) ₂					
13	0,39	8,78	6,52	5,82	64,25
14	0,34	8,71	6,44	3,56	63,79
15	0,30	8,61	6,32	2,42	63,01
NH ₃					
16	0,29	9,05	6,70	1,94	66,24
17	-	9,02	6,65	-	66,01
18	-	8,90	6,42	-	65,20
Концентрация азотной кислоты – 55%					
CaCO ₃					

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

19	0,45	8,78	6,50	6,22	64,28
20	0,42	8,48	6,43	4,75	62,11
21	0,37	8,45	6,38	4,57	61,87
Ca(OH) ₂					
22	0,37	8,75	6,47	5,61	64,08
23	0,32	8,70	6,41	3,26	63,67
24	0,28	8,59	6,32	2,28	62,86
NH ₃					
25	0,27	9,03	6,62	1,86	66,12
26	-	9,01	6,58	-	65,95
27	-	8,86	6,41	-	64,85

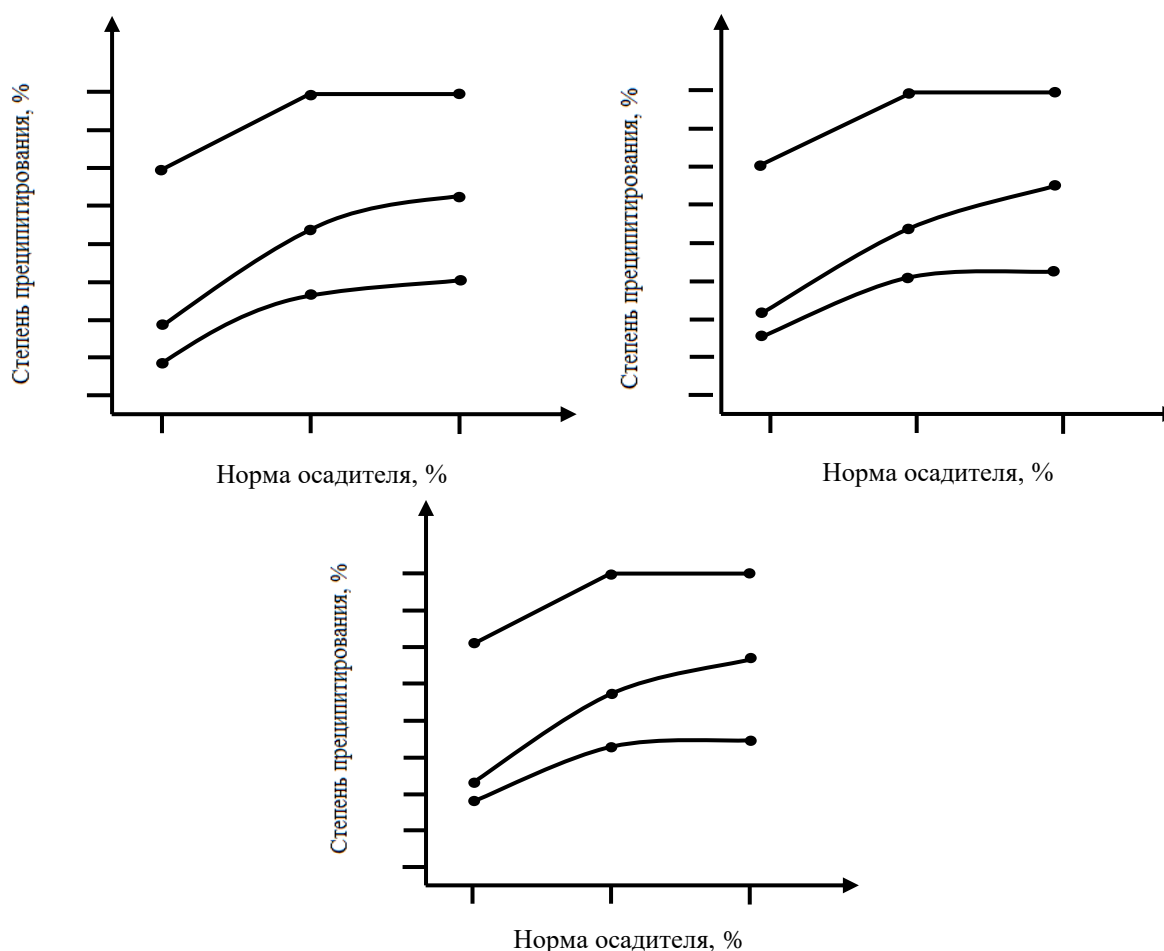


Рис.1. Влияние нормы осадителя на степень преципитирования. Концентрация кислоты: а-45%; б-50% и с-55%; осадители: 1– CaCO₃; 2 – Ca(OH)₂ и 3 – NH₃.

В таблице 2 приведены данные по химическому составу фильтратов (I, II и III - фильтраты). Из этих данных видно, что с увеличением нормы осадителя степень перехода P₂O₅ в раствор, т.е. потеря уменьшается. Эти данные согласуются с данными таблицы 1. Также из этих данных видно, что при использовании газообразного аммиака в качестве осадителя

потеря P₂O₅ исключается. На рисунке 1 показана зависимость изменения степени преципитирования азотнокислотной пульпы от нормы осадителя и концентрации азотной кислоты. Также эти данные согласуются с данными таблицы 1.

На рисунке 2 изображены влияние нормы осадителя на степень перехода CaO в раствор при

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
ПИИЦ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

различных концентрациях кислоты. Из этих данных видно, что норма осадителей существенно влияет на степень перехода CaO в раствор, а

концентрация практически не влияет на этот параметр.

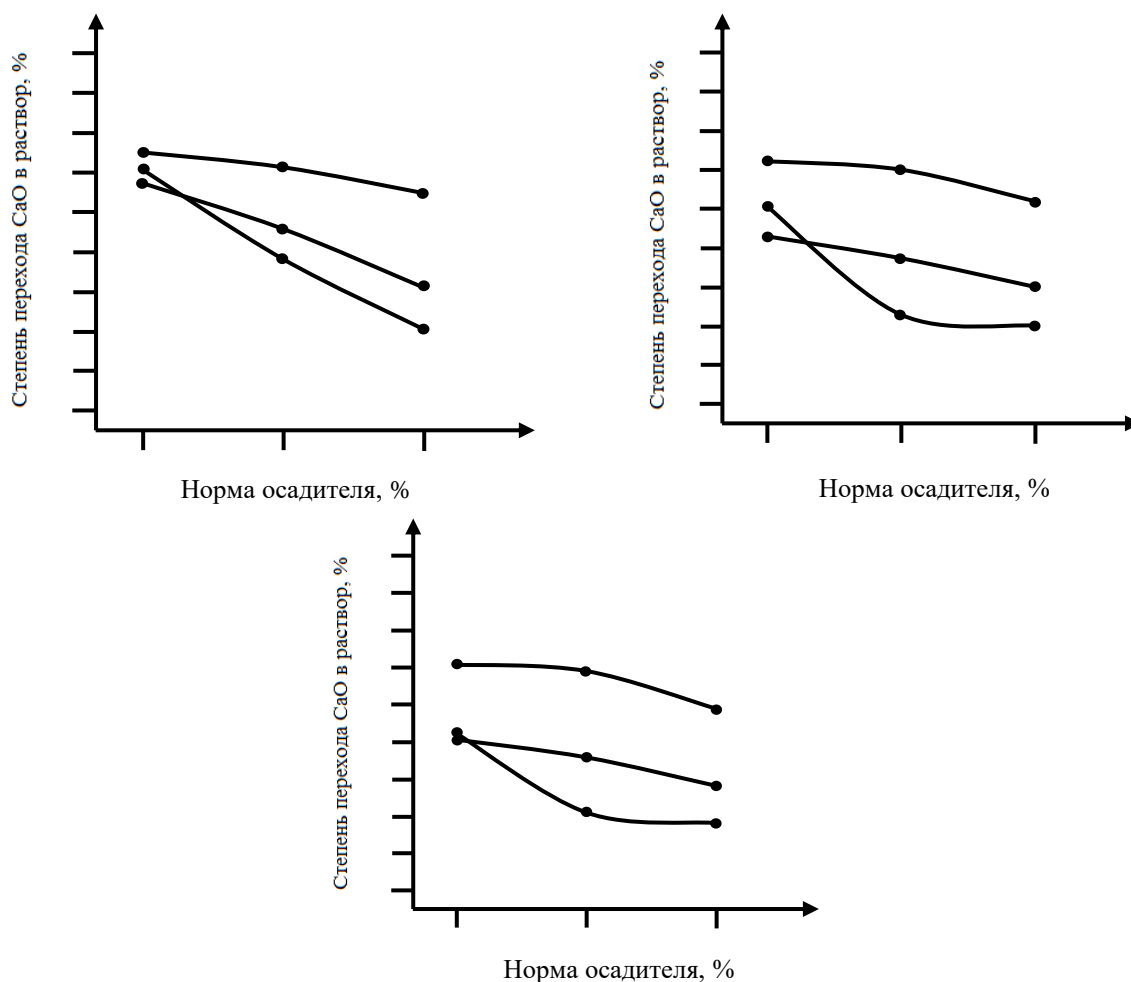


Рис.2. Влияние нормы осадителя на степень перехода CaO в раствор. Концентрация кислоты: а-45%; б-50% и с-55%; осадители: 1– CaCO₃; 2 – Ca(OH)₂ и 3 – NH₃.

Из вышеприведенных данных можно заключить, что все вышеуказанные концентрации азотной кислоты являются оптимальными. Оптимальными осадителями являются Ca(OH)₂ и NH₃. Все нормы осадителей можно считать оптимальными. Скорость фильтрации преципитатной суспензии составляет 350-500 кг/м³ час по влажному осадку.

Таким образом, на основании результатов лабораторных исследований показана влияние природы осадителей на степень преципитирования и перехода CaO в раствор.

Заключение.

1. Изучена влияние природы осадителей на степень преципитирования азотнофосфорнокислотных суспензий.

2. Впервые изучен химический состав фильтратов и определена степень перехода CaO в раствор.

3. Определены оптимальные параметры преципитирования. Полученные образцы преципитатов при оптимальных условиях содержат в своем составе 23,75-24,75% P₂O₅общ., 20,95-21,92% P₂O₅усв. по 2 %-ной лимонной кислоте, 25,16-28,19% CaOобщ., 22,60-23,70% CaOусв. по 2 %-ной лимонной кислоте. Степень преципитирования в оптимальных условиях равна 93,92-100%.

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHII (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

References:

1. Sultonov, B.Je., Namazov, Sh.S., & Zakirov, B.S. (2015). Soljanokislotoe poluchenie precipitata na osnove mineralizovannoj massy iz fosforitov Central'nyh Kyzylkumov. *Gornyj vestnik Uzbekistana, Nauchno-tehnicheskij i proizvodstvennyj zhurnal*, Navoiy, №1.
2. Sultonov, B.Je., Namazov, Sh.S., Rejmov, A.M., & Popova, O.I. (2016). *Poluchenie precipitata iz mineralizovannoj massy*. XIII-Mezhdunarodnaja nauchno-prakticheskaja konferencija «Nauchnyj poisk v sovremennom mire», sbornik materialov, g. Mahachkala, Rossija.
3. Sultonov, B.Je., Rejmov, A.M., Namazov, Sh.S., & Zakirov, B.S. (2016). Vlijanie nekotoryh tehnologicheskix parametrov na process precipitirovanija soljanokislotoj vytjazhki fosfatov. *Uzb.him.zhurn.*, №2.
4. Sultonov, B.Je., Sejtazarov, A.R., Namazov, Sh.S., & Rejmov, A.M. (2015). Soljanokislotoj pererabotka vysokokarbonatnoj fosforitovoj muki Central'nyh Kyzylkumov na udobritel'nyj precipitat. *Himicheskaja promyshlennost'*, Sankt-Peterburg, №4.
5. Sultonov, B.Je., Shamuratova, M.R., Namazov, Sh.S., & Kajmakova, D.A. (2017). Poluchenie precipitata na osnove mytogo obozhzhennogo fosforitovogo koncentrata. *Universum: Tehnicheskie nauki*, Vypusk 7(40), iul', Moskva.
6. Sultonov B.Je., Saparov A.A., Namazov Sh.S. (2018). Azotnokislotoe poluchenie precipitata na osnove mineralizovannoj massy iz fosforitov Central'nyh Kyzylkumov. *Universum: Tehnicheskie nauki*, Vypusk 11(56), nojabr', Moskva.
7. Sultonov, B.Je., & Saparov, A.A. (2018). Vlijanie normy osaditelja na process precipitirovanija azotnokislotoj vytjazhki fosfatov. *Kompozicionnye materialy. Nauchno-tehnicheskij i proizvodstvennyj zhurnal*, Tashkent, №4.
8. Rasulov, A.A., Alimov, U.K., Seytnazarov, A.R., Namazov, Sh.S., & Sultonov, B.E. (2019). Production of NP fertilizers based on the decomposition of poor phosphates using a mixture of phosphoric and sulphuric acids. *Journal of Chemical Technology and Metallurgy*, Sofia, (54) 6.
9. (2010). *Metodicheskie instrukcii po vypolneniu analiza jekstrakcionnyh pul'p i jekstrakcionnoj fosfornoj kisloty*. OAO «AMMOFOS-MAKSAM», Almalyk, (p.16, 22).
10. (1983). *GOST 20851-1-75. Metody opredelenija sodержanija azota*. (p.20). Moscow: Izd. Standartov.
11. (1996). *GOST 30181.4-96 Metody opredelenija summarnoj massovoj doli azota, sodержashhegosja v slozhnyh udobrenijah i selitrah v ammonijnoj i nitratnoj formah (metod devarda)* Mezghosudarstvennyj sovet po standartizacii, metrologii i sertifikacii. (p.7). Minsk.
12. Dorohova, E. N., & Prohorova, G.V. (1991). *Analiticheskaja himija: Fiziko-himicheskie metody analiza*. (p.302). Moscow: Vysshaja shkola.

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIIHQ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

SOI: [1.1/TAS](https://doi.org/10.15863/TAS) DOI: [10.15863/TAS](https://doi.org/10.15863/TAS)

International Scientific Journal Theoretical & Applied Science

p-ISSN: 2308-4944 (print) e-ISSN: 2409-0085 (online)

Year: 2022 Issue: 02 Volume: 106

Published: 07.02.2022 <http://T-Science.org>

QR – Issue



QR – Article



Nusratulla Hamidovich Abdullaev

National Institute of Fine Arts and Design named after Kamoliddin Behzod
Associate Professor of the Department of
“Miniature and Book Graphics”
Tashkent, Uzbekistan
jasur184@list.ru

HISTORY OF CARICATURE ART IN UZBEKISTAN

Abstract: The genre of the cartoon is studied in this article, its history and significance are covered. The structure, formation and development of the Uzbek satirical magazine “Mushtum” is considered. At the same time, the activities and achievements of the Uzbek cartoonist artists were revealed.

Key words: caricature, artist, “Mushtum”, satire, magazine, genre, history, fine art

Language: English

Citation: Abdullaev, N. H. (2022). History of caricature art in Uzbekistan. *ISJ Theoretical & Applied Science*, 02 (106), 64-67.

Soi: <http://s-o-i.org/1.1/TAS-02-106-7> **Doi:**  <https://dx.doi.org/10.15863/TAS.2022.02.106.7>
Scopus ASCC: 1200.

Introduction

Caricature is a noble genre, the appearance of which dates back to the Stone Age. The first marotaba on the stone surface of a strange man, who for the first time opposed the idea of his tribe, began to express his first Sharjah, which was inscribed with his own hands, dedicated to the head of his tribe and his revered Army through his discontent (in Imagine how much the cartoonist in the era of living mammoths and sword-toothed tigers risked himself, after all, any picture could bring people luck or the roar of the ruches. So sharp, talent-driven cartoon – it was seen as a serious weapon, even among Indians and papuas. In ancient times, caricature was also considered important, and the period of Pharaoh's glory was used as an effective weapon in laughing at the enemies of the Roman Senate.

Analysis and results.

Especially acute cartoon character evokes a terrible hatred in any humor. After all, the kech thing is that the defeat of the war, economic problems and internal problems, the genius, the tsar, his reputation in a funny way can not be reduced to such. Dictators of all times understood this very well and immediately found it necessary to take immediate measures against those who did so, to feed on sharp-toothed animals, to smear on the tonsils or loins. If so, what kind of

repressions, threats did not manage to disrupt the cartoon. On the contrary, in the period of the initial historical processes, the inscriptions did not develop at all, the genre of a caricature understandable to Khama promoted other types of art - literature, fine art, theater, development. This means that before drawing on Stone rocks, the picture can form the basis of the appearance of the next emerging writing, painting, theatrical masks, engraving, lithography and, finally, typographic stencils.

Caricature is valued as a monument of history. At the moment, the cartoon remains the most popular type of art. To understand this, we can see that if we take a gazeta or satirical magazine from the nearby Press stores and book something problematic is expressed in the "zakharkhan" pictures. Unlike the photomaterial, the talented cartoon is able to give the journalistic idea that many times are resourceful. As soon as the reader takes a look at the titles of the articles one by one and does not start reading them, his eyes fall into a dark funny cartoon. This was proved by our expert scientists in the observations of many times of humans.

In the Uzbek press, the cartoon appeared after the October Revolution, until the revolution there was not a single satirical publication, it would be sad if the cartoon did not speak about it. Now the rising national bourgeoisie was afraid of satire as a country. Although

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIIHQ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

Tsarist Russia was overthrown in the 1920s, my aunt did not want to give up and sought to regain power in various guises in the form of a British spy, a deaf earner, a nephew trader or a vicious nationalist. But even though they hid their real faces in front of the people and pretended to be friends, they were shouting in the corners trying to prove that the nation was discriminated against and that there was no confidence in the new life. Through the cartoon, all the masks are revealed and their original purposes are shown. This was the first Uzbek satirical magazine Mushtum. Through the cartoon reveals all the masks, their original purpose is indicated. This was the first Uzbek satirical magazine "fist". The first editions of the satirical magazine "Mushtum" began to be published in 1923 year in Tashkent as an application of the newspaper "Turkistan" in two weeks from 2 500 to 3 500 copies in the form of black-and-white in Arabic script once in 8 pages.

Later, in the quality of the supplement of the newspaper "Kizil Uzbekistan" in Cyrillic, from 1926 until the war in the form of a weekly, its number increased to 20,000 and began to appear on 12 pages.

Uzbek caricature grew and gained momentum with the satirical journalism of the former Soviet Union. In the work of the first artist of "Mushtum" I.Tula, class enemies - the rich, bourgeois nationalists, religious movements, merchants - were exposed. In the second half of the twentieth century, new artists V.Nikolayev (Usto Mo'min), V. Rozhdestvenskiy, R.Neklyudov, M.Vorobeychikov, V. Eremyan, V. Odilov, I. Ikramov and other artists began to enter. Mushtum's caricature has become a politically sharp, purposeful force. It reflected many aspects of that period - the creation of a socialist industry, the cultural revolution, the struggle for the protection of women's rights and freedoms.

The cartoonists contributed to the further development of the former allied system as a fighting aide to the party in the struggle against the elements that opposed the creation of a new socialist life.

In June 1941, the years of the outbreak of World War II, the publication was suspended. Uzbek cartoonists, like all former Soviet publishers, used their sharp ideological weapons against the enemy. In collaboration with the republican and front-line newspapers, they sent many sharp cartoons exposing the anti-human idea of fascism. At that time, UzTAG Oynasi, in the form of TASS Oynasi, was operating in Tashkent.

Then, in October 1948, there was an attempt to re-launch the magazine, but only 2 issues were published. Uzbek satirical graphics from the war have been enriched with new names. These are L.Abdullaev, D.Sinitsky, S.Marfin, B.Jukov, N.Leushin, V.Evenko, V.Kaydalov, S.Malt, N.Melamed and others. The magazine was re-launched in 1951 as a magazine, and in June 1958 it was published twice a month.

Samples of folklore of Uzbekistan were widely covered in the issues of the magazine. Much attention was paid to the development of friendly relations between the fraternal peoples, the magazine introduced Russian satirical and miniature literature, as well as translations of foreign classical literature. There are still interested readers of the magazine at that time, even today. Fans painted M.Vorobeychikov's sharp, topical, outdated paintings, L.Abdullaev's works in delicate national colors, B.Zhukov's political posters, D. Sinitsky is well remembered for his humorous sketches.

A circle of young cartoonists has been set up at the Mushtum editorial office. The addition of T.Muhamedov, A.Khalikov, N.Ibrokhimov, A.Kambarov, V.Dumkin, L.Sharifjonova, F.Kagarov and other talented young people to the list of artists brought a number of creative innovations in their genres. Telman Mukhamedov was well known as a master of cartoons. Although short-lived, the talented artist left a deep mark on the development of Uzbek cartooning with his irreversible style. While artists N.Ibragimov and A.Khalikov stand out as masters of sharp cartoons and posters, young artists A.Kambarov, V.Dumkin, S.Subkhanov have a subtle humorous talent. Later J.Umarbekov, A.Gulamov, T.Khojakulova, A.Jabborov, K.Tolipov and a number of talented young artists joined the magazine. The seminar of young cartoonists, organized at the initiative of the editor-in-chief of the magazine Ibrahim Rahim, was constantly working, the artistic council contributed to the creative growth of cartoonists. The main artist of "Mushtum" A.Khalikov led them as a teacher.

As Mushtum magazine celebrated its fiftieth anniversary, it published its 1,000th issue. His magic mirror reveals the crooked faces of his "prey" - the lazy, the greedy, the lazy, the bureaucrats, the pianists and other vices, and reveals his intrigues.

The editors often referred to the preparation of a special issue entitled "Fist in Moscow" (during the Decade of Uzbek Literature and Art, at the Congress of Cotton Growers). Each year, special issues of the magazine were devoted to planting, harvesting, and other economic activities.

Such issues were published with the help of the authors of the mobile special team "Mushtum at the Congress" (January 1954), "Mushtum in the field" (June 1955), "Mushtum walks the city" in 1957. v.b.) prepared. By 1963, the magazine was published in 12 pages in 196,000 copies in four colors.

Satirical articles and pictures were regularly published under the satirical sections of the magazine, as well as under the headings "Hungry", "Ambulance", "Friend speaks bitterly", "Does not work, does not bite" and many others.

It is important for a true cartoonist to be able to understand his model better than others, to be able to convey the harmony of his spiritual world in graphic

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHII (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

expression. The cartoonist reveals the permission by changing the attributes in the photo and reveals their negative aspects to the surrounding people. Clearly targeted cartoon it's like writing The Crimes of the same subject on the board. As for the cartoon Painter, the specialist will require originality from the artist. If we look at the materials of the photo in a more substantive, formalized document, then the cartoon is more like an aphorism or proverb, which gives a great idea of the meaning, consisting of several lines. The subject in the face of the cartoonist, having found its shortcomings, taking away the excess and ignoring the norms of the show itself, immense observability in entering into his psychology, dictates that he is able to intuitively ignore the described thing.

In addition, the tremendous resourcefulness, through some small detail, brightens the model itself, reveals its character, the cartoonist qiyng takes the task to his neck and, most importantly, izokh, simplifying it in the case that he maintains the similarity of the structure of nature. When a cartoonist observes a single person or a whole class, it is necessary to go through these attempts by deepening and compounding the processes with artistic processing, summing up a holistic image, symbolizing, forming a graphic formula. The basis of the cartoon is all the same a clear drawing. Only in the 20 years began to appear plasticity, relaxation in the lines, when describing the location of rough contoured works, over time. As the change of the period influenced the Fine Arts, new techniques of expression began to appear in the direction of the cartoon, especially in the 70-80-ies of the XX century, when new young artists entered, new methods of expression began to appear. A vivid example of this is the work of Husan Sodiqov, a 15-17-year-old artist Adolescent amateur, who entered the editing in those years with his first cartoons, later from 1996 to the present day as the chief artist in the satirical magazine "Mushtum". Of course, it is possible to study the experiences of the last generation of cartoonists who conducted their creative activity in the satirical

magazine and consider the result of their work as a product. Recall that once upon a time the young cartoonists 'seminar, organized under the initiative of the Chief artist of " Mushtum " Alijon Kholikov, was constantly working.

If history repeats itself, well-known cartoonists M.Eshonkulov, Sh.Muzaffar, F.Teshaev and a number of young cartoonists with different genres have gathered around Husan Sodiqov and a new school of cartoons has appeared. This was a period of renaissance of the cartoon genre. It certainly served to expand the magazine's potential, first with the band's 2010 National Award for the Golden Pen, and then its participation in the 2012 Cartoonists' Convention in Washington, DC. .

After the independence of Uzbekistan, our Uzbek cartoonists not only participate in many competitions in this field abroad, but also win high titles and prizes. If we take only the achievements of Mahmudjon Eshankulov as a cartoonist, he participated in more than 350 national and foreign exhibitions, competitions and festivals, winning 64 of them. It is a great honor for us to include the name of the Uzbek cartoonist in the list of "100 great master cartoonists."

Conclusions.

In the past, Mushtum Magazine was in close contact with many satirical magazines of the former Soviet republics, especially the Russian magazine Crocodile. Now our cartoonists are trying to introduce the name of our magazine to the whole world. Yes, let's say - "Mushtum" magazine is 100 years old. Over the course of a century, many writers and artists have created satire and humorous materials in the magazine's editorial office. He helped to cleanse the society of such evils, called people to turn away from evil, and made a great contribution to preventing the spread of evil. The future of Mushtum magazine and its further development depends on the contribution of new cartoonists. We wish them great victories!

References:

1. Krotkov, A. (2020). *Caricature. Unimagined story.* – Litres.
2. Laskova, M. V., & Zueva, R. S. (2016). Political caricature as a socio-cultural universal in modern political linguistics. *Humanitarian and social sciences*, №. 1.
3. (n.d.). *Mushtum magazine // 1960-1970.*
4. Ahmedova, N.R. (2004). *Zhivopis` Central`nyj Azii XX veka: tradicija, samobytnost`, dialog.* Tashkent.
5. Ahmedova, N. (2004). Hudozhnik - jepoha - istorija. *San`at*, №2, pp.21-24.
6. Rakitin, V. (2001). Hudozhestvennyye iskanija Aleksandra Volkova. *Nauchnyj, metodicheskij i informacionnyj zhurnal MGK "Vestnik MAGK"*, №2.

Impact Factor:	ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
	ISI (Dubai, UAE) = 1.582	PIHII (Russia) = 3.939	PIF (India) = 1.940
	GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
	JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

7. Lotman, Jy.M. (2004). *Kul`tura i vzryv. Semiosfera.* SPb.: Iskusstvo-SPb..
8. Zinger, L.S. (1986). *Ocherki teorii i istorii portreta.* Moskva: Izobrazitel`noe iskusstvo.
9. Hakimov, A.A. (2010). *Iskusstvo Uzbekistana: istorija i sovremennost`.* Tashkent.
10. Chuhovich, B. (2007). V poiskah imeni sobstvennogo (Sredneaziatskij avangard v 20-e gody i v nashi dni). *KURAK*, №1.

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
ПИИИ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

SOI: [1.1/TAS](#) DOI: [10.15863/TAS](#)

International Scientific Journal
Theoretical & Applied Science

p-ISSN: 2308-4944 (print) e-ISSN: 2409-0085 (online)

Year: 2022 Issue: 02 Volume: 106

Published: 28.02.2022 <http://T-Science.org>

QR – Issue



QR – Article

**Oleg Ivanovich Yurchenko**

Kharkiv National University named after V.N. Karazin
Doctor of chemical sciences, Professor,
Head of the Department of Chemical Merology, Ukraine
yurchenko@karazin.ua

Tatyana Vasilievna Chernozhuk

Kharkiv National University named after V.N. Karazin
Candidate of chemical sciences, Associate Professor of
Department of Inorganic Chemistry, Ukraine
chernozuk@karazin.ua

Aleksandr Nikolaevich Baklanov

Kharkiv National University named after V.N. Karazin
Doctor of chemical sciences, Professor of the
Department of Chemical Merology, Ukraine
baklanov_oleksandr@meta.ua

SUPERHIGH-FREQUENCY ULTRASOUND IN THE INTENSIFICATION OF ACID EXTRACTIONS OF LEAD AND CADMIUM FROM FATS AND OILS

Abstract: The use of ultrahigh frequency ultrasound for the intensification of the acid extraction of lead and cadmium from fats and oils is proposed. The optimal parameters of ultrasound were experimentally established: frequency 12-15 MHz, intensity 5.0-7.0 W/cm² for 5-8 minutes. The intensifying effect of microwave ultrasound is based on a combination of acoustic flows and cavitation effects. It has been shown that the use of intensification of acid extraction by microwave ultrasound makes it possible to increase the degree of extraction of lead and cadmium to 98-99%, which is more effective than the use of low-frequency ultrasound - 92-93%, and even the use of simultaneous exposure to high and low frequency ultrasound - 96 - 97%.

Key words: fats and oils, high frequency ultrasound, recovery, lead and cadmium.

Language: Russian

Citation: Yurchenko, O. I., Chernozhuk, T. V., & Baklanov, A. N. (2022). Superhigh-frequency ultrasound in the intensification of acid extractions of lead and cadmium from fats and oils. *ISJ Theoretical & Applied Science*, 02 (106), 68-73.

Soi: <http://s-o-i.org/1.1/TAS-02-106-8> **Doi:**  <https://dx.doi.org/10.15863/TAS.2022.02.106.8>

Scopus ASCC: 1500.

СВЕРХВЫСОКОЧАСТОТНЫЙ УЛЬТРАЗВУК В ИНТЕНСИФИКАЦИИ КИСЛОТНОЙ ЭКСТРАКЦИИ СВИНЦА И КАДМИЯ ИЗ ЖИРОВ И МАСЕЛ

Аннотация: Предложено использование ультразвука сверхвысокой частоты для интенсификации кислотной экстракции свинца и кадмия из жиров и масел. Экспериментально установлены оптимальные параметры ультразвука: частота 12-15 МГц, интенсивность 5,0-7,0 Вт/см² в течение 5-8 мин. В основе интенсифицирующего действия сверхвысокочастотного ультразвука лежит комбинация акустических течений и кавитационных эффектов. Показано, что использование интенсификации кислотной экстракции сверхвысокочастотным ультразвуком позволяет повысить степень извлечения свинца и кадмия до 98-99%.

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	РИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

что является более эффективным, чем использование ультразвука низкой частоты - 92 – 93 % и даже, использование одновременного воздействия ультразвука высокой и низкой частот - 96 – 97 %.

Ключевые слова: жиры и масла, сверхвысокочастотный ультразвук, степень извлечения, свинец и кадмий.

Введение

Определение содержания свинца и кадмия в жирах и маслах усложняется необходимостью проведения минерализации [1]. Сухая минерализация в классическом варианте занимает более 40 ч, при этом возможны потери определяемых элементов [2].

Предложенная нами ранее интенсификация сухой минерализации парами окислителей и ИК облучением оказалась непригодной для минерализации жиров и масел из-за опасности образования взрывчатого вещества – нитроглицерина [3]. Замена ИК облучения ультразвуком (УЗ) в интенсификации сухой минерализации позволила уменьшить, но не исключить риск образования нитроглицерина при минерализации жиров и масел [4].

Мокрая минерализация жиров и масел длительна, занимает около 16 ч. При этом вероятность образования нитроглицерина очень велика, особенно при использовании хлоридной кислоты [2]. Применение микроволнового облучения в закрытых системах для интенсификации мокрой минерализации жиров и масел также может привести к образованию взрывоопасных соединений, в частности нитроглицерина [5], поэтому использование всех возможностей современных микроволновых систем, обеспеченных автоклавами затруднено.

Для определения свинца и кадмия в жирах и маслах рекомендуется использовать кислотную экстракцию азотной кислотой (1:1) при кипячении в течение 1,5 - 2,0 с последующим атомно-абсорбционным определением [2]. Однако и при этом есть риск образования нитроглицерина, что может привести к взрыву.

Ранее нами была предложена методика атомно-абсорбционного определения свинца и кадмия [6], включавшая растворение навески в хлористом углеводе и экстракцию свинца и кадмия азотной кислотой (1:2), содержащей 0,2 % трилона Б под действием ультразвука частотой 18-44 кГц, интенсивностью 1,4-1,5 Вт/см² в течение 2-3 мин. При этом, степень извлечения элементов составляла 92 - 93%, а соотношение органической и водной фаз не могло быть больше 2:1. Последнее не позволяло определять свинец и кадмий с чувствительностью меньше 10 ПДК [6].

Использование одновременного воздействия ультразвуком частотой 20-45 кГц, интенсивностью 1,0-2,5 Вт/см² и ультразвуком частотой 1,0-2,5 МГц, интенсивностью 0,50-0,75 Вт/см² в течение 2-3 мин. для интенсификации кислотной минерализации жиров и масел

позволяет повысить степень извлечения свинца и кадмия до 96-97 % [7]. Однако, метод широкого распространения не получил из-за технических сложностей – необходимости одновременного воздействия на систему ультразвуком высокой и ультразвуком низкой частот [7].

Нами была показана возможность интенсификации массообменных процессов, в частности сорбции и соосаждения, воздействием сверхвысокочастотного ультразвука частотой ≥ 10 МГц. При этом, было установлено, что ультразвук сверхвысокой частоты по интенсификации массообменных процессов позволяет получить лучшие результаты, чем ультразвук низких, средних и высоких частот. А также следует отметить, что полученные результаты были несколько лучше результатов, полученных при использовании одновременного действия ультразвука высокой и ультразвука низкой частот [8].

Использование сверхвысокочастотного ультразвука для интенсификации кислотной экстракции свинца и кадмия из жиров и масел не изучено и, во всяком случае, нами в литературе не найдено.

Предлагаемая работа посвящена изучению возможности использования сверхвысокочастотного ультразвука для интенсификации кислотной экстракции свинца и кадмия из жиров и масел.

Экспериментальная часть.

Применяли атомно-абсорбционный спектрометр ААС-3 с электротермическим атомизатором ЕА-3 фирмы Карл Цейсс Йена (Германия). Использовали графитовые кюветы с пиролитическим покрытием, лампы с полым катодом Nurva (Германия).

Применяли пьезоэлектрические излучатели ультразвука (УЗ) с рабочими частотами 11, 12, 13, 14, 15 и 16 МГц типа ЦТС–19М, изготовленные из цирконата титана–свинца с защитным покрытием из фторопласта, которые подключались к ламповому генератору типа 24–УЗГИ–К–1,245М, позволяющему изменять частоты ультразвука от 11,0 до 16,0 МГц, интенсивностью до 10 Вт/см² [8].

Методика исследований была следующей. Навеску продукта массой в 12,00 г растворяли в пробирке в равном количестве четыреххлористого углерода. Растворение пробы в четыреххлористом углеводе способствует при кислотной экстракции уменьшению образования эмульсий [7, 8]. Приливали соответствующее количество азотной кислоты (1:1), содержащей 0,2 % трилона Б

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
РИИЦ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

согласно рекомендации работы [7]. Далее на систему действовали ультразвуком частотой 11,5 - 15,5 МГц, интенсивностью 4,5 - 7,5 Вт/см² в течение 4,5 - 9,0 мин. Для ускорения разделения фаз систему центрифугировали в течение 4 мин при 5000 об/час. Смесь переносили в делительную воронку. После разделения фаз, водную переносили в фарфоровую чашку. Экстракцию повторяли. Объединенный экстракт осторожно упаривали до сухого остатка на электроплитке, растворяли в азотной кислоте (1:1) и доводили объем раствора до 5 мл. В полученном растворе определяли содержание свинца и кадмия электротермическим атомно-абсорбционным методом [8]. Параллельно подготовку тех же проб проводили согласно [7] и также определяли содержание свинца и кадмия атомно-абсорбционным методом [7]. Кроме того, в анализируемые пробы вводили известное количество раствора свинца и кадмия – по 0,10 мг/кг и проводили анализ в соответствии с вышеприведенным. Также проводили "холостой" опыт для определения примесей определяемых элементов в используемых реагентах, а также опыт в условиях невозможности протекания звукохимических реакций, т.е. при насыщении пробы CO₂ [8, 9].

Результаты их обсуждение.

В табл. 1 приведено сравнение способов кислотной экстракции свинца и кадмия с использованием высокочастотного ультразвука частотой 12 МГц, интенсивностью 5,0 Вт/см² в течении 5 мин и с использованием одновременного воздействия ультразвука частотой 20кГц, интенсивностью 1,0 Вт/см² и ультразвука частотой 1,0 МГц, интенсивностью 0,50 Вт/см² в течение 2 мин. При этом, в качестве экстракционного реактива использовали азотную кислоту (1:2) с трилоном Б 0,2%. Соотношение органической и водной фаз 5:1.

Условия определения свинца электротермическим атомно-абсорбционным методом: длина волны 283,3 нм, ширина спектральной щели монохроматора – 0,20 мм, величина тока лампы Narva – 5 мА, объем пробы – 20 мкл. В качестве модификаторов матрицы использовали раствор нитрата палладия (0,1

мкг/мл), рекомендованного при анализе жиров и масел [7, 8]. Определения выполняли по такой программе: высушивание при температуре 100 °С, скорость подъема температуры 10 град/с с выдержкой при данной температуре 30 с; температура пиролиза – 590 °С, 100 град/с, 20 с; температура атомизации – 1300 °С, 2000 град/с, 5с; очистка –2500 °С [7].

Условия определения кадмия электротермическим атомно-абсорбционным методом: длина волны 228,8 нм, ширина спектральной щели монохроматора – 0,20 мм, величина тока лампы Narva – 3 мА, объем пробы – 20 мкл. В качестве модификаторов матрицы использовали раствор нитрата палладия (0,1 мкг/мл), рекомендованного при анализе жиров и масел [7, 8]. Определения выполняли по программе: высушивание при температуре 100°С, скорость подъема температуры 10 град/с с выдержкой при данной температуре 30 с; температура пиролиза – 500 °С, 100 град/с, 20 с; температура атомизации – 1300 °С, 2000 град/с, 5с; очистка –2500 °С.

На стадии атомизации использовали режим "газ-стоп". В качестве защитного газа – гелий осч. Измерения проводили по однолучевой схеме с дейтериевым корректором фона [7].

Из табл. 1 видно, что наиболее точные результаты определения свинца и кадмия были получены при использовании сверхвысокочастотного ультразвука. При использовании сверхвысокочастотного ультразвука относительное стандартное отклонение результатов определения свинца составляет $S_r = 0,061-0,064$, а кадмия - $S_r = 0,050-0,053$. При использовании одновременного воздействия ультразвука высокой и ультразвука низкой частот относительное стандартное отклонение результатов определения свинца составляет $S_r = 0,073-0,077$, а кадмия - $S_r = 0,062-0,065$. Лучшие метрологические характеристики результатов определения свинца и кадмия полученные при использовании сверхвысокочастотного ультразвука можно объяснить большей стабильностью пьезоэлектрических излучателей ультразвука по сравнению с магнитоотриксционными [8].

Таблица 1. Сравнение способов интенсификации кислотной экстракции свинца и кадмия из жиров и масел

Наименование продукта	Введено свинца и кадмия по мг/кг	Найдено микроэлементов, мг/кг / Относительное стандартное отклонение (n = 6)	
		свинец	кадмий
Использование сверхвысокочастотного ультразвука			
Масло подсолнечное нерафинированное	0	0,114/0,061	0,033/0,053

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	РИИЦ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

	0,100	0,211/0,063	0,125/0,050
Жир свиной	0	0,107/0,064	0,046/0,052
	0,100	0,203/0,062	0,140/0,050
Одновременное воздействие ультразвука высокой и низкой частот			
Масло подсолнечное нерафинированное	0	0,105/0,077	0,027/0,064
	0,100	0,203/0,073	0,121/0,065
Жир свиной	0	0,103/0,076	0,044/0,062
	0,100	0,187/0,074	0,137/0,063

В табл. 2 приведены характеристики способов подготовки проб жиров и масел для определения свинца и кадмия с использованием сверхвысокочастотного ультразвука и одновременного воздействия ультразвука

высокой и ультразвука низкой частот. Из табл. 2 следует, что в первом случае, степень извлечения свинца и кадмия составляет 98-99 %, а во втором 96-97 %.

Таблица 2. Характеристика способов подготовки проб жиров и масел для определения свинца и кадмия

Наименование показателя	Показатели	
	УЗ сверхвысокой частоты	УЗ высок.+УЗ низкой частот
Соотношение органической и водной фаз, обеспечивающей при экстракции количественное извлечение свинца и кадмия (более 90%)	5:1	5:1
Степень извлечения свинца и кадмия	96-97%	96-97%
Относительное стандартное отклонение результатов определения свинца	0,061-0,064	0,073-0,077
Относительное стандартное отклонение результатов определения кадмия	0,050-0,053	0,062-0,065
Время пробоподготовки	18-20 мин	18-20 мин

Также первый способ обеспечивает получение результатов анализа с лучшими метрологическими характеристиками. Кроме того, использование ультразвука только одной частоты проще в аппаратном оформлении. По

остальным показателям оба способа подготовки проб жиров и масел являются идентичными. Изменение частоты ультразвука при экстракции свинца и кадмия от 12 до 15 МГц на величину степени извлечения свинца и кадмия не отразилось (табл.3).

Таблица 3. Влияние частоты ультразвука на степень извлечения свинца и кадмия из жиров и масел

Частота УЗ, МГц	Степень извлечения, %			
	Жир свиной		Масло подсолнечное нерафинированное	
	Pb	Cd	Pb	Cd
11,5	85	86	83	80
12	98	99	98	99
14	99	99	98	98
15	98	99	98	99
15,5	87	81	88	89

Impact Factor:	ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
	ISI (Dubai, UAE) = 1.582	РИИЦ (Russia) = 3.939	PIF (India) = 1.940
	GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
	JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

В данной таблице и в последующих приведены средние результаты шести опытов.

Интенсивность ультразвука 5,0 Вт/см², время действия ультразвука – 5,0 мин.

Таблица 4. Влияние интенсивности ультразвука на степень извлечения свинца и кадмия из жиров и масел

Интенсивность УЗ, Вт/см ²	Степень извлечения, %			
	Жир свиной		Масло подсолнечное нерафинированное	
	Pb	Cd	Pb	Cd
4,5	87	86	85	84
5,0	98	99	98	99
*5,0	96	97	96	97
6,0	98	98	98	99
7,0	98	99	98	98
7,5	83	84	83	88

*Частота ультразвука 12 МГц, время действия ультразвука – 5,0 мин. * При насыщении пробы CO₂*

Из табл. 4 видно, что интенсивность ультразвука 5,0-7,0 Вт/см² обеспечивает степень извлечения свинца и кадмия из жиров и масел 98-99%. Также из табл. 4 следует, что в основе интенсифицирующего действия ультразвука предположительно лежит комбинация действия акустических течений и кавитационных эффектов. Так, при проведении исследований в условиях не протекания звукохимических реакций – при насыщении пробы CO₂ [8, 9], степень извлечения свинца и кадмия несколько уменьшалась (табл. 4). При озвучивании растворов в условиях насыщения пробы CO₂, звукохимические реакции не идут, потому что CO₂ проникает в

кавитационную полость уже на ранней стадии ее развития и препятствует электрическому пробую или эффективно дезактивирует возбужденные состояния [8, 9].

В табл. 5 представлены результаты исследований по установлению оптимального времени действия ультразвука при кислотной экстракции свинца и кадмия из жиров и масел. Из табл. 5 следует, что оптимальное время действия ультразвука 5-8 минут. При действии ультразвука менее 5 мин и более 8 мин степень извлечения микроэлементов меньше оптимальной. Последнее объясняется образованием стойких эмульсий.

Таблица 5. Влияние времени действия ультразвука на степень извлечения свинца и кадмия из жиров и масел

Время воздействия ультразвука, мин	Степень извлечения, %			
	Жир свиной		Масло подсолнечное нерафинированное	
	Pb	Cd	Pb	Cd
4,5	94	95	95	94
5,0	98	99	98	99
6,0	98	98	98	99
8,0	98	99	98	98
8,5	80	78	70	72
9,0	54	53	51	49

Частота ультразвука 12 МГц, интенсивность ультразвука - 5,0 Вт/см².

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
РИИЦ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

Выводы

Таким образом, в результате проведенных исследований нами установлено, что возможно использование ультразвука сверхвысокой частоты для интенсификации кислотной экстракции свинца и кадмия из жиров и масел. Экспериментально установлены оптимальные параметры ультразвука: частота 12-15 МГц, интенсивность 5,0-7,0 Вт/см², время воздействия 5-8 мин. Также экспериментально установлено, что в основе интенсифицирующего действия сверхвысокочастотного ультразвука лежит комбинация акустических течений и кавитационных эффектов. Показано также, что использование интенсификации кислотной экстракции сверхвысокочастотным ультразвуком

позволяет повысить степень извлечения свинца и кадмия до 98-99%, что является более эффективным, чем использование ультразвука низкой частоты - 92 – 93 % и даже, использование одновременного воздействия ультразвука высокой и низкой частот - 96 – 97 %.

Разработана методика экспрессного определения свинца и кадмия в жирах и маслах. Правильность методики проверяли методом добавок, а также анализом одних и тех же проб альтернативной методикой, в качестве которой использовали методику с использованием одновременного действия ультразвука высокой и низкой частот (табл.1). Предел обнаружения свинца – 0,001 мг/кг, кадмия – 0,0004 мг/кг.

References:

1. (1992). *Atomno-absorbtsionnyye metody opredeleniya toksichnykh elementov v pishchevykh produktakh i pishchevom syr'ye*. Metodicheskiye ukazaniya Uтверzhdeny Gosudarstvennym komitetom sanitarno-epidemiologicheskogo nadzora Rossiyskoy Federatsii 25 dekabrya 1992 g. № 01-19/47-11.
2. (1994). *GOST 26929-94 Syr'ye i produkty pishchevyye. Podgotovka prob. Mineralizatsiya dlya opredeleniya soderzhaniya toksichnykh elementov*.
3. Yurchenko, O.I., Kalinenko, O.S., Belova, Ye.A., & Baklanov, A.N. (2015). Intensifikatsiya sukhoy mineralizatsii pishchevykh produktov parami okisliteley s IK oblucheniym. *Ukrainskiy khimicheskii zhurnal*, 81 (4): 98-102.
4. Yurchenko, O.I., Baklanov, A.N., Belova, E.A., Kalinenko, O.S., & Baklanova, L.V. (2015). Ultrasound to intensify of food dry mineralization by the oxidants in vapor form. *ISJ Theoretical & Applied Science*, 07 (27): 122-129.
5. Kubrakova, I.V. (2002). Mikrovolnovoye izlucheniye v analiticheskoy khimii: *vozmozhnosti i perspektivy ispol'zovaniya. Uspekhi khimii*, T. 71, № 4, pp. 327-240.
6. Chmilenko, F.A., & Baklanova, L.V. (1998). Atomno-absorbtsionnoye opredeleniye toksichnykh elementov v zhirakh i maslakh. *Ukrainskiy khimicheskii zhurnal*, 64 (2): 134-140.
7. Yurchenko, O.I., Kalinenko, O.S., Baklanova, L.V., Chernozhuk, T.V., et al. (2014). Dvukhchastotnyy ul'trazvuk v podgotovke prob zhirov i masel dlya opredeleniya zhirov i masel *Vestnik Khar'kovskogo natsional'nogo universiteta. Seriya «Khimiya»*, №11(36).Vynp. 24 (47), pp. 126–133.
8. Yurchenko, O., Baklanov, A., & Chernozhuk, T. (2021). *Chemical applications of ultrasound. On the use of ultrasound in the analyses and technology of brains and sodium chloride solutions*. Lambert academic publishing (2021) 185.
9. Margulis, M.A. (1986). *Zvukokhimicheskiye reaktsii i sonolyuministsentsiya: monografiya*. (p.288). Moscow: Khimiya.

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
ПИИИ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

SOI: [1.1/TAS](#) DOI: [10.15863/TAS](#)

International Scientific Journal Theoretical & Applied Science

p-ISSN: 2308-4944 (print) e-ISSN: 2409-0085 (online)

Year: 2022 Issue: 02 Volume: 106

Published: 07.02.2022 <http://T-Science.org>

QR – Issue



QR – Article



Anvar Djuraevich Djuraev

Tashkent Institute of Textile and Light Industry
Professor, Uzbekistan

Shokhzod Sunattulla o'g'li Chuliev

«NAVPROMLITMASH» LLC
Design engineer, Navoi, Uzbekistan

GEOMETRIC PARAMETERS OF THE BEVEL GEAR AND ITS CALCULATIONS

Abstract: Mechanical engineering is one of the most important industries in the industrial complex of our country. Therefore, the plans for the economic development of the industrial complex of Uzbekistan provide for an increase in the output of engineering products by at least 1.4 times, an increase in the range and renewal of its structure. The solution of this problem is possible with the widespread use of progressive technologies, equipment and tooling, mechanization and automation mean that correspond to modern achievements in science and technology. In turn, measures to modernize the means of production in mechanical engineering make it possible to improve the quality of manufactured products and make them competitive with the best samples of products on the world market.

Key words: gear, teeth, device, material, manipulator, system, alloy, machine, bevel gears, cutting edges.

Language: English

Citation: Djuraev, A. D., & Chuliev, Sh. S. (2022). Geometric parameters of the bevel gear and its calculations. *ISJ Theoretical & Applied Science*, 02 (106), 74-79.

Soi: <http://s-o-i.org/1.1/TAS-02-106-9> **Doi:**  <https://dx.doi.org/10.15863/TAS.2022.02.106.9>

Scopus ASCC: 2200.

Introduction

The main tasks in the field of mechanical engineering technology and the prospects for its development are: approximation of the shape of the workpiece to the shape of the finished product through the use of plastic deformation methods, powder metallurgy, special profile rolled products and other progressive types of workpieces; automation of technological processes through the use of automatic loading devices, manipulators, industrial robots, automatic lines, CNC machines; concentration of transitions and operations, the use of special and specialized machines; application of group technology and highly efficient equipment; the use of effective cutting fluids with their supply to the cutting zone; development and implementation of high-performance cutting tool designs made of hard alloys, mineral ceramics, synthetic superhard materials, high-speed and high-performance high-speed steels; widespread use of electrophysical and electrochemical methods of processing, deep

grinding; introduction of the latest methods of thermal and chemical-thermal treatment, application of wear-resistant coatings; At present, a number of fundamental transformations are taking place in mechanical engineering technology. In particular, the introduction of automatic design systems (CAD). These systems use powerful computers, with the help of which the following operations are performed: drawing a working drawing; calculation and design of the tool; printout of regulatory and technological documentation: issuance of control work programs for CNC machines. Analysis of the design and technical requirements Bevel - the wheel is designed to transmit the torque of the shafts located in parallel in the box. The main value of the bevel gear is to change the position of the axis of rotation, moving from a horizontal shaft to a vertical one. Bevel - the gear works in difficult conditions, so lubrication is done with oil mist. A shaft with two bearings 113 GOST 8338-75 is installed inside the bevel gear, which are fixed along the outer ring of the bearing with a thrust

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	ПИИИ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

ring B 100 GOST 13943 - 86. Two bearings 2007124 A GOST 27365-87 are installed on the outer surface ring B 120 GOST 13942-87 on the outer ring, the bearings are fixed by a flange. On one of the inner surfaces there is a ring gear that engages with a gear clutch.

They are used in all branches of mechanical engineering, where, according to the layout of the machine, it is necessary to transfer the movement between the intersecting axes of the shafts. Bevel gears are more complicated than cylindrical gears and require periodic adjustment. A special tool is required for cutting bevel gears. In comparison with cylindrical bevel gears, they have a large mass and size, and are

more difficult to install. In addition, one of the bevel wheels, usually a gear, is cantilevered. At the same time, due to the increased deformation of the cantilever shaft, the uneven distribution of the load across the width of the ring gear and noise increase.

The main geometric dimensions are determined depending on the module and the number of teeth. The height and thickness of the teeth of bevel gears gradually decreases as they approach the top of the cone. Accordingly, the pitch, module and dividing diameters change, which can be countless. The main geometric dimensions have the designations adopted for spur bevel gears

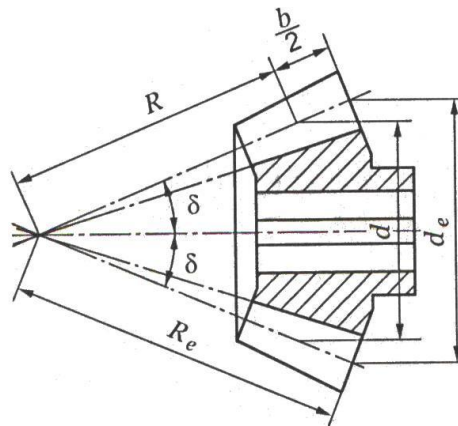


Figure 1. Bevel wheel geometry.

The forces in engagement are determined by the size in the average section of the gear tooth. Three forces act on the gear of a bevel spur gear Fig. 2:

District

$$F_{t1} = \frac{2T_1}{d_1}$$

radial

$$F_{r1} = F_r^1 \cos \delta_1 = F_{t1} \operatorname{tg} \alpha_w \cos \delta_1$$

axial

$$F_{r1} = F_r^1 \sin \delta_1 = F_{t1} \operatorname{tg} \alpha_w \sin \delta_1$$

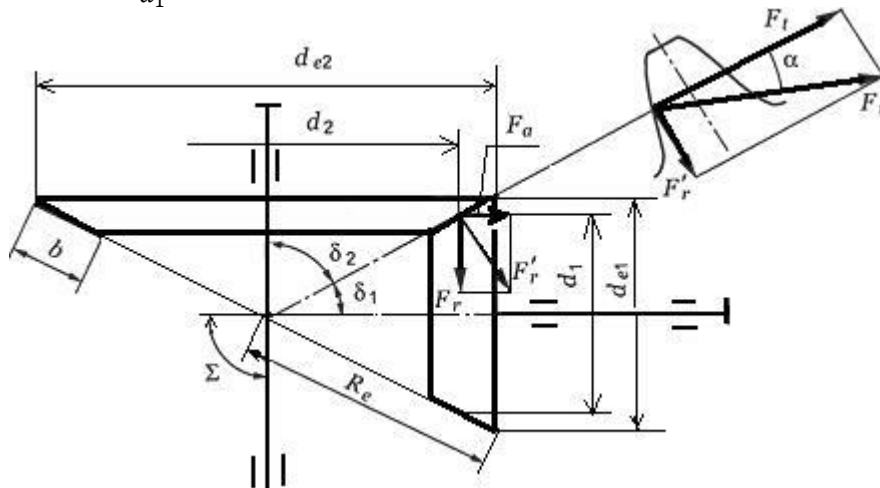


Figure 2. Scheme of the action of forces in the engagement of bevel gears.

For the wheel, the direction of forces is opposite, while:

$$F_{t2} = F_{t1}; F_{r2} = F_{a2}; F_{a2} = F_{r2}$$

The direction of the circumferential forces F, as in a cylindrical gear, depends on the direction of rotation of the wheels. Axial forces Fa are always directed from the tops of the cones, radial forces Fr -

Impact Factor:

SISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	PIHIIQ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

to the axes of rotation of the wheels. Bevel gears with circular teeth are predominantly used. Compared to bevel spurs, they are less sensitive to the violation of the accuracy of the relative position of the wheels, their manufacture is simpler. The disadvantage of gears with circular teeth is the change in the magnitude and sign of axial forces during reverse. The axis of a circular tooth is an arc of a circle corresponding to the diameter of the cutting head. Cutting teeth of the cutter head provides high performance and low-cost wheels. The angle of inclination of the circular tooth is variable. The angle on the circle of the average diameter of the wheel is taken as the calculated one, usually the Value is chosen based on ensuring smooth engagement.

It is known that the production of bevel gears with circular teeth is carried out on two types of gear cutting machines based on cone and flat-top production wheels. Tapered producing wheels give a theoretically correct geometry of the teeth of the bevel wheels within the accuracy of the machine tools, due to the use of setting the tilting tool spindle to the calculated engagement angle when using cutters with any values of profile angles. But gear cutting machines of this type are structurally complex, expensive and not widely used in mechanical engineering. They are produced in limited quantities by some machine tool firms in industrialized countries. Gear-cutting machines with a flat-top producing wheel, which are structurally simpler and less expensive, are used much more widely. But such machines do not give the theoretically correct geometry of the gear teeth, and therefore the companies that produce these gear cutting machines supply consumers with guidance materials that allow for corrections that reduce the error in the manufacture of gear teeth.

Instructional materials for the use of gear cutting machines with a flat-top producing wheel contain two types of tooth correction. The first type of correction is performed by a gear-cutting tool with cutters having different angles of cutting-edge profiles for cutting the concave and convex sides of circular teeth. This type of correction allows you to compensate for part of the tooth profile deviations.

Due to the wide variety of geometric parameters of gears, gear cutting heads are produced with a certain numbered range of nominal diameter and a normalized numbered range of cutters with established deviations in the cutting-edge profile angles. Since number cutters with a stepped size range do not allow to fully compensate for deviations in the profiles of circular teeth, the instructional materials provide for a second type of correction, by adjusting the settings of the actuators of gear cutting machines. In the manuals for the operation of machine tools, there are schemes for calculating the deviation of tooth profiles according to nomograms for correcting adjustment settings, which make it possible to

partially compensate for deviations in the tooth profile. The final correction is made after the operation of running in the bevel gear on the control-running machine by the method of empirical approximation by successive trials and changes in the machine's adjustment settings, which make it possible to obtain the shape of the teeth close to the theoretically correct geometry of the teeth. At the same time, the basis for the acceptance into operation of a conical pair is the criterion for the location and shape of the contact spot of the engagement of the teeth.

From the foregoing, it follows that the exact analytical dependences of the correction of circular teeth for machine tools with a flat-top producing wheel have not yet been established. Thus, for the production of bevel gears with circular teeth that meet high tribologies for the quality of engagement, it became necessary to develop new methods for correcting the production of bevel gears with circular teeth and conduct theoretical and experimental research, therefore, the topic of the dissertation work devoted to solving this problem is very relevant.

Gears, machined with cutters of gear heads and whose cutting edges are profiled according to new dependencies, give the correct contact patch in the engagement of the pair. This circumstance can serve as a basis for revising the known provisions and developing new normative and technical documentation for the geometry of numbered cutters of gear cutting heads. In order to reduce the range of numbered cutters used in the future, it is advisable to develop new methods for setting up and adjusting gear-cutting machines based on the above provisions to obtain the necessary geometry and the correct location of the contact patch in the gear mesh. It is known that correcting the running-in motion in bevel gear cutting machines with circular teeth is the main means of influencing the surfaces of the teeth of the gear being cut in order to give them deliberate deviations in order to obtain the proper dimensions, shape of the contact patch and eliminate deviations that violate the engagement. The introduction of a correction into the setting and adjustment of the gear cutting machine makes it possible to eliminate the difference between the calculated angle along the convex and concave sides of the circular tooth and the stepped numbered row of profile angles of the cutters of the gear cutting tool.

The bevel gear contains a gear and a wheel mounted rigidly on mutually perpendicular shafts, characterized in that the gear and the gear are made composite, including a hub and a rim with teeth, an elastic element is installed between them, in the form of a conical rubber bushing, while taper which are taken equal to the taper, respectively, of the bevel gear and the wheel and are installed opposite to the tapers of the gear six and the wheel.

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHII (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

The disadvantage of this transmission is the lack of absorption of peak values of load fluctuations (torques) on the transmission shafts when using the transmission in the drives of technological machines operating with variable loads. This leads to rapid wear of the teeth of the wheels, high noise, failure of the bearings, thereby reducing the service life of the gear, especially at high speeds.

In another gear train design, gears are mounted on shafts to obtain a variable gear ratio.

The disadvantage of this design is not a high transmission resource due to increased wear of the teeth, as well as the unbalance of the wheels, which leads to vibrations and breakdowns of the transmission elements.

The main disadvantage of the existing transmission design with bevel gears is also the lack of absorption of peak loads on the shafts in technological machines.

In addition, to keep the shafts in equilibrium, more expensive radial-thrust bearings are used as shaft supports, which are out of fear due to variable technological loads.

This design allows some absorption of peak torques. The disadvantage of this design is the lack of absorption of loads in axial directions. This can lead to increased wear of the wheel teeth due to fluctuations in axial forces when the wheels engage.

It should be noted that the value of axial forces in the engagement of bevel gears depends mainly on the angles of the conicity of the wheels. The greater the taper angle of the wheels, the greater the axial force, according to:

$$P_z = ptg\alpha\sin\delta$$

where,

p – district force;

δ – bevel gear taper angle;

α – engagement angle.

It can be seen from the formula that with an increase in the angle δ , the value of the axial force P_z increases. There is no P_z absorption in existing bevel gears.

The objective of the invention is the damping of axial forces in bevel gears, thereby increasing the service life of the transmission and, in general, the technological machine. The problem is solved by damping the axial forces during engagement of bevel gears.

The essence of the design lies in the fact that the bevel gear contains compound bevel gears, including a hub rigidly mounted on the shaft, and a rim with teeth between which an elastic element is installed, in

the form of a conical rubber bushing, while the taper of which is equal to the taper of the bevel gear, and oppositely installed in the wheel. The tapers of the rubber bushings of the gear and wheel allow the damping of axial forces in the transmission.

The design is too lazy drawing, where, in Fig.1 is a general diagram of a bevel gear.

The bevel gear transmission contains a composite bevel gear 1 including a hub 5 rigidly mounted on the drive shaft (not shown in the figure), a rim 6 with gear teeth 1, between which an elastic element is installed in the form of a conical rubber bushing 4. The taper of the rubber bushing 4 is made equal to the angle δ_1 taper gear 1, in the opposite direction. The gear bevel wheel 2 is also made composite of the hub 8, the rim 7 with the teeth of the wheel 2 and the conical rubber bushing 3. At the same time, the taper angle of the rubber bushing 3 is set opposite to the taper angle δ_2 of the wheel 2.

The bevel gear works as follows. The rim 6 with the teeth of the driving bevel gear 1 receives rotational motion from the drive motor and shaft (not shown in the figure), the hub 5, through the conical rubber bushing 4. When the teeth of the wheels 1 and 2 are engaged, the rotational motion between the perpendicular shafts is transmitted to the rim 7 with teeth and through a conical rubber bushing 3 hub 8 and further to the output shaft. Under the influence of external loads and technological resistances, the load, torques on the bevel wheels 1 and 2 will change. The rubber bushings 3 and 4 absorb the axial forces that occur when the bevel wheels 1 and 2 engage. The values of the tapers of the rubber bushings 3 and 4 are chosen equal to the corresponding tapers of the wheels 1 and 2; their opposite setting is effective and absorbs the damping of the axial forces.

The recommended bevel gear allows an increase in the service life due to the damping of axial forces in the gear.

Bevel gear refers to mechanical engineering and can be used in drives of technological machines operating with variable loads.

The objective of the invention is the damping of axial forces in bevel gears, thereby increasing the service life of the transmission and, in general, the technological machine. The problem is solved by damping the axial forces during engagement of bevel gears.

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
ПИИИ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

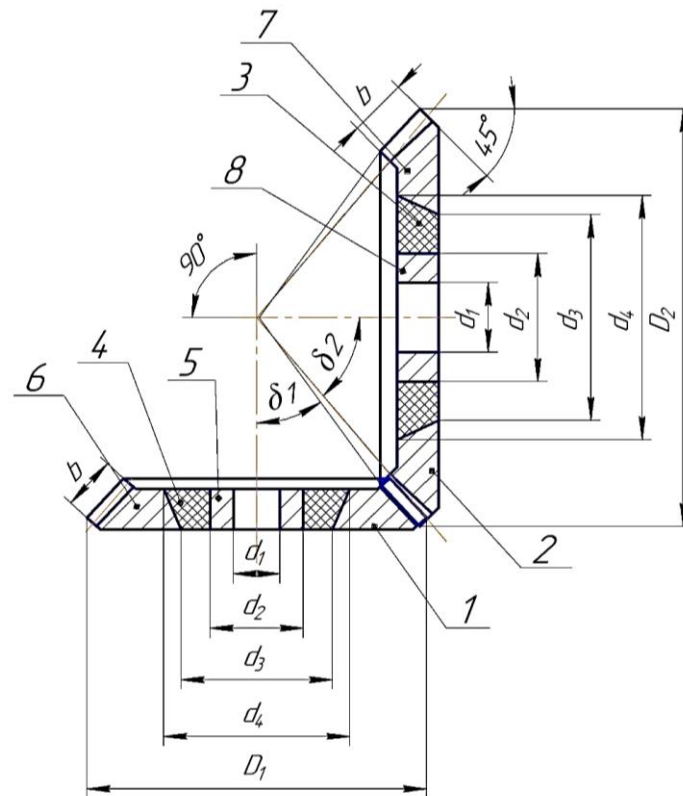


Figure 3. Geometric parameters of the bevel gear.

The essence of the design lies in the fact that the bevel gear contains compound bevel gears, including a hub rigidly mounted on the shaft, and a rim with teeth between which an elastic element is installed, in the form of a conical rubber bushing, while the taper of which is equal to the taper of the bevel gear, and oppositely installed in the wheel. The tapers of the rubber bushings of the gear and wheel allow the damping of axial forces in the transmission.

The main conclusions and results of the work are as follows:

1. An analysis of the deviation values of the tooth profile, calculated according to the dependence accepted in mechanical engineering and according to the refined dependence, shows significant discrepancies in the deviation values in absolute values, both for the concave and for the convex sides of the circular tooth, which forces us to reconsider the existing calculations of the tooth geometry error and

methods for their correction, used as guidelines in the production environment.

2. The obtained formulas for profiling the sides of the cutters of gear-cutting heads made it possible to develop new provisions for choosing the numbers of cutters for high-quality processing of bevel gears on gear-cutting machines. It was revealed that the deviation of the tooth profile takes place along the entire height of the tooth. It has been proven that in order to obtain a more accurate tooth profile, it is necessary to change the geometry of the cutting edges of the cutters of the cutting head. The compensated correction deviation of the profile of the teeth of the cutters in this case should be calculated by the formula, provided that the cutting edges pass the point of the engagement pole of the pair: cut - producing wheels. Gears machined with cutters of gear heads, the cutting edges of which are profiled according to new dependencies, give the correct contact patch in the engagement of the pair.

References:

1. Artobolevsky, I.I. (1988). *Theory of mechanisms and machines*. Ed. "Nauka", (p.639). Moscow.
2. (1976). *Gear*. Copyright certificate No. 514047, bull. No. 8.

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHII (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

3. Reshetov, D.N. (1974). *Machine parts*, Ed. "Engineering", (pp. 292-304). Moscow.
4. Djuraev, A., et al. (n.d.). *Gear*. Patent Res. Uzbekistan FAP01392.
5. Egamberdiev, I. P., et al. (2020). Research of vibration processes of bearing units of mining equipment. *International Journal of Advanced Trends in Computer Science and Engineering*, T. 9, №. 5, pp.7789-7793.
6. Yaxshiyev, S. N., Ashurov, Kh. K., & Mamadiyarov, A.J. (n.d.). Dynamics of Spindle Assembly of Metal-Cutting Machine. *International Journal of Engineering and Advanced Technology (IJEAT)*, pp. 2249-8958.
7. Jegamberdiev, I. P., Jahshiev, Sh. N., & Mamadiyarov, A. Zh. (2021). *Prognozirovanie tehnikeskogo sostojanija podshipnikovyh opor metallovezhushhih stankov po spektral'nym harakteristikam*. Sostav redakcionnoj kollegii i organizacionnogo komiteta.
8. Karimov, N. K., et al. (2020). *Povyshenie udarnoj vjazkosti konstrukcionnyh stalej termociklicheskoj obrabotkoj*. Estestvennye i tehnikeskie nauki: problemy transdisciplinarnogo sinteza, pp. 40-43.
9. Ahmedov, H. I., et al. (2017). *Analiz drobil'nogo agregata kak linejnaja staticheskaja sistema*. Luchshaja studencheskaja stat'ja 2017, pp.73-75.
10. Ibragimov, A. A., et al. (2017). *Interval'no-analiticheskie metody reshenija polnoj i chastichnoj problemy sobstvennyh znachenij*. Sovremennye tehnologii: aktual'nye voprosy, dostizhenija i innovacii, pp. 16-22.
11. Egamberdiev, I., Sharafutdinov, U., & Ashurov, K. (2021). *Investigation of the possibility of increasing the durability of steel castings 110G13L*. Glavnyj redaktor: Ahmetov Sajranbek Mahsutovich, d-r tehn. nauk; Zamestitel' glavnogo redaktora: Ahmednabiev Rasul Magomedovich, kand. tehn. nauk; Chleny redakcionnoj kollegii, p. 27.
12. Jegamberdiev, I. P., et al. (2021). *Ocenka vyhodnoj tochnosti shpindel'nogo uzla tokarnogo stanka NT-250 I*. innovacionnyj diskurs razvitija sovremennoj nauki, pp. 103-107.
13. Juraev, A., et al. (2021). *Modification of the structure of the bitter separator machine. strategija sovremennogo nauchno-tehnologicheskogo razvitija rossii: problemy i perspektivy realizacii*, p. 12-16.
14. Kulmurov, N. R., et al. (2020). Various issues in the field of setting nonstationary dynamic problems and analyzing the wave stress state of deformable media. *Theoretical & Applied Science*, №. 9, pp. 365-369.
15. Ashurov, K., et al. (2020). Applications metallographic and X-ray structural analysis. *Studencheskij vestnik*, №. 20-14, pp. 19-21.
16. Akhmedov, K. I., et al. (2020). Influence of integrated machining on the cutting capacity of fast-cutting steel R6M5. *Theoretical & Applied Science*, №. 9, pp. 322-327.

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHIQ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

SOI: [1.1/TAS](#) DOI: [10.15863/TAS](#)

International Scientific Journal Theoretical & Applied Science

p-ISSN: 2308-4944 (print) e-ISSN: 2409-0085 (online)

Year: 2022 Issue: 02 Volume: 106

Published: 08.02.2022 <http://T-Science.org>

QR – Issue



QR – Article



Gavkhar Shavkat qizi Abdiraxmonova

Konimex District Children's Music and Art School №4

Teacher. Navoi. Uzbekistan. 210501

ulugbekabdiraxmonov@gmail.com

Ezoza Kholpulat qizi Kilichova

Uzbek State University of World Languages

Student. Tashkent. Uzbekistan. 100000

ms.gilichova@gmail.com

THE IMPORTANCE OF MUSIC IN CHILDHOOD

Abstract: The article presents information on music and its importance on the development of child, state requirements for music, the importance of music in cognitive development of the brain, the role of music in working with children who have speech impairments[8].

Key words: music, education, musical movement, dance, listening to music, emotion, defect, rhythm, training.

Language: English

Citation: Abdiraxmonova, G. Sh., & Kilichova, E. Kh. (2022). The importance of music in childhood. *ISJ Theoretical & Applied Science*, 02 (106), 80-82.

Soi: <http://s-o-i.org/1.1/TAS-02-106-10> **Doi:**  <https://dx.doi.org/10.15863/TAS.2022.02.106.10>

Scopus ASCC: 3304.

Introduction

Music gives a person a happy mood, is a companion of the human heart, teaches to feel beauty. Music is a part of education.

From an early age, a person strives to listen to music, sing songs, and dance to various musical sounds. As a result of this aspiration, a person develops abilities, skills and talents.

The State Requirements for the Development of Preschool Children outlines the development of music education in children in terms of socio-emotional development and physical development.

Literature analysis and methodology

Preschool education is an important stage in the upbringing of children. A music educator has a special role to play in educating children aesthetically and morally. Musical education in the institution is an important area of aesthetic education.

Music is a world of joy and experience for children, which is manifested in a variety of musical and practical activities, such as listening to music, singing, moving to the accompaniment of music and

developing children's emotional feelings in the process of playing musical instruments.

Music is a rich resource for children's development. Helping children develop emotions is one of the most obvious roles of music: lullaby calms and soothes children, and children who hear lullaby say goodbye to their dolls. Soothing music doesn't have to be a song. In all ages and nations, mothers have sung low-pitched two-note melodies to their babies. In every culture, there are simple songs about love and holidays that children can memorize and help them express their feelings. Marsh gives a child a sense of pride and enthusiasm.

Discussion

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
ПИИИ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

Music can be a part of many activities throughout the day. But you have to be careful with the background music. In most cases, the music should be the center of attention of the children. Background music can be fun for adults, especially if it's popular music, but it can be distracting for kids.

Music can be a great way to enjoy your daily routine. You can weave or select appropriate songs, such as congratulatory songs. Singing when the whole group is together is a great activity. Singing is a great way to keep kids entertained during the holidays.

The result

It is a well-known fact that music plays an important role in working with children with speech problems and in restoring their speech. With such a group of children, the music director will achieve his goal if he works with a speech therapist teacher. Because there are not enough guidelines for organizing music lessons in this area.

In restoring speech in children with speech impediments, music directors are expected to pay more attention to logarithmics. Here:

- ◆ proper breathing;
- ◆ work on sound development;
- ◆ work on tempo and rhythm;
- ◆ development of hearing and memory;
- ◆ development of general and special motor skills;
- ◆ be able to work words correctly with actions;
- ◆ intonation and work on these registers;
- ◆ Games.

Every music director needs to know how to use exhibitions to make every music lesson fun and memorable for children. When organizing a class, the music director should keep in mind the following:

- ◆ training descriptions, new songs, dances,

exhibitions for used musical instruments;

- ◆ be able to connect parts together;
- ◆ communicate in a simple and low tone, taking into account the age characteristics of children to keep them interested;
- ◆ access to technical means;
- ◆ strengthening children's knowledge and skills through tests and puzzles;
- ◆ Organize musical action games using attributes and toys.

Here are some suggestions on how to use music during classes:

- ◆ - Use of pictures, portraits of composers and composers, shapes of different colors when listening to music;
- ◆ - Use of musical ladder visual aids, handouts and pictures in sound adjustment exercises;
- ◆ - Find the name of the song based on the pictures when singing;
- ◆ - Use of large picture cubes, magnetic tapes in lapars and dances;
- ◆ - When teaching musical movement and figurative games, teaching children to think by preparing the appropriate attributes for the game allows them to move independently in the staged process and plays an important role.

The above tips will work in your training.

Conclusion

In conclusion, we can say that music develops children's thinking, nurtures perception and emotion.

We must not forget that there are future music leaders among the little ones. When a music director picks fruit from a garden he has planted through his own labor, that fruit is our future students.

References:

1. Dmitriyeva, G.Ch. (n.d.). *"Methods of music education in school"*.
2. (1997). *Program T.1997y. "Methods of music education"*.
3. (n.d.). *Apraxina. "Methods of musical education"*.
4. Faziyev, O., et al. (1992). *"Methodical manual on the organization of musical education in schools of Uzbekistan"*.
5. Kabalevsky, D. (1977). *"How to speak to children in music lessons"*.
6. Sul'tonova, N. A., & Ulmasova, K. (2020). Developing the creative abilities of small school age people. *Internauka*, №. 3-2, pp.84-86.

Impact Factor:	ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
	ISI (Dubai, UAE) = 1.582	PIHII (Russia) = 3.939	PIF (India) = 1.940
	GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
	JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

7. Sultanova, N.A., Ibragimova, Sh., & Kholqoziyeva, D. (2020). Technologies of urbringing children in modern families / 2020/3. *European Journal of Research and Reflection in Educational Sciences*, - 2- 3, pp.115-119.
8. Sattarova, M. I. (2021). Musiqa va bola tarbiyasi. *Journal. Scientific progress*, v.2, issue 2. <https://cyberleninka.ru/article/n/musiqa-va-bola-tarbiyasi>

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
ПИИИ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

SOI: [1.1/TAS](https://doi.org/10.15863/TAS) DOI: [10.15863/TAS](https://doi.org/10.15863/TAS)

International Scientific Journal Theoretical & Applied Science

p-ISSN: 2308-4944 (print) e-ISSN: 2409-0085 (online)

Year: 2022 Issue: 02 Volume: 106

Published: 08.02.2022 <http://T-Science.org>

QR – Issue



QR – Article



Baxtiyor Allazarovich Muratov

National Institute of Fine art and design named after Kamaliddin Bekhzad

Independent researcher, Tashkent, Uzbekistan

muratovbaxtiyor@mail.ru

INTERNATIONAL RELATIONS OF THE STATE MUSEUM OF HISTORY OF UZBEKISTAN

Abstract: Over the years of independence, the State Museum of History of Uzbekistan has established international cultural and scientific ties with museums in such countries as the USA, Germany, South Korea, Kazakhstan, Egypt, Azerbaijan, Russia, Japan, etc.

Key words: museum, history, scientific, international, cultural.

Language: English

Citation: Muratov, B. A. (2022). International relations of the state museum of history of Uzbekistan. *ISJ Theoretical & Applied Science*, 02 (106), 83-86.

Soi: <http://s-o-i.org/1.1/TAS-02-106-11> **Doi:**  <https://dx.doi.org/10.15863/TAS.2022.02.106.11>

Scopus ASCC: 1200.

Introduction

The State Museum of History of Uzbekistan is considered one of the institutions that conducts fruitful activities to acquaint the international community with the material and cultural heritage of Uzbekistan. Over the years of independence, the State Museum of History of Uzbekistan has established international cultural and scientific ties with museums in such countries as the USA, Germany, South Korea, Kazakhstan, Egypt, Azerbaijan, Russia, Japan, etc. In particular, in 2002 the museum took part in the exhibition, held in the American Metropolitan Museum, with the display of one of its most famous exhibits - a stone amulet in the form of images of two snakes. This relic was found in the Fergana Valley and dates back to the 2nd millennium BC.

Analysis and results.

International relations of the State Museum of History of Uzbekistan are conducted in three main directions:

- Trainings and training seminars organized to improve the skills of museum staff;
- Scientific conferences and exhibitions organized at the international level;
- Joint archaeological research.

Young employees of the museum learn the secrets of museum business, restoration, conservation, museum management, archeology and other areas, not only through special courses organized at the museum itself, but also are sent for training and advanced training to other republics, as well as foreign countries. In 2008, several members of the museum took part in the courses on "Museum Management" and "Museum Business" organized by the UNESCO Office in Tashkent, as well as in the training seminars "Museum Management" (S. Petersburg, Russian Federation), "Museum business" (Korean National Museum, Seoul, Republic of Korea). In addition, a number of workers of the museum got acquainted with modern methods of restoration, metal objects, obtaining their copies in the framework of the training held in the Japanese city of Nara by the UNESCO Cultural Center in the Asia-Pacific Region (ACCU).

In 2009, the museum staff took part in such events as advanced training courses in the direction of "Museum Management" organized by the Ministry of Culture and Sport of the Republic of Uzbekistan and the Ministry of Culture of Egypt, lectures and open lessons of the OUDA (Operational Unit for Development Assistance), trainings on Restoration and Museum Studies, held at the German

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIIHQ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

Archaeological Institute (DAI) in Berlin, the capital of the Federal Republic of Germany, and at the Race-Engelhorn Museum (REM) in the German city of Mannheim, elu - at the Korean National Museum (Seoul, Republic of Korea), trainings conducted by Japanese archaeologists to photograph archaeological objects, pottery sketch, copying patterns of archaeological artifacts - the cultural heart of Caravanserai.

In 2010, museum staff took part in such events as training workshops on the theme "Restoration and preservation of fabrics" held at the Korean National Folklore Museum (Seoul, Republic of Korea), as well as restoration and museum studies conducted at the initiative of the Foundation Gerda Henkel at the German Archaeological Museum (DAI) and the German Ivory Museum in Eibach. In the same year, within the framework of the "MUSEUMstan" project of the "Desht-i-art" center, which operates in the Republic of Kazakhstan, the museum staff took an active part in the seminar devoted to the modernization and development of museums of Central Asia.

As a result of well-established international relations, in 2010 the museum's scientists took an active part in the "Special Project on Central Asia" of the Gerda Henkel Foundation and won the scholarship of the project. In 2012, within the framework of the international festival "Intermuseum 2012" on the activities of CIS museums, organized by the Ministry of Culture and Sport of Russia, the Russian branch of the International Organization of Museums and the Russian Museum Administration, the State Museum of Uzbekistan acquainted the participant with its activities. Within the framework of this festival, held at the Central House of Painters in Moscow on June 1-5, employees of more than 200 museums took part in seminars, master classes and other events in various areas.

In 2011-2013 specialists and scientists of the museum took part in such events as training on conservation of monuments, restoration, storage and methods of exhibiting ceramic and metal products found in archaeological excavations at the museum exposition (organized by the National Research Institute of the Republic of Korea for cultural heritage), as well as in the curriculum "Modern Children's Museums", organized in the Korean National Ethnographic Museum, and the master class "Design in Modern Museums" , conducted by the State Museum of Arts of Uzbekistan in cooperation with the Goethe Institute.

Employees of the museum who took part in the above-mentioned training programs and other events introduce knowledge gained in the course of the training seminars and thus make their worthy contribution to the development of the State Museum

of History of Uzbekistan. In particular, the museum was equipped with the latest world standards, adapted for children's psychology on the basis of the national style and national traditions of the Children's Museum.

For the first time in Uzbekistan, on 19 August 2011, the Children's Museum was organized under the State Museum of History of Uzbekistan at the Academy of Sciences of Uzbekistan. This museum is aimed at children's audience from 4 to 14 years. A child who has visited the museum will not only admire the exhibits, but will also have the opportunity to perform various activities, establish a dialogue with authentic historical events, touch the museum exhibit that interested him or try to make a copy of it.

If the children are engaged in archaeological research and excavations, search for coins and their dating, as well as other similar occupations in the Young Archeology Department of the museum, they get the opportunity to create ceramic toys by themselves in the department of the Young Potters, and in the History of Writing Department - to get acquainted with the history of the world's oldest written systems.

Through the second major direction of international relations of the State Museum of History of Uzbekistan, the museum staff continues to acquaint the international community with the material and cultural heritage, rich culture and history of Uzbekistan in the framework of scientific conferences and exhibitions held at the international level. In particular, on October 18, 2008, the Director of the State Museum of History of Uzbekistan, J. Ismailova, took part in the scientific and practical conference on the theme "International Conference on National Clothing" organized by the "Korean Scientific Society of Garments": "From history of Uzbek national clothes "and the deputy of museum on scientific work O. Yu. Aripdjanov with a report on the topic "Clothing of Bactrians in the Kushan period." In addition, museum researchers participated with their reports on the intangible cultural heritage of Uzbekistan in the framework of the conference on "Ecoculture of Asia", was held on 12-18 October 2009 in the capital of the Republic of Korea - Seoul. Also, within the framework of the conference, they gave a lecture on the culture and traditions of Uzbekistan to a group of students studying Uzbek at the University of Khankuk.

Within the framework of the international exhibition "Ancient History of Uzbekistan", held from November 17, 2009 to September 26, 2010 in the Korean National Museum (Seoul, Republic of Korea), the staff of the State Museum of History of Uzbekistan arranged a display of the material culture of Uzbekistan from the ancient period to the 8th century, while the exposition absorbed the monuments of

Impact Factor:

ISRA (India)	= 6.317	SIS (USA)	= 0.912	ICV (Poland)	= 6.630
ISI (Dubai, UAE)	= 1.582	PIIHQ (Russia)	= 3.939	PIF (India)	= 1.940
GIF (Australia)	= 0.564	ESJI (KZ)	= 9.035	IBI (India)	= 4.260
JIF	= 1.500	SJIF (Morocco)	= 7.184	OAJI (USA)	= 0.350

culture of the Bronze and Iron Ages, as well as relics of culture and art of ancient Sogd. The catalog of the exhibition is published in four languages (Uzbek, Russian, English, Japanese) under the name "The crossroads of civilization: Ancient culture of Uzbekistan" ("At the crossroads of civilizations: Ancient culture of Uzbekistan").

The catalog contains photographs of more than 30 exhibits of the State Museum of History of Uzbekistan, as well as information about their dating and places of discovery. In particular, the exhibition catalog reflects such interesting relics as a necklace from the Zamonbobob site of the Bukhara oasis, dating back to the end of the III - beginning of the II millennium BC, objects of cosmetics and everyday life - bottles for antimony, hairpins, beads, bronze mirrors and seals relating to the XVII-XVI centuries. BC, found in a settlement of the proto-city type Sapallitepa, located in the Surkhandarya region.

In addition, in 2011 the National Ethnographic Museum of the Republic of Korea organized and conducted an exhibition in the State Museum of History of Uzbekistan on the theme "Traditional Culture of Korea". The exhibits that took their place in this exposition not only give a full and wide picture of everyday products, traditional cuisine, housing, writing materials, clothes, masks and other attributes of the traditional culture of Eastern Asia, but also get a close acquaintance with the culture of Korea and the way of life of the Korean people. The exhibition was supplemented by documentary videos reflecting the rich and unique nature of Korea, its sights, places of visit and tourist sites, as well as the life of the Korean people.

Within the framework of the exhibition "Traditional Culture of Korea", the exposition "The Life Image of Koreans" from eight paintings executed on cloth reflecting the traditional way of life of the Korean society was also shown.

The exhibits shown at the exhibition were donated by Korean scientists, left for storage at the State Museum of History of Uzbekistan.

From 3rd September to 2nd November 2014, the exhibition "Arirang - the heart of Korea" was held at the museum in cooperation with the Korean National Folklore Museum, Jeongseon Arirang Research Institute and the Korean Foundation. The exhibition was dedicated to the Korean folk song Ariran, and modern progressive technologies and new styles of exhibitions of this kind were used to familiarize the visitors of the museum with Korean culture and art, as well as to popularize this song at the international level and to acquaint them with wide sections of society.

In 2014, the State Museum of History of Uzbekistan, in cooperation with the University of Dortmund and the National Institute of Arts and

Design of Uzbekistan named after Kamoliddin Behzod, organized an exhibition of Uzbek national and modern clothes "Tradition and Modernity". Within the framework of the exhibition, the national clothes preserved in the museum collection were demonstrated, as well as modern clothes created by Uzbek designers in modern style from national and traditional fabrics. The display of national and traditional women's clothing, which has historical value and is stored in museum funds, their fabrics, together with modern clothes created by Uzbek designers from national types of fabrics with the use of modern style and design, significantly increased the significance of the exhibition, and helped foreign specialists who took part in the work of the event, to create a complete picture of the traditional and modern national dress of the Uzbek people.

Every year the participation of museum staff in scientific and practical conferences of international level in the framework of international relations of the State Museum of History of Uzbekistan is expanding. In particular, on December 5-10, 2009, the ICOM-ASPAC Conference took place in Tokyo, the capital of Japan. Within the framework of the conference, the scientists of the museum made a presentation on the theme "Protection of cultural heritage in the State Museum of History of Uzbekistan under the Academy of Sciences of the Republic of Uzbekistan". The report familiarized the participants of the scientific event with the unique exhibits kept in the museum, the work of the foundation, the restoration process, the achievements of the museum in the field of protecting the cultural heritage of Uzbekistan, etc.

If we consider the international relations of the State Museum of History of Uzbekistan in 2011, we can observe a serious increase in the participation of museum scientists in various kinds of scientific events. As evidence of this opinion, it should be mentioned that the representatives of the museum took part in a scientific conference on the theme "Global perspectives of the history of art", organized and conducted on February 7-12, 2011 by the Department of Art History of the University of Minnesota, USA. The scientific employee of the museum, at the event, made a presentation on the theme "From the treasury of art history of Uzbekistan", in which he acquainted the participants with studying the history of Uzbekistan's art and research projects of the republic's scientists in this field, and acquainted the audience with such remarkable archeological monuments as Dalvarzintepa, Khalchayan, Kampirtepa, Old Termez, Ayrtam and other monuments of the Kushans period, located in the territory of Surkhandarya region. In archaeological excavations they were joined along with the staff of the Institute of Art Studies, the Institute of Archeology and the staff of the State Museum of History of Uzbekistan. Participants were

Impact Factor:

ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
ISI (Dubai, UAE) = 1.582	PIIHQ (Russia) = 3.939	PIF (India) = 1.940
GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

also informed about the discoveries related to these studies and the progress of ongoing research.

October 17, 2011 in Kazakhstan there was a scientific and practical conference on the theme "The 40th anniversary of the South Kazakhstan Complex Archaeological Expedition: the picture and results of research conducted in 1971-2011, the restoration of objects, the questions of museumification of monuments, the development of tourism." Scientific employees of the museum took part in the work of the above-mentioned event with the thesis of the report devoted to the issues of scientific research of Kang state coins. In the second part of the practical part, practical sessions were held devoted to such issues as the organization of an open-air museum in the city of Otrar, the museumification of archaeological sites.

The State Museum of History of Uzbekistan is considered to be one of the main museum institutions that conducts fruitful activities in the field of acquaintance of the world with unique archeological monuments of Uzbekistan.

In September 2013 the State Museum of History of Uzbekistan signed a five-year agreement with the Museum of the University of Tokyo to study and study the monuments of the Stone Age in Uzbekistan. Studies within the framework of the agreement began with the study of the monuments of the Stone Age epoch of the Yakkabag and Chirakchi regions of the

Kashkadarya region, as well as the Nurata district of the Navoi region.

In October 2013 the international Uzbek-Japanese expedition, aimed at the search and study of new archaeological monuments of the Stone Age on the territory of Uzbekistan, conducted work in the Yakkabag district of the Kashkadarya region and the Nurata district of the Navoi region. Archaeological expedition began work with the study of the Turnasay Valley. Uzbek archaeologists B. Sayfullaev, A. Radjabov, R. Suleymanov, O. Aripdjanov and Japanese scientists J. Nishiaki, M. M. Naganuma, H. Nakata, T. Miki conducted archaeological research. During the archaeological expedition, several caves in the Turnasay Valley were explored. However, these layers were relatively young, and layers of the Stone Age era were not found.

Conclusions.

In 2014, the expedition continued its work in the cave of Angalak, as a result of which four stone layers belonging to the Middle Paleolithic were found and studied in four cultural layers of the cave. In general, as a result of research in 2014, a large amount of findings of the Middle Paleolithic was discovered. Among the archaeological finds there are stone tools and animal bones. These studies, among other things, allowed to restore the diet of primitive people in the territory of Uzbekistan.

References:

1. Sadykova, N.S. (1975). *Muzejnoe delo v Uzbekistane*. Tashkent.
2. Ahmedov, Zh., & Ahmedova, R. (2021). O dejatel'nosty Gosudarstvennyj muzej istorii Uzbekistana. «Aktual'nye nauchnye issledovanija v sovremennom mire» Zhurnal, Vypusk 3(71), Chast' 9, Perejaslav, pp. 101-104.
3. Glass, Jy.I., & Landa, L.M. (1961). *Muzei Uzbekistana. Putevoditel'-spravochnik*. Tashkent: Gosizd.
4. Axmedov, Zh., & Muhamedova, M. (2016). Bolalar muzeji - ma#navij tarbiya maskani. *YzMU habarlari*, №2, pp.4-6.
5. Al'meev, R. (2007). *Muzei Uzbekistana i social'no-kul'turnye perspektivy ih razvitija*. Tashkent.
6. Ahmedov, Zh. (2015). Fergana vchera i segodnja. *Mir muzeja*, Moskva, №4, pp. 47-48.
7. Ahmedov, Zh. (2016). Sokrovishha Fergany. *Mir muzeja*, Moskva, №8, pp. 53-55.
8. Ahmedov, Zh. (2016). Muzeeficirovat' na meste. *Mir muzeja*, Moskva, №11, pp. 53-55.
9. Ahmedov, Zh. (2021). Bronzovyy sakskej kotjol. *Mir muzeja*, Moskva, №10, pp. 51-52.
10. Ahmedov, Zh., & Tulkinova, S. (2021). Kamennye busy i bronzovye zerkaly iz Sapallitepy. «Aktual'nye nauchnye issledovanija v sovremennom mire» Zhurnal, Vypusk 4(72), Chast' 9, Perejaslav, pp. 80-82.

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIIHQ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

SOI: [1.1/TAS](#) DOI: [10.15863/TAS](#)

International Scientific Journal Theoretical & Applied Science

p-ISSN: 2308-4944 (print) e-ISSN: 2409-0085 (online)

Year: 2022 Issue: 02 Volume: 106

Published: 15.02.2022 <http://T-Science.org>

QR – Issue



QR – Article



Zulfizar Sharipovna Yusupova
Bukhara State University
base doctoral student

METHODOLOGY OF INCREASING STUDENT LEVEL OF PHYSICAL PREPARATION THROUGH PHYSICAL EDUCATION CLASSES IN PRIMARY EDUCATION

Abstract: The article describes the methods of organizing physical education in preschool and primary education on the basis of focusing on children's health. The author also points out that due to the diversity of children's physical fitness and mobility in the organization of the lesson, teachers should achieve their goals individually with each student, rather than dividing them into levels.

Key words: Health and fitness, pupils' physical preparation levels, physical instruction which makes health and fitness, approaching differential, pupils who acquire well and fast, pupils who acquire slowly.

Language: English

Citation: Yusupova, Z. Sh. (2022). Methodology of increasing student level of physical preparation through physical education classes in primary education. *ISJ Theoretical & Applied Science*, 02 (106), 87-89.

Soi: <http://s-o-i.org/1.1/TAS-02-106-12> **Doi:**  <https://dx.doi.org/10.15863/TAS.2022.02.106.12>

Scopus ASCC: 3304.

Introduction RELEVANCE

The attention paid to the upbringing and health of the younger generation today is the attention paid to the future. It is no secret that unprecedented work is being done in our country in this area, including in a number of areas to improve the health of the population. It should be noted that pre-school education and upbringing of physically and spiritually mature people from primary school age is one of the most pressing issues facing education today. To this end, the development of physical culture and sports in Uzbekistan is considered at the level of state policy, used as a field. It is no secret that thanks to independence, our country has made great strides in the development of this industry. In order to educate the younger generation, sports complexes that meet the requirements of state standards have been built and are operating effectively. Physical education and sports should be an integral part of the overall culture of the country's citizens. At the current stage of development of humane society, in the field of physical culture and sports, issues related to improving the general level of physical fitness of students, the development of their abilities are important. Physical education classes in primary

education are aimed at developing students' motor knowledge and skills, laying the foundations for physical fitness, which will help them to develop in all respects. Physical fitness is the most important condition for good health, and its improvement depends on the fact that physical education in schools is aimed at improving the quality of health.

Research method: Theoretical analysis and generalization of the literature, pedagogical observation

Results and discussion: Traditionally organized physical education classes are aimed at developing certain physical abilities of schoolchildren, the formation of knowledge and skills that are characteristic of this age group, the knowledge that meets the requirements of physical education. Due to the diversity of children's physical fitness and mobility in the organization of such training sessions, physical education teachers need to achieve their goals individually with each student or by dividing them into levels. However, little attention is paid to this issue in the educational process.

An important aspect of the modern concept of physical education for students is that it aims to increase the role of the problem of health in physical education classes. Unfortunately, not enough attention

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIIHQ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

is paid to this area in the educational process. Our observations show that effective methods of combining theoretical and methodological knowledge with health-improving technologies in the process of physical education for primary school students have not been fully developed. Finding a solution to this problem is extremely important in strengthening and maintaining the health of primary school students with varying degrees of physical fitness. Another shortcoming of the previously developed system of physical education classes is that its main purpose is not educational, but educational. In the school physical education system, as well as the lack of an individual approach to physical exertion exercises, taking into account the physical development and functional readiness of students. This is partly due to the fact that diagnostic methods are not used to determine the level of physical health. To improve the physical fitness of society, especially children, physical education and sports should become an integral part of daily life for all segments of the population. An effective way to do this is to develop a positive attitude towards the system of physical education and sports in children. The solution to this problem largely depends on the level of interest and satisfaction of the children involved in these activities. Therefore, the study of attitudes to physical education and sports is directly related to the theoretical and practical pedagogical education, which serves to form an attitude that implements not only social and psychological, but also the principle of consciousness and activity in the classroom. It is also an important issue. Exploring the origins of students' dissatisfaction with physical education and sports classes will help them learn about attitudes toward exercise and increase their participation in physical education classes. The need for a comprehensive individual approach to physical education has arisen due to a number of factors that are allowed in physical education classes. General education, which is the same for all children to demonstrate their abilities and talents, does not guarantee their intensive development. This is primarily due to the heterogeneity of students in the same class, the diversity of their interests and abilities. There may be students in the groups who are already familiar with the material being taught, and the movement exercises may not be a problem. The participation of such students in the lessons is taken into account by the teacher, and in order to achieve a relatively high level of mastery, it is necessary to develop a more complex task, to deepen the motor exercises. At a time when one student is already learning motor skills, another student may already be mastering that knowledge perfectly. During the movement training, each group completed an exercise based on their physical fitness. The importance of the attractive aspects of physical culture also varies with age. If younger schoolchildren are generally interested in physical activity (children

love to run, jump, and play, even if they don't think it's a means of physical and mental development), teenagers are more likely to engage in exercise for a specific purpose. are engaged. For high school students, first of all, their life plans, that is, the interests associated with preparing them for a particular professional activity, are formed.

Given the specific reasons for the interest of schoolchildren in physical culture, the physical education teacher is committed to the promotion of physical culture, regardless of the material covered in his work. should build on the formation of interest. At the same time, schoolchildren have different interests in different programming materials. In elementary school, boys prefer sports and girls prefer movement games. In these classes, all other exercises in the curriculum are enjoyed by students approximately equally.

Beginning in 3rd grade, interests begin to vary more and more. One-third of girls prefer gymnastics and acrobatics and at the same time do not like general developmental exercises.

School children often refrain from such exercises because they do not fit the purpose of going to class: running, playing, talking to friends. Therefore, in order for school students to perform all the exercises conscientiously, it is necessary to form in them a long-term goal of attending physical education classes - self-development.

The task of a physical education teacher is to instill in schoolchildren a sense of purpose, that is, a desire to achieve a goal that is long overdue. When a goal is important to a student, meets his or her interests and interests, and is considered achievable by him or her, purposefulness arises.

In some cases, the interests and purposefulness of school children engaged in sports may conflict with the physical education tasks of these school students in physical education classes.

Interest in physical education and sports are different stages in the development of an interest. An interest in physical education can turn into an interest in sports, or vice versa.

Active interest is an interest in physical education classes. A passive interest in physical culture is a wonderful, informative, and cognitive interest that is not related to active exercise. Thus, interest in physical culture is an integral result of complex processes in the motivational field of school students.

However, interest in physical education is always raised and conducted in any subject, but the impact of interest on being is still insignificant: only a few of the hundreds of high school students engage in physical education independently.

The fact is that the motivation for the student is internal and external. Interest arises only on the basis of internal motivation. It is, paradoxically, that it allows the student to cope with great physical and

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHLI (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

neuro-emotional stress with interest at his or her own request. At the same time, the student performs tasks and exercises with enthusiasm, as if pushed by some invisible current.

First graders feel and behave this way in emotional and plot-based games. They have a natural, innate inner motivation for such games. However, in connection with socio-pedagogical tasks, factors, conditions and in connection with the development of the student's personality, various means, methods, external rag to form and develop an interest in physical culture. batlant; competitions will be required at the same time. However, internal motivation arises only when external motivation (assignments, exercises, standards, requirements, etc.) meets the child's capabilities, when he feels satisfied with the learning process and is inspired to succeed in fulfilling these external requirements.

CONCLUSION

In modern conditions, the problems of improving the educational process in physical culture,

the formation of interest in physical culture and sports, in particular, the formation of a healthy lifestyle through systematic physical education are of particular importance.

Students' interests in physical education vary: health, desire to shape, desire to develop willpower, etc. Boys and girls have different interests: girls often have a beautiful figure, flexibility, elegance of movement and gait. thinks about, less speed, endurance, strength development. Boys want to develop strength, endurance, speed, agility.

The importance of the attractive aspects of physical culture also varies with age. If younger schoolchildren are generally interested in physical activity (children love to run, jump, and play, even if they don't think it's a means of physical and mental development), teenagers are more likely to engage in exercise for a specific purpose. are engaged. For high school students, first of all, their life plans, that is, the interests associated with preparing them for a particular professional activity, are formed.

References:

1. Abdullayev, A., & Xankeldiyev, Sh.X. (2005). *Theory and methods of physical education: A textbook for the faculties of physical education of the Institute of Physical Education and higher education institutions*. (p.232). Tashkent.
2. Goncharova, O.V. (2005). *Development of physical abilities of young athletes. Study guide*. (p.172). Tashkent.
3. Yusupova, Z.Sh. (2019). Principles and methods of organization of physical culture and sports events in educational institutions. *Academy*, №. 5 (44).
4. Djumaturdiyevich, A. S., & Yusupova, Z. Sh. (n.d.). *Scientific reports of bukhara state university*. (p.271).
5. Yusupova, Z.Sh. (2021). Methodology for teaching physical lessons using digital technologies in primary school. *Bulletin of science and education. Nauchno-metodicheskiy zhurnal*, 20.10.2021, №15 (118) chast 3.
6. Mukhitdinova, N.M. (2020). Methodology of physical exercises and games in preschool educational organizations. *Problems of Science*, No. 9 (57), pp. 81-83.
7. Mukhitdinova, N.M. (2020). Mehanizm intellektual'nogo razvitija u detej doshkol'nogo vozrasta s pomoshh'u sportivnyh igr. *Problemy nauki*, 9(57), pp.81-83.
8. Turaev, M. M. (2021). Metody prepodavanija fizicheskogo obrazovanija i ih vazhnye aspekty. *Problemy nauki*, №. 2 (61), pp.35-37.
9. Mukhitdinova, N.M. (2021). Development of the preschool education system in foreign countries (example of Great Britain and Germany) *Academic Research in Educational Sciences ARES* 2021.10.10, pp.503-508.
10. Muxitdinova, N.M. (2021). Physical educational activities with children educational methods and organizations used in organization general description of them Middle European scientific bulletin, 12 May, 498-503.

Impact Factor:

ISRA (India) = 6.317
 ISI (Dubai, UAE) = 1.582
 GIF (Australia) = 0.564
 JIF = 1.500

SIS (USA) = 0.912
 ПИИИ (Russia) = 3.939
 ESJI (KZ) = 9.035
 SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
 PIF (India) = 1.940
 IBI (India) = 4.260
 OAJI (USA) = 0.350

SOI: [1.1/TAS](#) DOI: [10.15863/TAS](#)

International Scientific Journal
Theoretical & Applied Science

p-ISSN: 2308-4944 (print) e-ISSN: 2409-0085 (online)

Year: 2022 Issue: 02 Volume: 106

Published: 17.02.2022 <http://T-Science.org>

QR – Issue



QR – Article



Mohira Zhumakulovna Karimova
 Tashkent State Agrarian University
 English teacher
 Department of Languages

Makhfurat Khalilovna Nurmatova
 Tashkent State Agrarian University
 English teacher
 Department of Languages

SYNTAXIC CONVERGENCE AND ITS ROLE IN CREATING THE EXPRESSIVENESS OF A ARTWORK

Abstract: When interpreting a work of art, it is important to note that language expressive means in fiction are not a simple accumulation of elements belonging to different levels of language. They often interact with each other within individual levels and at different levels, reflecting systemic relations characteristic of the language in the images created. In the process of learning the stylistic analysis of texts, the fact that images, ideas, events important for the text are transmitted not by one isolated stylistic device, but by their whole complex is often not taken into account. Expressive syntax plays an important role in creating the expressiveness of a literary text. Due to the complexity and diversity of the stylistic functions of syntactic expressive means (VS) and stylistic devices (SP), the expressive fabric of the work is created. When mastering the techniques of stylistic analysis of a work of art, it is necessary not only to identify what expressive means the author uses, but also to answer the question of how linguistic means are used and why they were selected. [1, 15]

Key words: syntactic convergence, language means of expression, teaching stylistic analysis.

Language: Russian

Citation: Karimova, M. Zh., & Nurmatova, M. Kh. (2022). Syntactic convergence and its role in creating the expressiveness of a artwork. *ISJ Theoretical & Applied Science*, 02 (106), 90-92.

Soi: <http://s-o-i.org/1.1/TAS-02-106-13> **Doi:** <https://dx.doi.org/10.15863/TAS.2022.02.106.13>

Scopus ASCC: 1200.

СИНТАКСИЧЕСКАЯ КОНВЕРГЕНЦИЯ И ЕЕ РОЛЬ В СОЗДАНИИ ЭКСПРЕССИВНОСТИ ХУДОЖЕСТВЕННОГО ПРОИЗВЕДЕНИЯ

Аннотация: При интерпретации художественного произведения важно отметить, что языковые выразительные средства в художественной прозе не являются простым скоплением элементов, относящихся к различным уровням языка. Они нередко взаимодействуют друг с другом в пределах отдельных уровней и на разных уровнях, отражая в создаваемых образах характерные для языка системные отношения. В процессе обучения стилистическому анализу текстов часто не учитывается тот факт, что важные для текста образы, идеи, события передаются не одним изолированным стилистическим приемом, а целым их комплексом. В создании экспрессивности художественного текста важная роль принадлежит экспрессивному синтаксису. Благодаря сложности и многообразию стилистических функций синтаксических выразительных средств (ВС) и стилистических приемов (СП) создается выразительная ткань произведения. При овладении приемами стилистического анализа художественного произведения необходимо не только выявить, какие выразительные средства использует его автор, но и ответить на вопрос, как используются языковые средства и почему отобраны именно они. [1, 15]

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
РИИЦ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

Ключевые слова: синтаксическая конвергенция, языковые выразительные средства, обучения стилистическому анализу.

Введение

Как известно, не только частота употребления того или иного стилистического приема определяет его роль в контексте. Большое значения имеет его контакт с другими СП: именно тогда количественные отношения перерастают в качественные, т. е. одновременное использование нескольких СП является не механическим соединением стилистических элементов которые независимо друг от друга усиливают художественную выразительность текста - взаимодействие СП ведет к созданию качественно нового стилистического комплекса. Наряду со стилистической конвергенцией существует понятие синтаксической конвергенции (СК). Оно было введено и изучалось в работах И.В. Арнолд, Н.Н. Золиной, А.А. Мальченко, М.Е. Обнорской и других стилистов.

Несмотря на то, что эта проблема была изучена в течение длительного времени, она остается одной из актуальных и нерешенных с позиции существующих научных парадигм в этой области. Этнический и культурный анализ языка становится и рассматривается на сегодняшний день гораздо шире, поскольку он отошел от анализа и сравнения только речи презентация исследования дискурса, например, культурное коммуникативное поведение лица в качестве участника определенного общества. Психологи, изучающие проблемы межкультурной коммуникации обращают особое внимание на познавательные или когнитивные ресурсы дискурса и описать особенности познания. Философия, культурология и этнология полагают, что ценности, нормы, и история знание различных культур и религии ведут к успешной межкультурной коммуникации.

Все эти исследования оказывают перманентное влияние на методы и методологию развития межкультурной компетентность как неотъемлемое условие в решении проблемы межкультурных и коммуникативных контактов. Как известно, межкультурная компетенция является фоновым знанием образованного человека определенного лингвокультурного общества. Лингвистический толковый словарь дает следующее определение: “фоновые знания – это информация, которая имеет важное значение для понимания ситуации или проблемы в процессе коммуникации” [6, с. 134].

Фурманова В.П., например, говорит о следующем необходимых фоновых знаниях: 1) исторический фон (включая основные постулаты культурной жизни, факты определенного социума в своем историческом развитии, 2) социально-культурный фон, 3) этнокультурный фон (в том

числе информацию о повседневной жизни традиций, праздниках и торжеств, обрядов и ритуалов), 4) семиотический фон (включая знание символов и определенных особенностей вербальной и невербальной коммуникации) [6, с. 45].

Большая часть ученых классифицирует дополнительно к языковым факторам также географические, культурные, исторические, политические и этнографические. Одной из интересных позиций была предложена В.П. Конечкой, которая считает культурную консонанту и как предмет объективной реальности, и как специфического референта, т.е. элемент объективного аспекта на данный момент, имея свое отражение в сознании в виде языкового эквивалента [4, с.43]. Согласно этой позиции, можно выделить три основные группы англоязычного культурного общества в соответствии с узбекским: 1) универсалии (явления) - референтов, которые идентичны по своим основным и вспомогательным показателями в сравнении различных культур (солнце, воздух, вода); 2) квази-реальности - референтов, которые идентичны по их существенным показателям, но отличаются от них своеобразными особенностями (грант-стипендия, колледж - педагогический институт); 3) собственные реалии - референтов, которые являются уникальными их основных и вспомогательных указаний и имманентны к одному из сравниваемых культур.

Синтаксическая конвергенция определяется в этих работах как синтаксическая конструкция, состоящая из подчиняющего слова и элементов, которые находятся в тождественных синтаксических отношениях подчинения к главному слову. Таким образом, в данной интерпретации СК представляет собой одну из разновидностей повтора. Принимая за исходное выдвинутое М. Риффатером определение стилистической конвергенции, мы предлагаем рассматривать синтаксическую конвергенцию как один из аспектов этого явления, а именно как сочетаемость синтаксических ВС и СП, взаимодействующих в одном контексте (т.е. шире, чем вышеназванное понимание СК). Существует несколько оснований для того, чтобы определить явление концентрации синтаксических ВС и СП в одном контексте термином «синтаксическая конвергенция». Во – первых, применяя термин «конвергенция», М. Риффатер не конкретизирует ее материальный состав, не дифференцирует типы возможных сочетаний приемов. Во – вторых, конвергенция рассматривается в лингвистике как развернутый троп, т. е. это явление может не

Impact Factor:

ISRA (India) = 6.317
ISI (Dubai, UAE) = 1.582
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
РИИЦ (Russia) = 3.939
ESJI (KZ) = 9.035
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

только охватывать сочетания разно уровневых приемов, но и обозначать комбинацию нескольких ВС одного уровня. Следовательно, СК относится к одной из разновидностей того явления, при котором «стилистическая значимость, стилистический эффект... создаются не языковой единицей как таковой – не фактом ее присутствия и не фактом ее адекватности или несоответствия денотату, а фактом совместной встречаемости, соотношенности в тексте данной единицы с другой

единицей [2, 48].

Таким образом, на сочетаемость синтаксических ВС и СП и, следовательно, на образование СК в значительной степени влияют структурные и функциональные особенности каждого из компонентов, образующих ее. Исследование показывает, что выразительная сила СК прямо пропорциональна числу стилистические отмеченных структур.

References:

1. Solganik, G.Ja. (1984). *O sintaksicheskoj strukture.*
2. Gal`perin, I.R. (1980). *Modal`nost` teksta.* Moskva.
3. Grishaeva, O.N. (1985). *Mnogomernost` mezhdru predlozhenijami.* Moskva.
4. Kovalev, V.P. (1991). *Jazykovye sredstva russkoj hudozhestvennoj prozy.* Kiev.
5. Kuharenko, V.A. (1980). *Individual`no hudozhestvennyj stil`.* Kiev.
6. Arnol`d, I.V. (1980). *Stilistika sovremennogo anglijskogo jazyka.*
7. Astafurova, T.N. (1997). *Strategii kommunikativnogo povedenija v professional`no znachimyh situacijah mezhkul`turnogo obshhenija (lingvisticheskij i didakticheskij aspekty): avtoref. dis. ... d-ra ped. Nauk.: 13.00.02; 10.02.19. M.*
8. Grushevickaja, T.G. (2002). *Osnovy mezhkul`turnoj kommunikacii.* Moscow: Jyniti-Dana.
9. Elizarova, G.V. (2001). *Kul`tura i obuchenie inostrannym jazykam.* SPb.: SOJyZ.
10. Koneckaja, V.P. (1980). *Leksiko-semanticheskaja harakteristika jazykovyh realij. Velikobritanija: lingvostranovedcheskij slovar` / A.R.U. Rum, L.V. Kolesnikov, G.A. Pasechnik; pod red. E.F. Rogova, M., Prilozhenie.*

Impact Factor:	ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
	ISI (Dubai, UAE) = 1.582	PIHII (Russia) = 3.939	PIF (India) = 1.940
	GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
	JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

Contents

	p.
1. Markelov, G. E. Parallel connection of PTC thermistors.	1-4
2. Aminova, D. Modern methods of teaching a foreign language.	5-8
3. Shcherbakov, D. S., Blagorodov, A. A., Prokhorov, V. T., Zverev, S. M., & Volkova, G. Y. Features of creating prerequisites for solving the tasks by light industry enterprises in the sustainable manufacture of priority products demanded by consumers of the south and NCFD regions.	9-47
4. Bazarov, Z. M. On cognitive modeling of intuition and creativity in translation: an interpretive-semiotic approach.	48-51
5. Abdurakhmanova, F. M. Psychosemantic features of translation into English in the scientific literature.	52-55
6. Sultonov, B. E., Saparov, A. A., & Isaqova, G. A. Influence of specifying the type of precipitating agents to qualitative changes of fertilizer precipitates, obtained on base phosphorities of central Kyzylkum and nitric acid.	56-63
7. Abdullaev, N. H. History of caricature art in Uzbekistan.	64-67
8. Yurchenko, O. I., Chernozhuk, T. V., & Baklanov, A. N. Superhigh-frequency ultrasound in the intensification of acid extractions of lead and cadmium from fats and oils.	68-73
9. Djuraev, A. D., & Chuliev, Sh. S. Geometric parameters of the bevel gear and its calculations.	74-79
10. Abdiraxmonova, G. Sh., & Kilichova, E. Kh. The importance of music in childhood.	80-82
11. Muratov, B. A. International relations of the state museum of history of Uzbekistan.	83-86
12. Yusupova, Z. Sh. Methodology of increasing student level of physical preparation through physical education classes in primary education.	87-89
13. Karimova, M. Zh., & Nurmatova, M. Kh. Syntactic convergence and its role in creating the expressiveness of a artwork.	90-92

Impact Factor:	ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
	ISI (Dubai, UAE) = 1.582	РИИИ (Russia) = 3.939	PIF (India) = 1.940
	GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
	JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

Impact Factor:	ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
	ISI (Dubai, UAE) = 1.582	ПИИЦ (Russia) = 3.939	PIF (India) = 1.940
	GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
	JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350



Scientific publication

«ISJ Theoretical & Applied Science, USA» - Международный научный журнал зарегистрированный во Франции, и выходящий в электронном и печатном формате. **Препринт** журнала публикуется на сайте по мере поступления статей.

Все поданные авторами статьи в течении 1-го дня размещаются на сайте <http://T-Science.org>.

Печатный экземпляр рассылается авторам в течение 3 дней после 30 числа каждого месяца.

Импакт фактор журнала

Impact Factor	2013	2014	2015	2016	2017	2018	2019	2020	2021
Impact Factor JIF		1.500							
Impact Factor ISRA (India)		1.344				3.117	4.971		6.317
Impact Factor ISI (Dubai, UAE) based on International Citation Report (ICR)	0.307	0.829							1.582
Impact Factor GIF (Australia)	0.356	0.453	0.564						
Impact Factor SIS (USA)	0.438	0.912							
Impact Factor ПИИЦ (Russia)		0.179	0.224	0.207	0.156	0.126		3.939	
Impact Factor ESJI (KZ) based on Eurasian Citation Report (ECR)		1.042	1.950	3.860	4.102	6.015	8.716	8.997	9.035
Impact Factor SJIF (Morocco)		2.031				5.667			7.184
Impact Factor ICV (Poland)		6.630							
Impact Factor PIF (India)		1.619	1.940						
Impact Factor IBI (India)			4.260						
Impact Factor OAJI (USA)						0.350			

Impact Factor:	ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
	ISI (Dubai, UAE) = 1.582	РИИЦ (Russia) = 3.939	PIF (India) = 1.940
	GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
	JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

Deadlines

	Steps of publication	Deadlines	
		min	max
1	Article delivered	-	
2	Plagiarism check	1 hour	2 hour
3	Review	1 day	30 days
4	Payment complete	-	
5	Publication of the article	1 day	5 days
	publication of the journal	30th of each month	
6	doi registration	before publication	
7	Publication of the journal	1 day	2 days
8	Shipping journals to authors	3 days	7 days
9	Database registration	5 days	6 months

INDEXING METADATA OF ARTICLES IN SCIENTOMETRIC BASES:



International Scientific Indexing ISI (Dubai, UAE)
<http://isindexing.com/isi/journaldetails.php?id=327>



Research Bible (Japan)
<http://journalseeker.researchbib.com/?action=viewJournalDetails&issn=23084944&uid=rd1775>



РИИЦ (Russia)
<http://elibrary.ru/contents.asp?issueid=1246197>



Türk eğitim indeksi

Turk Egitim Indeksi (Turkey)
<http://www.turkegitimindeksi.com/Journals.aspx?ID=149>



CI.An. // THOMSON REUTERS, EndNote (USA)
<https://www.myendnoteweb.com/EndNoteWeb.html>



Scientific Object Identifier (SOI)
<http://s-o-i.org/>



Google Scholar (USA)
http://scholar.google.ru/scholar?q=Theoretical+science.org&btnG=&hl=ru&as_sdt=0%2C5



Directory of abstract indexing for Journals
<http://www.daj.org/journal-detail.php?jid=94>

Impact Factor:	ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
	ISI (Dubai, UAE) = 1.582	ПИИИ (Russia) = 3.939	PIF (India) = 1.940
	GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
	JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350



DOI (USA) <http://www.doi.org>



Open Academic Journals Index (Russia)
<http://oaji.net/journal-detail.html?number=679>



Japan Link Center (Japan) <https://japanlinkcenter.org>



Kudos Innovations, Ltd. (USA)
<https://www.growkudos.com>



AcademicKeys (Connecticut, USA)
http://sciences.academickeys.com/jour_main.php



Cl.An. // THOMSON REUTERS, ResearcherID (USA)
<http://www.researcherid.com/rid/N-7988-2013>



RedLink (Canada)
<https://www.redlink.com/>



TDNet
Library & Information Center Solutions (USA)
<http://www.tdnet.io/>



RefME (USA & UK)
<https://www.refme.com>



CrossRef (USA) <http://doi.crossref.org>



Collective IP (USA)
<https://www.collectiveip.com/>



PFTS Europe/Rebus:list (United Kingdom)
<http://www.rebuslist.com>



Korean Federation of Science and Technology Societies (Korea)
<http://www.kofst.or.kr>



Sherpa Romeo (United Kingdom)
<http://www.sherpa.ac.uk/romeo/search.php?source=journal&sourceid=28772>



Cl.An. // THOMSON REUTERS, ORCID (USA)
<http://orcid.org/0000-0002-7689-4157>



Yewno (USA & UK)
<http://yewno.com/>



Stratified Medical Ltd. (London, United Kingdom)
<http://www.stratifiedmedical.com/>

Impact Factor:	ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
	ISI (Dubai, UAE) = 1.582	ПИИИ (Russia) = 3.939	PIF (India) = 1.940
	GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
	JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

THE SCIENTIFIC JOURNAL IS INDEXED IN SCIENTOMETRIC BASES:



Advanced Sciences Index (Germany)
<http://journal-index.org/>



Global Impact Factor (Australia)
<http://globalimpactfactor.com/?type=issn&s=2308-4944&submit=Submit>



CiteFactor (USA) Directory Indexing of International Research Journals
<http://www.citefactor.org/journal/index/11362/theoretical-applied-science>



JIFACTOR
http://www.jifactor.org/journal_view.php?journal_id=2073



Eurasian Scientific Journal Index (Kazakhstan)
<http://esjindex.org/search.php?id=1>



SJIF Impact Factor (Morocco)
<http://sjifactor.inno-space.net/passport.php?id=18062>



InfoBase Index (India)
<http://infobaseindex.com>



SCIENTIFIC INDEXING SERVICE (USA)
<http://sindexs.org/JournalList.aspx?ID=202>



International Society for Research Activity (India)
<http://www.israjif.org/single.php?did=2308-4944>



International Institute of Organized Research (India)
<http://www.i2or.com/indexed-journals.html>



Journal Index
<http://journalindex.net/?qi=Theoretical+%26+Applied+Science>



Open Access Journals
<http://www.oajournals.info/>



Indian citation index (India)
<http://www.indiancitationindex.com/>



Index Copernicus International (Warsaw, Poland)
<http://journals.indexcopernicus.com/masterlist.php?q=2308-4944>

Impact Factor:	ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
	ISI (Dubai, UAE) = 1.582	РИИЦ (Russia) = 3.939	PIF (India) = 1.940
	GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
	JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350



Электронно-библиотечная система
«Издательства «Лань» (Russia)
<http://e.lanbook.com/journal/>

Impact Factor:	ISRA (India) = 6.317	SIS (USA) = 0.912	ICV (Poland) = 6.630
	ISI (Dubai, UAE) = 1.582	ПИИИ (Russia) = 3.939	PIF (India) = 1.940
	GIF (Australia) = 0.564	ESJI (KZ) = 9.035	IBI (India) = 4.260
	JIF = 1.500	SJIF (Morocco) = 7.184	OAJI (USA) = 0.350

Signed in print: 28.02.2022. Size 60x84 $\frac{1}{8}$

«Theoretical & Applied Science» (USA, Sweden, KZ)
Scientific publication, p.sh. 40.625. Edition of 90 copies.
<http://T-Science.org> E-mail: T-Science@mail.ru

Printed «Theoretical & Applied Science»