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The Role of Hemolytic Enteropathogenic Escherichia Coli (EPEC) in the Development of Diarrhea in Children, its Features of Prevention and Treatment

Yusupov Mashrabismatillayevich¹, Shaykulov Hamza Shodiyevich²

¹Assistant, Head of the Department of Microbiology, Virusology and Immunology,

²Assistant of the Department of Microbiology, Virusology and Immunology,

^{1,2}Samarkand State Medical Institute, Samarkand, Uzbekistan

ABSTRACT

The article deals with a group of infectious diseases caused by pathogenic serotypes of Escherichia coli. Most often, these bacteria cause acute intestinal disorders (intestinal coli infection), and in young children and in weakened persons, they can also cause damage to the urinary tract, sometimes the development of cholecystitis, meningitis, and sepsis. Distinguish between enteropathogenic, enterotoxigenic, enteroinvasive, enterohemorrhagic, enteroadhesive infection and other infections.

KEYWORDS: Infectious diseases, pathogen, E. coli, bacteria, diarrhea

INTRODUCTION

The main facts

- Diarrhea is the second leading cause of death among children under five years of age. It can be prevented and treated.
- Every year 525,000 children under the age of five die from diarrhea.
- A significant proportion of diarrheal diseases can be prevented by providing safe drinking water and adequate sanitation and hygiene.
- Approximately 1.7 billion cases of childhood diarrhea are reported annually worldwide.
- Diarrhea is one of the leading causes of malnutrition among children under five years of age.

Diarrhea is the second leading cause of death in children under five years of age, with 525,000 deaths annually. Diarrhea can last for several days and can drain the body of water and salts it needs to survive. In the past, the main causes of death associated with diarrhea were dehydration and fluid loss in most cases. Currently, an increasing proportion of all deaths attributable to diarrhea are attributed to other causes, such as septic bacterial infections. Children who are malnourished or those with weakened immunity are at greatest risk of life-threatening diarrhea.

Diarrhea is defined as loose or loose stools three or more times a day (or more often than usual for a particular person). Frequent bowel movements are not diarrhea. Loose, "pasty" stools of breastfed babies are also not diarrhea. Diarrhea is usually a symptom of an intestinal tract infection that can be caused by various bacteria, viruses, and parasites. Infection spreads through contaminated food or drinking water, or from person to person through poor hygiene.

Measures to prevent diarrhea, ensuring safe drinking water, using improved sanitation, and hand washing with soap and water, can help reduce the risk of illness. Diarrhea is treated with oral rehydration salts (ORS), a mixture of pure water, salt and sugar. In addition, an additional course of treatment with 20 mg zinc tablets for 10-14 days can shorten the duration of diarrhea and improve results.

There are three clinical types of diarrhea:

- Acute watery diarrhea — lasting hours or days and includes cholera;
- acute bloody diarrhea - also called dysentery; and
- Persistent diarrhea - lasts 14 or more days.

Incidence of diarrhea

Diarrhea is one of the leading causes of child mortality and morbidity in the world. It develops mainly as a result of the consumption of contaminated food and water. Globally, about 780 million people lack access to improved water and 2.5 billion people lack access to basic sanitation. In developing countries, diarrhea caused by infection is widespread.

In low-income countries, children under the age of three have diarrhea, on average, three times a year. Each time, children are deprived of the nutrition they need to grow. As a result, diarrhea is one of the leading causes of malnutrition, and children who are malnourished are more likely to develop diarrhea.

Dehydration

The most significant threat posed by diarrhea is dehydration or dehydration. During diarrhea, water and electrolytes (sodium, chlorine, potassium, and bicarbonate) are excreted from the body in loose stools, vomiting, sweat, urine, and respiration. Dehydration occurs if these losses are not reimbursed.

There are three degrees of dehydration.

- Severe dehydration (at least two of the following):
 - lethargy / unconsciousness;
 - sunken eyes;
 - the patient cannot drink or drinks badly;
 - after pinching, the skin returns to its original state very slowly (≥ 2 seconds).
- Moderate dehydration:
 - restless behavior, irritability;
 - sunken eyes;
 - the patient drinks with greed, is thirsty.

- No dehydration (not enough evidence to qualify as moderate or severe dehydration).

The reasons

Infection: Diarrhea is a symptom of infections caused by a wide variety of bacteria, viruses and parasites, most of which are spread through fecal contaminated water. Infections are most common where there is a shortage of clean water for drinking, cooking and personal hygiene. Rotavirus and *Escherichia coli* are the two most common causes of diarrhea, both moderate and severe, in low-income countries. Other pathogens, such as cryptosporidium and shigella, may also be relevant. It is also necessary to take into account the etiological patterns characteristic of a particular area.

Malnutrition: Children dying of diarrhea often suffer from concomitant malnutrition, which makes them more vulnerable. Each case of diarrhea, in turn, exacerbates their malnutrition. Diarrhea is one of the leading causes of malnutrition among children under five years of age.

Source: Of particular concern is water contaminated with human faeces, such as from wastewater, sedimentation tanks and latrines. Animal faeces also contain microorganisms that can cause diarrhea.

Other causes: Diarrhea can also spread from person to person, exacerbated by inadequate personal hygiene. Food is another significant cause of diarrhea when prepared or stored in unhygienic conditions. The unsafe storage and handling of water in the household is also an important factor. Fish and seafood from contaminated water can also cause this disease.

Prevention and treatment

Basic measures to prevent diarrhea include the following:

- access to safe drinking water;
- improved sanitation facilities;
- washing hands with soap;
- exclusive breastfeeding of the baby during the first six months of life;
- proper personal and food hygiene;
- health education about the ways of spreading infections;
- vaccination against rotavirus infection.

The main measures for treating diarrhea include the following:

- Rehydration: with oral rehydration salt (ORS) solution. ORS is a mixture of pure water, salt and sugar that can be safely prepared at home. Treatment with this mixture

costs a few cents. ORS is absorbed in the small intestine and replaces water and electrolytes excreted in feces.

- Zinc supplements: Zinc supplements reduce the duration of diarrhea by 25% and lead to a decrease in stool volume by 30%.
- Rehydration via IV line in case of acute dehydration or shock.
- Nutrient-rich foods: The cycle of malnutrition and diarrhea can be broken by feeding children nutrient-rich foods (including breast milk) during diarrhea and then feeding recovered children nutritious foods (including exclusive breastfeeding during the first six months of life).
- Consult with a healthcare professional, in particular regarding the management of persistent diarrhea, blood in stools or signs of dehydration.

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Study of the Lipid Composition of Brain Tissue in Neurodegenerative Conditions

Mamadaliyeva Nodira Isakovna¹, Abidova Dildora Dilshodbek qizi²

¹Candidate of Biological Sciences (PhD), Head Teacher of Department of Chemistry Teaching Methods, TSPU Named After Nizami, Tashkent, Uzbekistan

²Master's Student of Institute of Tashkent Pediatric Medicine, Tashkent, Uzbekistan

ABSTRACT

The Brain performs many functions, it contrasts the work of the entire body. Each part of the brain performs its own function.

KEYWORDS: Lipid, brain, physico-chemical

It is known that the occurrence and conduction of excitation through nerves is a complex physical and chemical process associated not only with the redistribution of ions between the cell and the external environment, but also with a whole cascade of biochemical reactions in which the lipid fraction of the nerve fiber takes an active part. Currently, numerous experimental data have been accumulated on the role of nerve fiber lipids in excitation. It was found that various lipid metabolites are actively involved in the regulation of nerve fiber functioning, Ca²⁺ transport, and the activity of most membrane-related enzymes. Mechanical injury of the nerve caused by its ligation or cutting leads to changes in the lipid composition of the membranes, the level of membrane-bound Ca²⁺, the activity of protein-enzymes, and the viscosity of the cytoplasm in both the proximal and distal segments of the nerve fiber.

It is assumed that the ideal marker of brain damage should have the following characteristics: (1) high specificity for brain substance damage; (2) high sensitivity; (3) released exclusively in cases of irreversible damage to cerebral neurons and should provide information about the nature of damage to the brain substance; (4) is found in the blood or cerebrospinal fluid for a short period of time following the injury and correlates with its severity; (5) is released at a well-known time following the injury. Moreover, it must be (6) age- and gender-independent; (7) it is easily detected in the blood, since frequent sampling of cerebrospinal fluid is impractical; (8) the concentration should be easily measurable in laboratory tests and simple techniques; (9) reflect the dynamics of the disease and the effectiveness of treatment. In connection with the above, there is a need to conduct research aimed at studying the mechanisms underlying the excitation of somatic nerves and the regeneration of damaged nerve conductors. Purpose and objectives of the study. The aim of the work was to study the role of lipids in the processes of excitation and regeneration of damaged somatic nerves. To achieve this goal, it was necessary to solve the following tasks:

1. To investigate the lipid composition of somatic nerves in rats at rest and when carrying out excitation.
2. To Study changes in the quantitative content and fatty acid composition of phospholipids in the proximal and distal ends of the rat sciatic nerve after its cutting.

3. To Study changes in the content of lysophospholipids, free fatty acids, and lipid peroxidation products in the proximal and distal ends of the damaged rat sciatic nerve.
4. Conduct a comparative analysis of the effect of potassium hyaluronate on changes in the lipid composition and the content of their peroxidation products in the proximal and distal ends of the damaged rat sciatic nerve.
5. To study the phase state of lipids somatic nerves of rats when the initiation of, damage to and introduction of potassium hyaluronate.
6. To Study changes in the activity of phospholipase A2 in the case of damage to rat somatic nerves and to evaluate its role in the regulation of regeneration processes under the action of potassium hyaluronate.

For the first time, a comparative analysis of the role of lipids in the processes of excitation and regeneration of damaged rat nerve fibers was performed. It is shown that during excitation and nerve fiber damage, changes occur not only in the composition of lipids, but also dramatically changes the entire dynamics of the lipid phase. It was found that the use of potassium hyaluronate helps restore the quantitative and fatty acid composition of individual phospholipid fractions, as well as reduce the level of lysophospholipids and free fatty acids in the injured nerve conductor. Raman spectroscopy and differential scanning calorimetry revealed changes in the physical and chemical state of the lipid bilayer during excitation and damage to rat somatic nerves. With the introduction of potassium hyaluronate, the microviscosity of the lipid component of nerve fibers is restored. It is shown that the acceleration of regeneration processes in the damaged nerve conductor under the action of potassium hyaluronate is most likely mediated by the functioning of Ca²⁺ - dependent phospholipase A2. scientific and practical significance of the work. The results of the study allow us to expand and deepen the understanding of the role of lipids in the processes of excitation along somatic nerves and the development of pathology of the nerve fiber when it is damaged, and also allow us to identify a possible mechanism of action of potassium hyaluronate in the process of restoring the functioning of nerve conductors. The obtained data can be used to improve the effectiveness of existing and develop new methods for stimulating somatic nerve regeneration in case of injury.

Biological membranes consist of representatives of three classes of substances: lipids, proteins, carbohydrates, and minor components. Lipids largely determine the course of pathological processes, since they are characterized by high

lability, and the products of lipid metabolism cause destructive changes in the membrane. It is known that a violation of lipid metabolism and the intensity of the processes of lipid peroxidation (LPO) leads to a violation of the transport of Ca^{2+} and normal cell metabolism. The main lipids that make up the membranes of nerve fibers are phospholipids, glycolipids, and steroids. In the nervous tissue, the following percentage of different classes of lipids is noted: phospholipids make up 43 %, cholesterol - 28 %, gangliosides - 29 %. At the same time, the main share of phospholipids in the nervous tissue is accounted for by phosphatidylethanolamine and phosphatidylcholine.

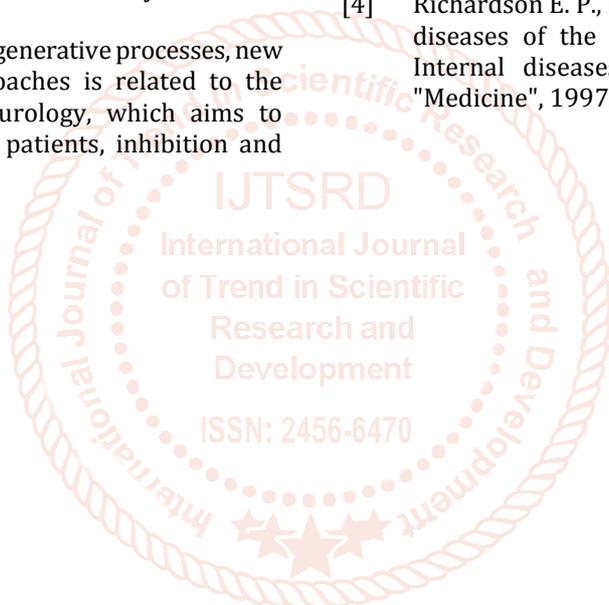
The ratio of different lipid fractions is not constant and changes in various pathological conditions. It is known that many factors can affect lipid metabolism. Among them, the most important are radical reactions of lipid peroxidation and phospholipase activity. Therefore, it becomes obvious that from the point of view of the possibility of controlling the morphofunctional state of the cell, these components should be given priority. Thus, a violation of lipid metabolism is an initiating link in the pathogenesis of various diseases and requires targeted and timely correction.

The relevance of studying neurodegenerative processes, new diagnostic and therapeutic approaches is related to the priority direction of modern neurology, which aims to achieve a high quality of life for patients, inhibition and

transfer, ultimately, to remission of diseases, which could lead to the preservation of medical and social adaptation of patients and optimization of the quality of life. Despite the fundamental research carried out in the field of molecular neurobiology, pharmacology and gene therapy and reaching new frontiers in the knowledge of the pathophysiology of this disease, methodological approaches to the diagnosis and treatment of neurodegenerative pathology remain extremely relevant.

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Compilation of an Algorithm for the Activity of an Air Traffic Service Controller as a Source of Optimization of the Flight Safety Management

Shamsiev Zair Ziyayevich¹, Sharipova Alsu Rafikovna²

¹Doctor of Technical Sciences, Professor of the Tashkent Transport University, Tashkent, Uzbekistan

²PhD Student of the Tashkent Transport University, Tashkent, Uzbekistan

ABSTRACT

The article discusses the importance of building the logical activity of the air traffic service controller, consisting of a set of actions and operational units of information, to reduce the negative impact of errors on their activities. A table has been compiled showing the role of the controller in the aviation system. In particular, all the negative factors that affect the mental activity of the air traffic controller from the moment of receipt of information to the adoption of a decision are considered.

KEYWORDS: *flight safety, air traffic control, psychology, algorithm, errors, factors, air traffic controller, aviation, aviation incidents, automated systems*

The practical mechanism of the safety management conception is based on a purposeful search of factors causing the occurrence of aviation events in order to protect their impact. Detection of hazardous factors can be implemented in the form of regular monitoring, collection, processing and accumulation of information on the factors causing aviation incidents [1].

Man is the most flexible, adaptable and important element of the aviation system [2]. In turn, the air traffic controller is an obligatory link in the intelligent control system in the aviation system, who has a unique ability to make the right decisions in an environment of incomplete and fuzzy information, but who is also the most vulnerable from the point of view of the possibility of a negative influence of factors on his activity, which in its turn gives rise to such a theory as the human factor. Attempts to solve the problem of the human factor through the introduction of automated ATC systems, of course, contributed to the solution of the level of flight safety in ATM, but could not completely solve this problem since the efficiency of functioning of intelligent systems in air traffic control depends not only on the automation of the ATM system, but also on successful performance of air traffic services personnel [3]. Human activities in the aviation system have been the cause of accidents in many cases. These failures are usually classified as "error". Mistakes are often made by qualified employees, although it is obvious that they did not plan any incident [1]. Errors are not a kind of abnormal behavior; they are a natural by-product of almost all human efforts. An error must be perceived as a normal component of any system in which a person and technology interact since an error can be the result of insufficient professional training and is an unintentional act. It is well known that every three out of four accidents are the result of a malfunction in human performance, which means that any improvement in this

area, i.e. improving the efficiency of activity of both a person and a control system can significantly contribute to an increase in the level of flight safety. To achieve a reduction in the number of accidents, it is necessary to understand better the role of the human factor in aviation and to apply the accumulated knowledge for preventive purposes [2] [4]. In the course of studying the causes of errors on the part of the ATC controller, the task was set to identify factors that affect the safety of flights at ATC, as well as to analyze the causes of errors of specialists in this field since there is such a theory that ATC controller errors are often the result of deficiencies in the system itself air traffic management [1]. The following is a diagram of the deficiencies of the ATM system affecting air traffic control.

- Shortcomings in the organization of work of controllers' shifts
- Equipment design flaws
- Insufficient level of professional training
- Flaws in regulatory documents

The above theory is confirmed by the fact that during investigating aviation events associated with deficiencies in ATC or ATM, it provides a thorough analysis of not only the event itself, but also the environment in which the controller works, for example, how much the controller was loaded at the time of the development of the aviation event, how much crews were in touch at a specific moment and on average for one hour, how well the ATC area was planned.

Likewise, in order to be able to determine in advance the capabilities and limitations of air traffic service personnel and to reduce the negative impact of factors and errors on their activities, an algorithm was created since in the modern concept of ensuring safety, human error is the starting point, not the final point. Safety management system initiatives seek to find ways to prevent human errors that can jeopardize flight safety and to minimize the adverse consequences of those errors that inevitably occur. The characteristics of a person have a significant impact on the stability and quality of functioning of the automated system. The impact of the ATS controllers on the stability and quality of the system functioning can be assessed by drawing up an algorithm for their activities. When creating an algorithm for the activity of an ATS dispatcher, it is necessary to take into account the psycho physiological characteristics of a person, as well as the influence of various kinds of external factors on the activity of the controller and its results [4].

Construction and use in practice of an algorithm for the activity of an air traffic service controller, i.e. the

construction of his logical activity, consisting of a set of actions and operational units of information, in engineering and psychological design allows to optimize his activities, and is also the basis for the correct construction of training for the personnel of the ATS service [5]. fig. 2.

For this case, a table is presented below, which shows the role of the air traffic services controllers, as a subject in the aviation system, possessing certain qualities, skills and knowledge, designed to process information and make decisions for air traffic services. fig. 1.

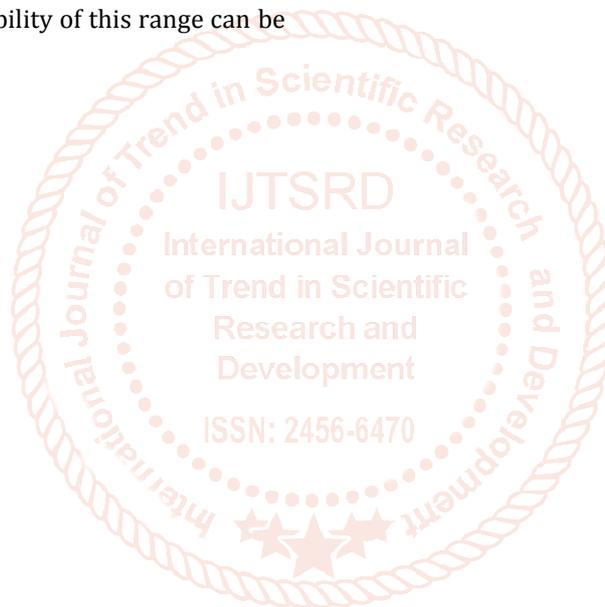
As you can see, the air traffic services controller is an intellectual link in the aviation system, which, based on its experience, knowledge, character, processes information and makes decisions in the range of tasks assigned to him. The tasks of the air traffic services dispatcher are outlined in the regulatory and governing documents, as well as in the work technology document.

In the process of functioning of the controller's intellectual activity in a certain active space, that is, in the range of receiving and transmitting information more errors are made. The reason for the vulnerability of this range can be

proved in fig. 2, where the algorithm for receiving and processing information by the air traffic service controller is described, where dangerous moments are highlighted in red, on which attention must be paid.

The picture perceived by the air traffic controller during work changes under the influence of the most significant active and spiritual values that activate the intellectual activity of the controller, since knowledge, experience, motivation, attitude, fatigue, emotions affect the organization and productivity of his intellectual activity.

Confronting negative factors under the influence of the educational and professional environment in the field of psychological training, transforming volitional qualities, motivation, and values of the dispatcher, will allow performing the assigned tasks at a professional level and serve as a signal and stimulus for more active intellectual activity, since mobilizing intellectual capabilities, focusing on goals, The ability to recover in the face of intense intellectual activity plays a leading role in the activities of air traffic services personnel.



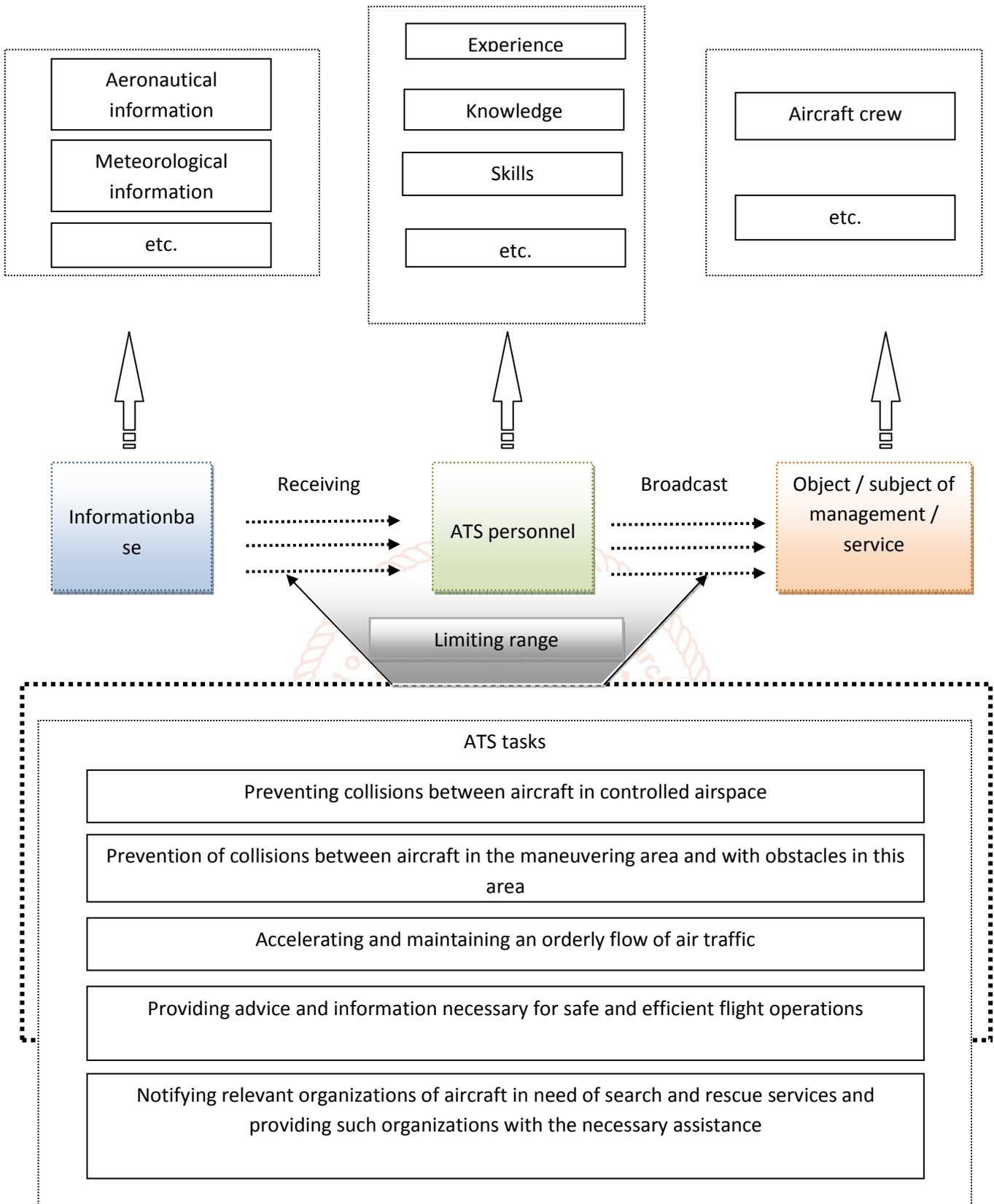


Fig 1: The role of ATS personnel in the aviation system

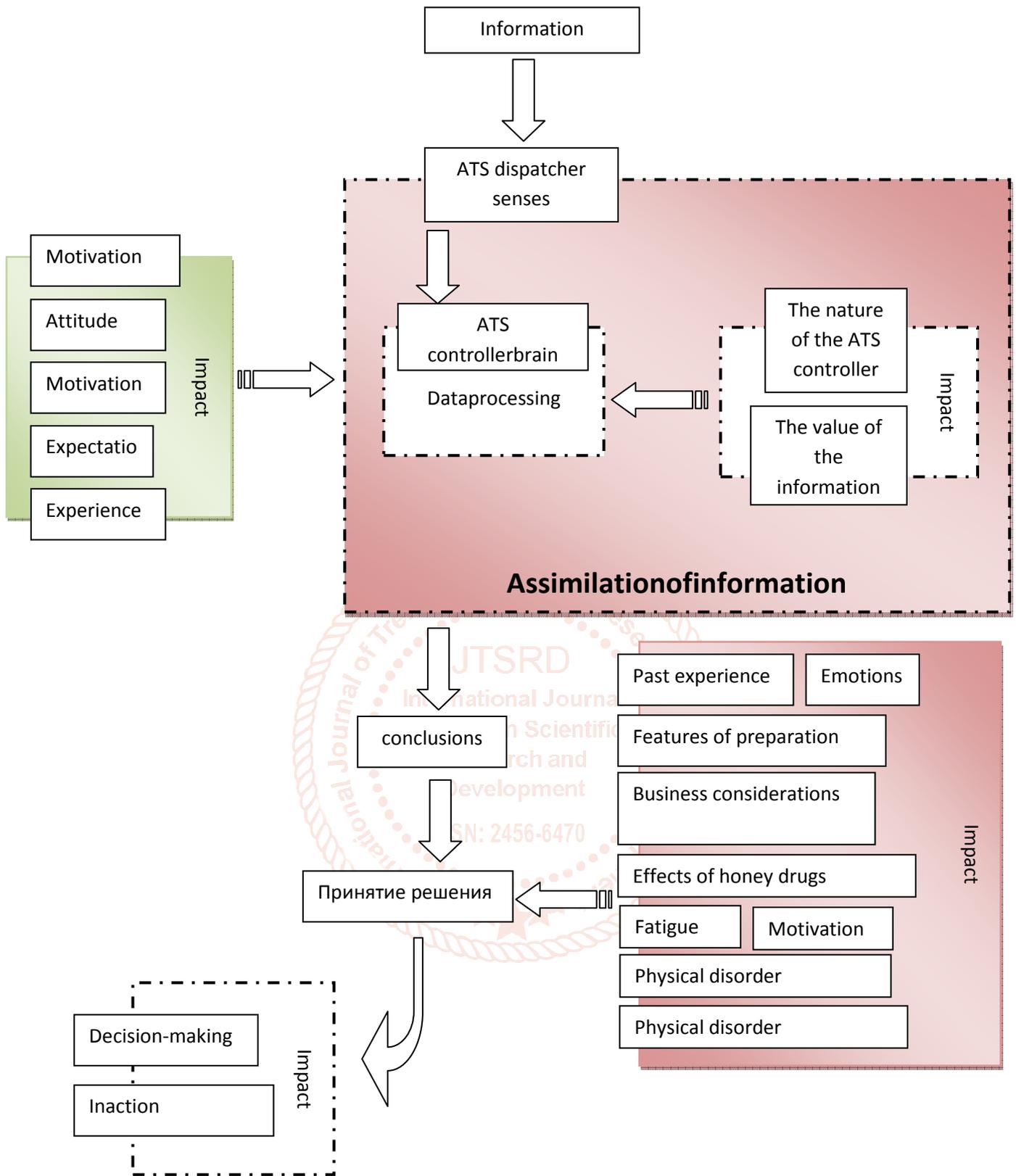


Fig. 2: Algorithm for receiving and processing information by the air traffic service controller

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The Possibilities of using Digital Technologies in the Financial, Banking and Tax System in Uzbekistan

Malika Uktamova

Student of Tashkent Financial Institute, Tashkent, Uzbekistan

ABSTRACT

This work provides a comprehensive overview of digital technology and its possible impact on the financial sector. Scientific papers and books have been used in the study of the topic to fully understand the topic provided. The paper also presents two drawings for the concept of the topic for the reader.

KEYWORDS: digital technologies, innovation, Fintech, technology, electronic banking, tax

Introduction

The largest stimulant of growth, innovation, and competitiveness all belong to the digital economy. Thanks to the rapid development of technology, it contributes to fundamental reforms in the economy and society. A special feature of the manifestation of technology is the ability to integrate and to take advantage of necessary services that were not previously available (Maftuna Kurbanova, 2019). At present, the technological progress that has been made in telecommunications is noted as a component of the structure in the transformation of finance (OECD, 2018). The impact of new technologies in financial services is called digital finance. It differs from traditional Bank services because it combines business models, applications, and various services. Investment in technological innovation is exploding every year. The way people use the services of banks today did not exist a few years ago. In the digital reality, it is possible to easily transfer, pay, and check balance through a computer or a phone (European Commission, n.d.).

This work comprises the key three chapters. In the first chapter author discussing the development of financial innovation. The second chapter introduces the concept of Internet banking its relevance today and financial technologies. The third chapter is talking about general tax reforms in Uzbekistan.

Chapter 1 Globalization and financial innovation

1. The technology and digital monetary revolution

Technology has made a significant contribution to shaping society, the environment, and the economy. Moreover, it has two sides at the same time as it creates constantly new challenges and the solution to many problems. Technology transformation is closely linked to the development of socio-economic areas as society and institutions have developed simultaneously. Technological change can be controversial, as it can be a means for social activism and collaboration, and it can also be a source of controversy (United Nations, 2016).

Thanks to technological innovations, organizations have unique transformation opportunities. The basic principles of economics and business have properties to change in all areas of industry. Technology transformation may be a

promising opportunity for any organization and may become a problem for society (Hency C.Lucas, 2008). The transformation of all kinds of forces, which leads to the simplest constructions and fundamental changes in human status, considers the measurement of the scientific and technological revolution. By nature, human has limited intellectual and physical capabilities, in case of the technical growth can exclude him from production proper. The technological revolution depending on the labor failure into classic elements, from the other side, a synthesis remains a natural technical process that a person achieved, and therefore able to manage. This symbiosis shows the victory of the automatic principle (Richta).

In the modern era, technology is taking on a more scientific form. Because it is unlimited to the formation and development based on science but also generates scientific knowledge. One of the key examples of technologies represents the development of artificial intelligence. A need for interaction between diverse industries shows the potential for future use. Approaches to solving problems that have been considered earlier are inferior to modern ones. Since current methods allow breaking down the barriers to achieve a holistic and multi-disciplinary view of technology (COLOMBO, 1988).

In advanced technology and globalization, goods that are not available in any region can be instantly placed in the right place. Thanks to the offered options of cash currency, this is available online. Indeed, many people disapprove of the money trading system, explaining the negative impact on society (Jean-François Serval, 2015). To assess the subsequent impact of the digital revolution, it needs a structured analysis based on the impact of technological trends on politics and economic growth. Information technology and networks impact the formation of the structure, day-credit policy, and the establishment of state control over the money supply. ICT has a huge impact on regulating the monetary economy, and this, in turn, concerns monetary policy. In particular, it will help to adapt to changes affecting interest rates and exchange rates (Papaconstantinou, 2004).

Chapter 2 Banking in the modern era

2. Concepts and applications in Electronic banking

Electronic banking includes several distribution channels as top-level design. The term “e-banking” has a broader meaning than just online banking. Internet banking is one of the most common forms of electronic banking. It provides this service through a computer and mobile phone to provide information and banking services. The modern era of technology as e-banking is perceived as a modern method of providing services and affects the development of the banking market. The alternative method of providing

services online, creates challenges for traditional banks, as it neutralizes possible advantages. But this does not mean that traditional banks may disappear, conversely, will take on a new level for further operation in the banking market. The key advantages of e-banking are increasing the reputation of the bank, efficiency, cost savings, and customer satisfaction (Long Pham, 2015).

Meanwhile, increased investment in banking technology has resulted in the growth of efficiency and innovation. The increasing complexity of e-services and the widening range have contributed to the growth of clients and their demand for continuous technologies. An important aspect of internet banking is the ability to expand operations and provide optimal services at minimal operation costs. It is necessary to consider also risks which can be connected with e-banking. Moreover, the use of e-banking has led to threats of cyber-crime. But every bank has its security system. The major risks of e-banking are the authenticity of the stakeholders, the security of transactions, viruses, and the availability of the Internet. However, customers continue to use the services of the bank in its service branches.

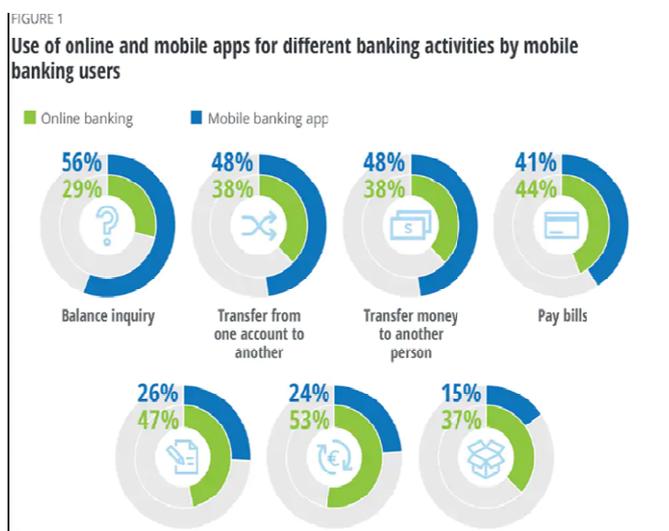
introduces disruptive and transformational innovations in the financial sector. Organizations using Fintech differentiate themselves by providing new applications to partners, financial institutions, and direct clients. There is no doubt that Fintech has caused a spike in the sector of financial institutions and business operators. It is believed that Fintech belongs to the fourth generation of the industrial revolution as it destroys industrial structures and erases borders. Reducing the cost of remittances, preserving the expertise in innovation and non-banking services is Fintech's principal focus (Muhammad Anshari, 2020). Besides, Fintech helped to create a fresh look for the financial market and alternative ways of solving problems related to financial transactions. An example is Paypal, which has become one of the successful examples of financial technology. Paypal's chief objective is to execute transactions and manage money through online trading. Another achievement is the well-known eBay. The platform where there is a huge range of products that can be purchased through reliable online payments (Truong, 2016).

Chapter 3 Tax implications in banking 3. Consumption-oriented tax system

The State establishes a compulsory tax to perform economic growth and development. The provision of economic, social, and political development is directly related to the volume of revenues received in the country. Thanks to the organized system of taxation, the government obtains appropriate profits to meet the needs of infrastructure. The tax is one of the essential subjects in every society. Due to that, states receive the necessary financial resources to carry out their direct duties. The taxation structure represents an effective method for mobilizing resources and stimulating economic growth (Gylch Jelilov, 2016).

The introduced tax systems in the socialist's epoch command economies were incompatible with Western standards and also more limited. Salary, business and turnover rates were the principal source of tax revenue. Besides, the collection of taxes from individuals represents a minor part of all revenues. In most cases, tax mechanisms have always been complex because of several uncertain tariffs and are subject to regulation. Significantly, in countries with central planning, there was no tax collection with the application of the established norms and rules. In particular, it collected taxes through negotiations between entrepreneurs and the government. The need for a tax authority was low, given the small number of taxpayers (Luigi Bernardi, 2005).

Significantly, the system of taxation affects the economic sphere, therefore it is necessary to pay attention to the careful development and volume of related costs. How much taxation affects producers, employees, and can change consumer behavior. As a result, it leads to a reduction in using physical, intellectual capital and directly reduces the volume and growth of it. Therefore, the extent to which the tax system impacts economic efficiency is likely to increase concurrently with taxation (Marco Buti, 2005). Professionals who deal with tax policy and administration should carry out reforms concerning direct taxes. Direct taxes include those levied in business and household. The tax system is building on the consumption of both direct and indirect taxes. For example, the value-added tax is one of the main indirect taxes on consumption, which is practicing in most EU countries. To implement the regime of consumption-oriented



Picture 1 Use of online and mobile apps for different banking activities (Val Srinivas, 2018)

Security of transactions, viruses, and the availability of the Internet. However, customers continue to use the services of the bank in its service branches. Taking into account that, over the last few years Internet banking has become the principal instrument of communication between consumers and banks (IMOLA DRIGĂ, 2014). To identify a key business opportunity, it is necessary to collect customer data for depth research. It carries out with the help of web analytics, which has the capacity of careful customer tracking in relationship management. Since the internet is a unique way to serve, it is very important to develop the relationship between the client and the bank (Emanuela, 2015).

2.1. Customer adoption and Perception towards Fintech

The twenty-first century is considered an era of information technology that has come to simplify daily trade transactions. To meet the needs of clients, there are business models that are developed with the help of financial technologies. The term as *"the new technology in the financial services industry"* is called "Fintech" (Tun-Pin Chong, 2019). Fintech-is to be described as a process that

taxes, it is necessary to reduce direct rates and an increase in value-added rates (Rose, 1990).

The importance of the consumption tax is explained by the fact that it is one of the key mechanisms in tax policy. The EU's €4 trillion, which is over 25 percent of the tax revenue comes from consumption taxes. The consumption and profit tax are therefore considered as alternative tax revenue. It is crucial to evaluate the impact of the tax on company decision-making, the interaction between consumption and profit taxes to provide a tax regulatory and policy analysis. However, the establishment of tax systems based on income and consumption taxes is under active discussion. According to economic theory, tax pressure can partly be placed on enterprises rather than on the final consumer (Marcel Olbert, 2018). It is crucial to understand the differences between income and consumption taxes before starting certain projects. Income tax is deducted from taxable income, while consumption tax is deducted from the net of savings. Different methods for saving and investing are the key differences between income tax and consumption tax. However, the key factor in the consumption tax is the reduction in the value of existing capital relative to the new capital (Garner).

3.1. The tax reforms in prosperity of small business in Uzbekistan

At the beginning of the reform of tax forms, several countries applied simultaneously to standard tax benefit schemes for small and large businesses. Because of the dynamic development of small businesses, the growth of taxpayers is increasing as called "hard to tax". Earlier, when there was a socialist tax system, the concept of "small business" was virtually absent. The expansion of taxpayers as a separate group where inexperienced specialists in tax management may have difficulties in solving problems, especially in countries with transition economies. However, registered small enterprises do not have management problems. The issues for tax administration are also the forced control of numerous taxpayers who had low income with potential volatility. According to statistics, only a few small businesses have achieved success and sustainability. One reason for the collapse of businesses may be that small businesses were often built on the base of influential and irrational companies that had a low viability ratio (Engelschalk).

Nowadays, one of the primary goals of Uzbekistan is to develop small and medium-sized businesses. Progress is being made in the conditions of macro-politics, preventing cardinal changes and focusing on social aspects (Hubner, 2000). The main types of enterprises are sole proprietorship, limited liability companies, partnerships, and foreign companies. Such types of business enterprise are most often found in the economic market of Uzbekistan:

- **Representation**
- **Permanent facilities**
- **Joint-stock company**
- **Limited liability Company** (Deloitte, 2017).

Gradually, in line with the ongoing changes, the tax system, and its administrative and institutional structures have evolved through consistent action. The reform resulted from a compromise related to income retention. Mistakes in tax reforms at the early stages concerned the functions of taxation and the underestimation of social and regulatory activities. This practice harmed the dynamics of private business, employment, and capital investment, which had contributed to the rapid growth of the unorganized economy. Over the years, tax authorities have focused on optimizing infrastructure and reducing the tax burden, including increasing regulatory and incentive measures of tax strategy (Dildora Tadjibaeva, 2009). Significant government revenues and employment are generated by the small and medium-sized business segment. Each country tries to develop this segment for further welfare of the state. Uzbekistan has adopted a decree: **"On accepting the previously paid one tax and compensation payments to government agencies, including reducing the tax burden on small businesses and micro-firms from 15.2% to 13%"**. A new Tax Code was adopted in the Government in 2008. This provision has contributed to tax exemptions, enhanced sustainability, reduced tax burden, and improved tax administration. According to the above data, the measures taken in the tax code significantly increased the state profit from corporate income by 42.6% and single tax by 36% in the first half of 2008 (DEKHANDOV, 2011).

The tax reform is being updated every year, with the VAT rate being reduced from 1 October 2019 to 15%. However, it is assumed that corporate income taxes will increase from 12 to 15%. From today, the following major tax rates are available:

Name of tax	Rate
Personal income tax	12%
Single Social Payment	12%
Corporate income tax	Standard rate - 12% For commercial banks and mobile communication companies - 20% * It is expected that the standard rate of Corporate income tax shall be increased to 15% as of January 1, 2020.
Property tax	2%
Value added tax	15%

Picture 2 Major taxes in Uzbekistan (Dentons, 2020)

Conclusions

Today, digital technology is an integral part of the economy, the environment, and society. The need for interoperability between diverse industries points to the need to develop

artificial intelligence. The digital age has influenced economic development in banking and insurance services. An example of this is e-banking, which is a method of providing services online. The digital era influences the

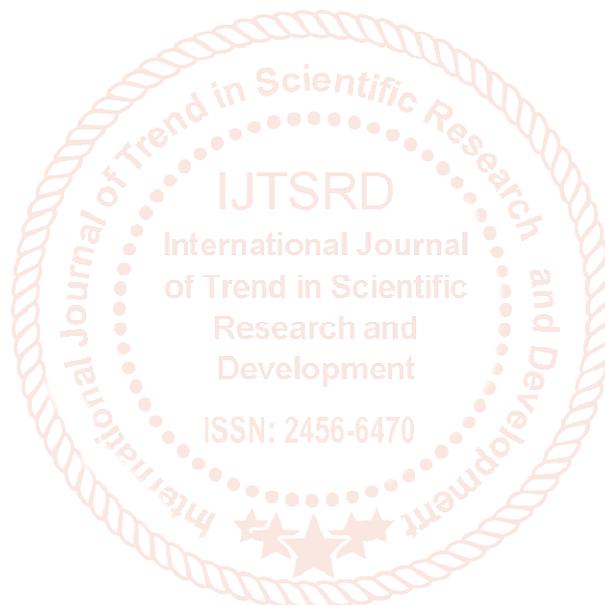
economic development of the banking and insurance industry. The financial technology focuses on price reduction in remittances and innovation activities. There is a term which has known as "Fintech" as transformational innovations in the financial sector.

When it comes to taxes, it is one of the sources of resources for the government. The basis of taxation is the collection of taxes at the lowest cost to the state. It is worth noting that digital technology, the Internet of Things, and Artificial Intelligence are transforming the tax administration. With Big Data, it will be possible to control all available operations in tax administration, giving preference to problem-solving artificial intelligence that will make decisions in tasks.

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Changes in the System of Higher Education in the New Uzbekistan

Ismailov Ikromjon

Namangan Institute of Engineering Technologies, Namangan, Uzbekistan

ABSTRACT

The article reflects on the existing problems in the higher education system of the Republic of Uzbekistan and the positive changes that have taken place in recent years as a result of measures aimed at developing this area. In particular, the analysis focuses on reforms aimed at realizing the aspirations of the country's youth to higher education.

KEYWORDS: Republic of Uzbekistan, higher education system, decree, concept, limited quota

INTRODUCTION

The assessment of the state and development of the countries of the world in the XXI century is based not on the natural resources of these countries, but on the share of investment in human capital and the correct organization of this work. The most reliable way to do this is to create the right conditions for young people to receive a quality education. One of the main tasks of the higher education system, which is the highest level of the education system, is to develop the country socially and economically, to provide various sectors of the economy with highly qualified specialists who meet modern requirements. Because in our society, the more highly educated, highly qualified specialists, the faster and more effective the development [1].

Main part

Since the introduction of independence, Uzbekistan has undergone a series of changes and development in its own system of higher education, as in all other aspects of public life. The normative and legal foundations of the national education system have been established. The financing of the higher education system has been implemented in a new way, that is, at the expense of the budget and personal funds. A national test system has been introduced to enroll applicants in higher education institutions, which will objectively assess their knowledge. In order to bring the training of highly educated specialists to a qualitatively new level, training was started on the basis of a two-stage system consisting of bachelor's and master's degrees.

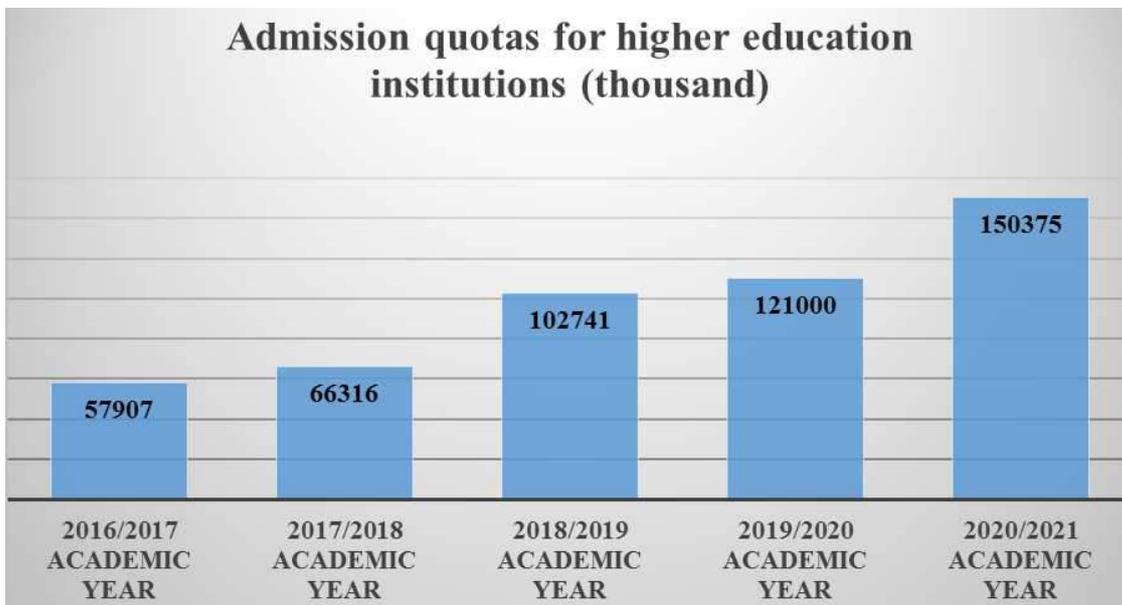
In the first 25 years of independence, along with the positive changes in the system of higher education in the country, there were some problems that need to be addressed in this area. One of the main problems is that young people's aspirations for higher education are limited and the practice of admitting them to higher education on the basis of quotas set by the government on a fixed basis has been observed for years. President of the Republic of Uzbekistan Sh. Mirziyoyev in his address to the Oliy Majlis on the results of 2018 and

priorities for 2019 said: "In the past, the coverage of graduates of higher and secondary special education institutions in Uzbekistan was 9-10%. Thanks to the measures taken in the last two years, we have managed to increase this figure by more than 15%. But this is not enough. Because if we look at the experience of developed countries in the world, this figure is 60-70% of them "[2].

Indeed, the number of people with higher education in Uzbekistan has declined due to low enrollment in higher education. In 1991, the population of the republic was 20 million, and by 2016 it had grown to 30 million. Accordingly, the number of people with higher education should have increased. However, this did not happen, on the contrary, the number of people with higher education in the country decreased. For example, in 1991, there were 26 highly educated specialists per 10,000 population in the country, while in 2000 this figure was 13 and decreased by 50% compared to 1991. In 2016, this figure was 20 [3. p 115]. If we pay attention to the above figures, we can see that from 1991 to 2016, the number of specialists with higher education in the country decreased by 23.0%. This decrease can be attributed to the fact that the coverage of young people with higher education has not increased. The decline in the number of specialists with higher education in Uzbekistan, in turn, has led to a shortage of specialists with higher education in various fields.

By 2017, as in all spheres of public life, great attention has been paid to the implementation of comprehensive reforms in the higher education system. At the same time, one of the main tasks was to develop a plan of measures to address the existing problems in the higher education system of the country and to implement them step by step. One of the main tasks in this area is to realize the aspirations of graduates to higher education by increasing the coverage of these young people in higher education, on the other hand, to accelerate economic development while meeting the demand for higher education in socio-economic spheres.

In particular, if we pay attention to the reforms carried out in this area in recent years, it is possible to witness the gradual increase in the quotas of admission to higher education in order to realize the aspirations of graduates of general secondary education, vocational education, academic lyceums to receive higher education. For example, if we pay attention to the quotas for the admission of young people to universities in the country, in the 2018 academic year, the enrollment of students increased by 30% compared to 2017 and by 62.4% compared to 2016 [4. p 1]. Details are given in the table below.



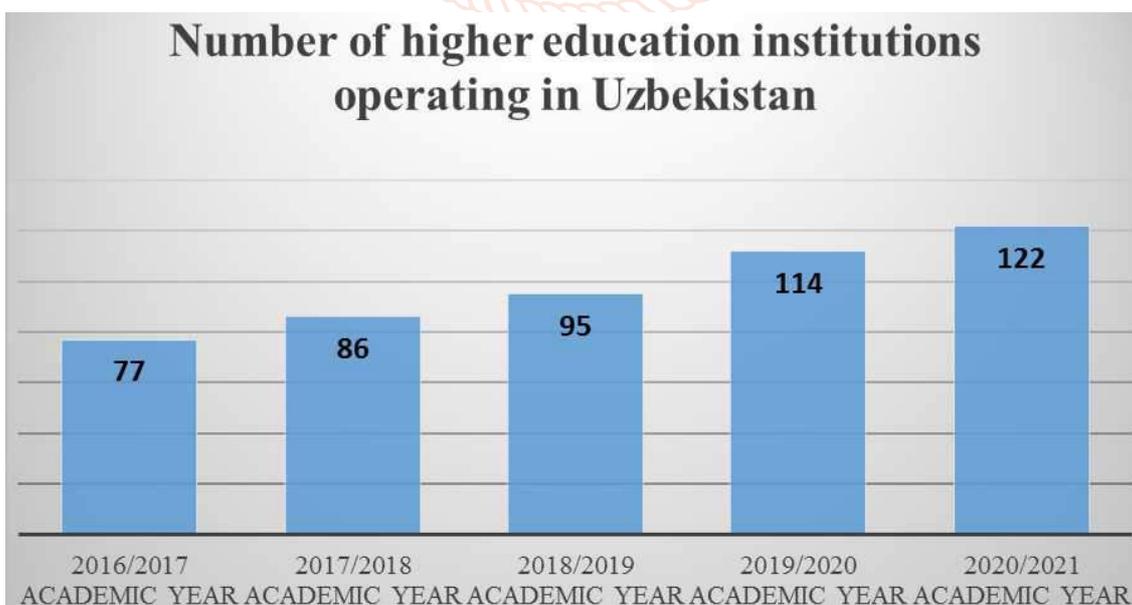
Note: Official website of the Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan. (<https://www.edu.uz/uz/pages/enrollment-plan>) 9.12.2020 y.

<http://www.erasmusplus.uz/images/shared/file/TAM%2014/4%20MHSSE%20Ulugbek%20Khodiev.pdf> (10.12.2020).

It can be seen from the table above that if 57907 students are admitted to higher education institutions in the 2016/2017 academic year, the number will be 150,375 by the 2020/2021 academic year. This figure increased by 159.6% in 2020 compared to 2016. This, in turn, has allowed students to increase their enrollment in higher education from 9-10% to 25%.

In this regard, it is necessary to pay special attention to one aspect of the ongoing reforms in the field of higher education, namely, the material and technical base of existing higher education institutions in the country in the 2016/2017 academic year, the number of students in higher education institutions in the 2020/2021 academic year. As a result, along with the introduction of training in new specialties in the higher education system of the republic, new higher education institutions and branches of the country's leading higher education institutions, as well as foreign universities, have been established not only in the capital but also in the regions.

In particular, in the early years of independence, that is, in 1991, 52 higher education institutions were operating in Uzbekistan, and by 2017 their number had dropped to 77 [5]. In other words, in the last 26 years, the number of higher education institutions in the country has increased by 25 times. However, this was not in line with population growth and the aspirations of young people for higher education. As a result, the inclusion of young people in higher education has been limited. In recent years, measures aimed at expanding the opportunities for graduates to pursue higher education have been taken not only by increasing the admission quotas for existing higher education institutions in the country, but also by opening new branches and opening branches in their places. As a result, the number of higher education institutions in the country has grown significantly. This is detailed in the table below.



Note: <http://www.erasmusplus.uz/images/shared/file/TAM%2014/4%20MHSSE%20Ulugbek%20Khodiev.pdf> (10.12.2020), <https://edu.uz/uz#universs> (9.12.2020). Republic of Uzbekistan Sh. Decree of the President of the Republic of Uzbekistan dated October 8, 2019 No. PF-5847 "On approval of the Concept of development of the higher education system of the Republic of Uzbekistan until 2030". <https://edu.uz/uz#universs> (9.12.2020)

As can be seen from the table above, in the 2016/2017 academic year, there were 77 higher education institutions in the country, while in December 2020, the number of higher education institutions increased to 122. In other words, the number of higher education institutions in Uzbekistan will increase by 45 during these years. For comparison, between 1991 and 2016, the number of higher education institutions in the country increased by 48% (25), while during 2017-2020, the number of higher education institutions in Uzbekistan increased by 58.4% (45). The increase in the number of higher education institutions in the country is due not only to local institutes, universities and their local branches, but also to the establishment of leading higher education institutions and their branches in the developed countries.

In particular, until 2017, the number of foreign higher education institutions and their branches in the country was 7, and by 2020 their number increased to 22. This, in turn, serves to integrate the higher education system of the republic to international standards, as well as a wide range of opportunities for young people to become highly educated professionals who meet world standards. In conclusion, it should be noted that in recent years, as a result of reforms at every stage of the education system of the republic, significant changes have taken place. Such positive changes can also be observed in the higher education system. A number of measures are being taken to meet the aspirations of the youth of the republic to higher education. In particular, on October 8, 2019, the Decree of the President of the Republic of Uzbekistan No. PF-5847 "On approval of the Concept of development of the higher education system of the Republic of Uzbekistan until 2030" was adopted. According to the decree, a number of priorities have been set in the higher education system of the republic. One of the

most important of these is the goal of reaching 50% of young people who want to pursue higher education by 2030. And efforts have been made to make this happen.

Conclusion

Therefore, in order to further develop the system of higher education, we propose the following:

- To simplify as much as possible the examinations for young people to enter higher education institutions and to organize the transition from one course to another in higher education institutions on the basis of international standards;
- Creation of an electronic system of quality education;
- Creating conditions for the free movement of students and professors.

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Historical Stages of Formation and Development of Modern Banking System in Uzbekistan

Begmatov Oybek Rustamovich

Teacher of the Department Social Sciences, Kokand State Pedagogical Institute, Kokand, Uzbekistan

ABSTRACT

This paper investigates major points of the HISTORICAL STAGES OF FORMATION AND DEVELOPMENT OF MODERN BANKING SYSTEM IN UZBEKISTAN. On this case, research has been pinpointed on different analyses of the modern banking system in the Republic of Uzbekistan. In conclusion, research has focused on outcomes and shortcomings as the whole.

KEYWORDS: Formation, development, modern banking, Uzbekistan, research

INTRODUCTION

The formation of the first banks on the territory of Uzbekistan dates back to the second half of the XIX century. As a result of the conquest of Central Asia by Tsarist Russia, the Russian capital began to enter, and on May 10, 1875 The Tashkent branch of the First bank – the State Bank of Russia began its activity [1]. This date can be considered as the date of establishment of the system associated with the bank and this financial institution in Uzbekistan.

For many years, The Tashkent branch of the State Bank of Russia was considered the only bank in the Turkestan region (up to the 90-ies of the XIX century), which controlled the budget funds of the colonial administration and provided loans for the development of trade. Its opening contributed to the penetration of the Russian commercial and industrial capital into Central Asia, increasing the interest of Russian industrialists in Central Asia as a cotton-growing region.

Later, branches of commercial banks began to develop widely in the country. In 1893, the branches of the "Volkko-Kamsky Bank" and the "Russian-Chinese bank" were opened in 1903 year, it was reorganized in 1910 year together with the "northern bank" as the "Russian-Asian bank". In the same year, The Tashkent branch of the Azov-don commercial bank was opened. In general, on the eve of the revolution in 1917 year in Central Asia there were about 50 branches of the Russian State Bank and commercial banks. There were bank branches in 12 cities of Central Asia, including Bukhara and Khiva. Until 1915, the largest number of banks had branches in Bukhara - 8 units, Samarkand - 8 units, Kokand - 8 units, Andijan, Namangan and Tashkent-three, Ashgabat and Marv-two [2].

Initially, private banks, which opened their branches in Central Asia, were only engaged in deposit and accounting and credit operations, but as the cotton-growing and related production sectors developed, banks began to gradually reduce the number of ordinary accounting operations and lend money to the commercial industrial operations of the local bourgeoisie. In addition, since the 1910-ies, banks began to engage in independent trading. To this end, they

established special warehouses for goods in their branches, began to rent cotton cleaning plants, and also obtained monopoly rights in the sale of cotton, fur of Karakul, cocoons and other raw materials, putting a loan to local entrepreneurs.

In Russia, and then in Turkestan, the development of financial capital led to an increase in the inflow of foreign capital into the country. Since 1890-ies, foreign capital (German, French, English, Belgian, American, etc.) entered the banking institutions of Russia, various industries and trade. The finances of foreign financiers and industrialists the Russian Empire entered many branches of the national economy and remote countries. They even penetrate into the Central Asian economy – a region whose activities are prohibited. One of the largest banks operating in Central Asia – the Russian-Asian bank was founded in 1910 year on the basis of the former Russian-Chinese bank, which was founded in 1906 year and is closely connected with the American financial capital. Its departments were opened in such cities as Tashkent, Samarkand, Kokan, Andijan, Margilan, Namangan, Bukhara, new Urgench, Ashgabat, Marv. Almost all of these branches were in control of the activities of enterprises associated with the cultivation of cotton [3].

In general, before the establishment of Soviet power in Turkistan, a number of state and commercial banks of the Empire were established. At present, at the end of the XIX – beginning of the XX century, the basis of the modern market economy was formed in the country and began to develop rapidly. But the revolutionary processes of 1917 year led to the abandonment of the path of socio-economic development based on market principles, at the same time, the transition to a centralized and administratively-ordered planned economic system. And this caused radical changes not only in the socio-economic life of the imperial center, but also in the activity of such remote countries as Uzbekistan, which are considered dependent on it, in particular in the banking sector. These changes, along with market Relations, also put an end to the banking system based on the principle of freedom, have created a "monobank" [4] system that serves the planned economic system.

On December 14, 1917, the decree of the All-Russian Central Executive Branch "on the nasionalization of banks" was signed and, based on it, the banking business was transformed into a state monopoly [5]. Under this Decree, all existing banks in the country were united under the State Bank. On October 12, 1921, the Central Executive Power adopted a decision "on the establishment of state banks [6]. According to this normative act, first the State Bank of the RSFSR was established, and then, after the establishment of the Soviet Union, on its basis, the State Bank of the USSR was

established in 1923 year [7]. Only from 1923 year for 1925 year the Departments of the State Bank of the USSR reached from 251 to 448 units [8]. In this way, the country introduced a full-fledged monobank system, which operated until 1987 year.

The model of economic development of the Soviet Union from the very first period of its formation began to show the fact that it was built in accordance with the requirements of innovative development, as well as the low efficiency of the centralized mechanism of economic management. In other words, "the experience that began with the policy of military communism has led to the fact that the system of Economic Conduct, which has been decided from year to year, has led to the decision-making of the central bodies of unrestricted hukmiga-based non-violent methods of governance, in its influence the accumulation of contradictions in the national economy and gradually" [9].

The escalation of crisis situations in the economy led to the fact that the Soviet banking system also faced problems and contradictions in the performance of its functions. The Soviet credit system lost the potential to stimulate expanded reproduction and rational use of the country's production capacities and reserves. The Bank has become a mass phenomenon – an organization that regularly allocates loans to compensate for the losses of enterprises that do not fulfill the plans. As a result, by the 1980s, the discipline of payment and circulation of money in the country's national economy deteriorated sharply.

The banking system of the USSR (including in the republics) showed that they were not able to promote scientific and technical development, modernize production, transfer it to the rails of intensive development, take into account the full cost of advanced enterprises and support the direction of self-financing. As a result, along with the liberalization of economic life, the issue of reforming the existing banking system became urgent.

As in all spheres of the national economy, reforms were initiated in the banking system. In particular, the decision of the Central Bank of the Republic of Azerbaijan and the Council of Ministers of the USSR on July 17, 1987 "on improving the banking system in the country and its impact on increasing economic efficiency" gave impetus to the process of liberalization in the banking sector and transition from the monobank system to two-tier [10].

With this decision, it is planned to eliminate the problems and conflicts that have accumulated over the years in the field. To this end, structural and functional changes were made in the banking system, a new monetary policy was announced, a number of new forms and methods of banking activity were approved, and qualitative updating of technical equipment of banking institutions was envisaged. It was decided to reorganize the existing banks and form new specialized banks, a new system of banks was created, the main directions and principles of their activities were determined.

Since 1987, as in the whole country (in the USSR), along with cooperatives (small enterprises), private and joint-stock banks began to open in Uzbekistan. In particular, before independence, in 19999991, "Silk Road bank", "Namangan

bank" and a number of other banks began their activities in the Republic of Uzbekistan. For example, on April 23, 1990, the Silk Road Joint-Stock-Innovation Commercial Bank was established, which on June 21, 1990 received a license from the State Bank of the USSR to conduct banking operations [11]. Since 1991 (on the eve of independence) "Andijan bank" has started its activity in the market of banking services of the Republic of Uzbekistan, and later changed to "Partnerbank" aktsiyatadorlik-Commercial Bank [12].

Of course, the process of transition from the monobank system to the two-tier system was not easy, the lack of experience and qualifications was clearly noticeable. Banks, as before, had been linked to norentabel customers, their economic support mechanism had not been developed by the state, commercial banks had been forced to carry out these customer service and damaging banking operations for themselves. Nevertheless, in the banking system, the first steps were taken towards a market economy. But the real conditions for the transition to a new system, in fact, came into existence after 1991 year.

After the Republic of Uzbekistan gained independence on September 1, 1991, a new model of the national banking system was laid. Work was carried out on the abolition of the so-called "Monobank" system and the formation of a new banking system that corresponds to the conditions of the market economy. Laws on banks and banking activities have been developed. This has created conditions for sustainable development of banks and competition in the banking system. For the last thirty years, the banks of Uzbekistan have had to take an evolutionary and at the same time complex path of development in order to become a significant structure affecting the national economy.

In addition, the sovereignty made it possible for the banking system of the Republic of Uzbekistan to become a member of international influential financial organizations and establish comprehensive and mutually beneficial relations with them. In particular, Uzbekistan was admitted to the World Bank on September 21, 1992.

The first period of development of the banking system-1991-1993 years. Although the adoption of normative documents on the sphere coincided with the eve of independence (the law of the Republic of Uzbekistan "on banks and banking activities") [13], it did not lose its power in the conditions of sovereignty, but was improved. It is noted in this law that the composition of the two-level banking system and the imposition of new tasks on the Central Bank of the country. The tasks of regulating money circulation, the system of commercial banks and the formation of a payment system were assigned to the responsibility of the banking system of Uzbekistan. Financing of various sectors of the economy should have been carried out by specialized commercial banks, which are now established, operating on the basis of modern principles and requirements.

In 1994 year, the reforms in the banking system continued the second period of reforms in the industry began and it continued until 2003 year. Since July 1, 1994, the introduction of the national currency – sum into circulation has played an important role in the formation of an independent banking system, in general, the national economy. This meant that the central bank was completely

independent in its activities, which in the future could contribute to the effective organization of the regulation of the national monetary system through market instruments. Since that time, the activities of the central bank on maintaining the pulkredit policy, regulating the work on the Currency, managing the banking activities and subsequently creating an effective payment system were aimed at ensuring the stability of the national currency in full.

The mid-1990s is characterized by the fact that there is a period of improvement of banking legislation. In these years, two main documents on the banking system were adopted – the laws of the Republic of Uzbekistan "on the Central Bank of the Republic of Uzbekistan" in 1995 and "on banks and banking activities" in 1996. It is worth noting that the experience of countries with a developed financial system in their development is taken into account. These laws, as well as the law "on protection of the rights of Joint-Stock Companies and shareholders" created favorable legal conditions for the organization of non-resident banks in the form of private and joint-stock trading [14].

During this period, it is necessary to distinguish two factors that have had a special impact on the development of the banking system. Firstly, as a result of the reforms carried out, the Central Bank of the Republic of Uzbekistan became a full-fledged body of monetary management and banking supervision in 1996. Second, the law of the Republic of Uzbekistan "on banks and banking activities" has determined the legal basis of the activity of the second – level banking system-commercial banks. In it, the printing house was strengthened to form commercial banks on the basis of diversification of bank assets and attraction of foreign capital. During this period, the processes of formation of the Central Bank of the Republic of Uzbekistan as the managing and controlling body of the banking sector continued. The legislative base on the banking system has been qualitatively updated and coordinated with international banking practice.

In 1997, one of the strategic directions of reforms was to stimulate the flow of private capital in the banking sector. This process intensified in 1997 after the publication of the decree of the president of the Republic of Uzbekistan "on encouraging the establishment of private commercial banks". It provided for the provision of benefits for opening banks with a share of not less than 50 percent of individuals [15].

During this period, necessary measures were taken to operate in accordance with the Basel recommendations of the banks of the Republic. Following the recommendations of the Basel Committee on Banking Supervision and international practice, normative documents were developed that regulate the activities of commercial banks within the framework of International Financial Reporting Standards. In order to ensure the financial stability of commercial banks, Bunda used the principles of identifying the problems existing in their balance sheet in advance, as well as taking warning measures before the bank's liquidity decline and Capital end.

At the same time, in the second half of the 1990-ies, the mining system ceased to work due to the fact that the country's economy underwent serious tests. The reason is that the cotton crisis, which occurred in 1996 year, caused a

decrease in the world prices set for this product and led to a 15 percent reduction in revenues from cotton production. On top of this, a relatively low yield of cotton was obtained in 1998-1999 and in 1995-1999 its exposure decreased by 25 percent. The measures carried out by the country's leadership in response to this in the form of promoting the development of import-substituting production and maintaining foreign exchange reserves were evaluated in different ways by experts. According to some considerations, protectionism (the economic policy of a state aimed at protecting its economy from foreign competition) and the policy of limiting the currency negatively affected the liberalization of foreign exchange and trade procedures, as well as slowing the growth rates of small business and private entrepreneurship. This led to almost half the reduction in employment in small business. The slow pace of development of small scale business is attributed to the investment activity in which financial flows serve in favor of the public sector, in particular redistribution, in favor of some sectors and productions [16].

Taking this into account, at the end of this period, the leadership of the country drew attention to the liberalization of foreign exchange policy in order to reduce the impact of the negative circumstances that are taking place in the economy. This condition was mainly observed at a later stage.

2003-2016 was the next stage, during which Uzbekistan achieved a number of achievements in the strengthening of the banking system. The banking system has strategic tasks that determine the prospects for its development. The first of the tasks is to increase the financial stability of banks and increase the scope of financial services in the domestic market, while the second is to ensure the activity of banks of Uzbekistan in the international capital market.

During this period, the system of mortgage lending began to develop. This resource, which provides for social protection of all layers of the population, especially young people, was strengthened by the laws of the Republic of Uzbekistan "on consumer credit" and "on mortgage". The law of the Republic of Uzbekistan "on consumer credit" is significant with the aim of protecting the rights and interests of consumers. This law has further facilitated a significant increase in the volume of consumer lending in banks to improve the living conditions and the opportunities of the population [17].

The factors associated with the continuation of the liberalization of the foreign exchange market and the creation of the necessary conditions for the provision of sum deposits for current international operations also had a direct impact on the activities of banks. Since October 15, 2003, chunanchi accepted the obligation under Article VIII of the agreement of the International Monetary Fund of the Republic of Uzbekistan. As a result, enterprises were partially able to carry out mining on current operations [18]. As a result of the liberalization of the foreign exchange market, the official rate was depreciated three times, the black exchange rate of the foreign exchange market, which appeared in the middle of 1990, decreased in 2004-2008 years. At the same time, in these years we have achieved a high rate of development of the country's economy. Exports increased fourfold. In addition, it simplified the registration of enterprises and their work with banks [19].

In the aftermath of the global financial and economic crisis in 2008, the leadership of the country, which, without attracting foreign funds, practically relied on its own resources, began to introduce restrictions on the foreign exchange market again. As these measures were implemented in a limited way, local and foreign entrepreneurs using the national currency mining encountered a number of problems in carrying out their activities. At the same time, administrative barriers, limiting competition did not allow the development of business [20]

Since 2017, a completely new era has begun in the banking system of the Republic. The adoption of the strategy of action by the president of the Republic of Uzbekistan Shavkat Mirziyoyev on five priority directions of development of the Republic of Uzbekistan in 2017-2021 gave impetus to the next stage of reforms in the national banking system. In the framework of deepening the reforms carried out in the economy and further strengthening the macroeconomic stability and maintaining the pace of economic growth, along with a number of tasks, further improvement of monetary and credit policy on the account of the use of instruments in accordance with advanced international experience, ensuring the stability of the national currency and prices in the.

Proceeding from the above tasks, at a new stage, the implementation of a radical change process in Uzbekistan aimed at achieving effective changes in the economy and forming a reliable basis for its sustainable and inclusive growth was initiated.

The successful implementation of this task is closely connected with the radical improvement of the investment attractiveness of the Republic and the liberalization of foreign exchange policy.

At the new stage, the first reforms in the economy began, first of all, from the banking-financial system, which was considered the blood vessel of the economy. To this end, by the decree of the president of the Republic of Uzbekistan dated September 2, 2017, individuals who are residents of the Republic of Uzbekistan were given the right to purchase foreign currency at the exchange offices of commercial banks from the Free Sale and conversion departments and use it abroad without any restrictions. Thus, in order to strengthen the position of the national currency as a single means of payment, it was forbidden to make payments in foreign currency for goods and services (works) in the territory of the Republic of Uzbekistan [21].

The measures taken in this regard began to yield their results at a short opportunity. In particular, as of September-October 2017, when the decree was adopted, the average monthly volume of operations on the foreign exchange market increased by 1,7 times compared to the corresponding figure of the first half – year. At the same time, foreign exchange trading operations by exporters increased by 2 times compared to the average monthly operations in the first half of this year [22].

In general, by the end of 2017 year, the volume of foreign currency buying and selling operations increased by 1,5 times compared to the period of liberalization, averaging 1,3 billion dollars. At the same time, the gold and currency

reserves of the state during the year increased by 1,1 billion dollars.

The work carried out in the foreign exchange market was also positively assessed by international organizations. In particular, on November 7-16, 2017, the mission of the International Monetary Fund (IMF) under the leadership of Albert eger received a statement after the visit to Tashkent, in which it was noted that " the mission will positively assess the work of the official bodies in accordance with the priorities of the development strategy developed by the president of the Republic of Uzbekistan on [23].

The first reforms carried out in the system began to serve the revival of the country's economy, and more importantly, the well-being of the population. By 2020, 31 commercial banks operate in the banking system of Uzbekistan. Among them, if there are banks with a state share of 13 banks, 16 banks are private banks or banks with the participation of foreign capital. Since July 2019, tenge bank as an affiliate Bank of the Kazakh "Halyk bank" has started its activity. TBC Bank of Georgia, which has purchased the Payme payment service shares management package, has started to carry out banking activities since April this year [24].

Despite the successes achieved in the new era, the signs of the economy of the monopolistic character formed during the last quarter century in the economy, the competition in the banking system almost did not develop [25], the practice of preferential loans was not abandoned, the need to take drastic measures this year for the development of the banking system has come.

In this regard, President Sh.Mirziyoyev touched upon separately, defining the tasks aimed at eliminating the problems accumulated in the field and introducing modern performance measures. In particular, these tasks are an indicator of the following: introduction of digital technologies in the banking system, introduction of new banking products and bringing them to the modern demand for software; establishment of a "project factory" in the banking system that supports entrepreneurs; access of banks to international financial markets, bringing cheap and long-term resources; step-by-step sale of state-owned banks to strategic investors; establishment of modern personnel training in the field; radical updating of their software through the wide application of information technologies in banks; formation of trust in the population in relation to the banking system and Prevention of foreign interference in the activities of banks [26].

In conclusion, a number of problematic periods were observed in Uzbekistan during the formation and development of the modern banking system. The banking system, founded in the Times of the Russian Empire, suffered from Soviet experience. As a result, the banking system of the country, which has been operating in the form of a monobank for almost seventy years, has gone beyond the path of evolutionary development and the advanced experience of the world. In the years of independence, Uzbekistan created the basis of an independent banking system, which is suitable for the world market, but from the mid-1990s to 2017, the policy pursued in the banking sector, including in the foreign exchange market, has served as a further impetus for the development of the country's

economy at a high rate of growth, this led to a decrease in the incidence of work aimed at ensuring employment and further improving living conditions of the population. Since 2017 year, as a result of the reforms that began to be carried out in the banking system, positive changes began to be observed. At present, new tasks have been set to deepen the reforms in the banking sector and eliminate the problems that have accumulated over the years. In particular, it should be noted that in recent years the principle of "the client is not the bank, but the bank for the client" has become the main criterion for the activities of commercial banks.

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The Expander Gas and Ammonia Ratio Influence on the Calcium Cyanamide Yield

O. Kh. Panzhiev¹, A. Kh. Panzhiev², N. Umarov³, O. Azimov³

¹Candidate of Technical Science, Associate Professor of

Karshi Engineering and Economic Institute, Qarshi, Uzbekistan

²Senior Teacher of Karshi Engineering and Economics Institute, Qarshi, Uzbekistan

³Master of Karshi Engineering and Economics Institute, Qarshi, Uzbekistan

ABSTRACT

For the first time, thermodynamic calculations based on relatively new physicochemical constants clarified the onset temperature of thermal ammonia decomposition, as well as the side chemical reactions probability between ammonia and carbon dioxide. The influence of the main technological parameters on the calcium cyanamide synthesis is investigated. The exhaust gases composition from the reactor for the calcium cyanamide synthesis was studied depending on the temperature. Kinetic studies of the calcium cyanamide synthesis determined the chemical reaction orders with respect to ammonia and carbon dioxide, and it was proved that the limiting stage of calcium cyanamide synthesis is the initial gas components diffusion through the product layer.

KEYWORDS: Carbon monoxide, ammonia, expander gas, calcium cyanamide, waste gases

On the basis of long-term physiological and biochemical studies, it has been established that, under salinity conditions, its growth and development or death suppression is the disturbance result in the cells ultrastructure and metabolism and is associated with the equilibrium state disorder of various cations and anions in them. Together with the excessive intake and large amounts of sodium, magnesium, silicon, iron, chlorine and sulfate accumulation in the organs of plants, the calcium intake in them sharply decreases. Cotton belongs to the calciphilic (calcium-loving) plants group and this element plays a special role in its life. Therefore, the physiological calcium deficiency arising during salinization is considered as one of the most important factors limiting the salt tolerance (growth and development) of cotton [1]. Therefore, the mineral fertilizers production development based on our own raw materials, especially calcium containing new mineral fertilizers types, such as calcium cyanamide and others, are becoming important for growing cotton in saline soils and limited water resources.

One of the positive qualities of calcium cyanamide is a more efficient nitrogen absorption by plants from it, because it is a slow acting fertilizer. So, for example, the calcium cyanamide solubility in water is 70 times less than that ammonium nitrate.

Also, unlike ammonium nitrate, calcium cyanamide is an explosion-proof fertilizer.

When applied under fall plowing, it is preferable to all other nitrogen fertilizers forms. In addition to the fertilizing effect, its sterilizing effect on the harmful soil microflora was revealed.

Industrial processing of calcium cyanamide also provides a number of valuable products for various industries, including the gold mining industry.

However, such fertilizers production as calcium cyanamide has not been established in our Republic, and this issue remains relevant to this day.

Based on the above, there is an objective need to activate creating processes of the effective explosion-proof calcium-containing nitrogen fertilizers production based on our own raw materials. Calcium cyanamide, which consists of 50% calcium and may contain up to 34.98% bound nitrogen in amide form, can be considered such a fertilizer. Raw materials for the calcium cyanamide production can be: natural limestone of Uzbekistan, ammonia produced in huge quantities in our Republic, and carbon dioxide, which is an industrial waste of the natural gas conversion process and is emitted into the atmosphere by millions of cubic meters.

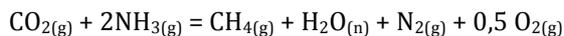
The enterprises of our Republic producing nitrogen fertilizers annually emit million tons of gas into the atmosphere, containing carbon dioxide and other gases. These waste gases are called **expansive** gases. In the calcium cyanamide synthesis, a clean or "dirty" expander gas fraction was used. The pure expander gas fraction had the composition: CO₂ – 99,90%, H₂ – 0,02%, N₂+Ar – 0,01%, monoethanolamine – 5mg/m³, H₂S – 1mg/m³, the "dirty" fraction composition: CO₂ – 95,00%, H₂ – 4,50%, monoethanolamine – 5mg/m³, H₂S – 1mg/m³. During the calcium cyanamide synthesis by the action of an ammonia and carbon dioxide gas mixture on calcium oxide, it is important to study the loss issue of a relatively expensive starting component - ammonia due to thermal decomposition and side reaction of the ammonia and carbon dioxide interaction [2].

The calculation equation, according to Gibbs energy definition, of the thermal ammonia decomposition process into elemental nitrogen and hydrogen according to the NH_{3(g)} = 0,5 N_{2(g)} + 1,5 H_{2(g)} reaction, compiled in 1974 on the basis of physicochemical constants 1947-1972 can be considered obsolete, since over the next ten years, they were revised and refined by a number of authors.

In this regard, we performed a number of thermodynamic calculations based on relatively new physicochemical constants to solve the following problems:

- the average relative error determination in the thermodynamic calculations results using the old and new change constants in enthalpy, equilibrium constant and Gibbs energy in the temperature range 373-1473°K with 100°K step for the thermal ammonia decomposition process;
- determination of a new temperature value of the thermodynamic ammonia probability beginning decomposition process;

- thermodynamic determination of the ammonia losses possibility due to chemical interaction, in the temperature range 673-1473°K with 100°K step, of the initial gas components - ammonia and carbon dioxide by the following reaction:



To perform thermodynamic calculations, Table 1 shows new physicochemical constants values.

Table 1 Thermodynamic components constants

№ п/п	Substance and its aggregation state	ΔH°_{238} , kcal/mol	S°_{238} , cal/mol. temp	Equation coefficients				Temperature range, K
				$C^{\circ}_p=f(T)$				
				$C^{\circ}_p=a+b*T+cT^2$				
$C^{\circ}_p= a+b*T+c^1/T^2$				a	b*10 ³	c ¹ *10 ⁻⁵	c*10 ⁶	
1	2	3	4	5	6	7	8	9
1.	NH _{3(g)}	-10,980	46,047	7,122	6,090	-0,399	-	298-1800
2.	N _{2(g)}	0	45,770	6,663	1,021	-	-	298-2500
3.	H _{2(g)}	0	31,195	6,520	0,779	0,119	-	298-3000
4.	CO _{2(g)}	-94,051	51,066	10,550	2,161	-2,041	-	298-2500
5.	CH _{4(g)}	-17,890	44,520	3,4243	17,844	-	-	298-1500
6.	H _{2O(l)}	-57,7944	45,105	7,170	2,560	0,079	-	298-2500
7.	O _{2(g)}	0	49,006	7,519	0,810	-0,901	-	298-3000

In this table:

ΔH°_{238} – change in enthalpy as a result of the reaction of one mole of a given compound (substance) from simple substances under standard conditions.

S°_{238} – absolute value of entropy of a compound (substance) under standard conditions

C°_p – the true molar isobaric heat capacity of the compound (substance) at P = 101.325 kPa (1 atm) and the temperature T degrees Kelvin, different from 298K.

a,b and c¹ - constants for a given inorganic substance, the equation coefficients for calculating the true molar isobaric heat capacity at different temperatures T and pressure P =101,325 kPa (1 atm).

a,b,c – constants for a given organic matter, the equation coefficients for calculating the true molar isobaric heat capacity at different temperatures T and pressure P=101,325 kPa (1 atm).

Thermodynamic quantities values ΔH°_{238} and S°_{238} are given for standard conditions: pressure P=101,325 kPa (1 atm) and T=298 K.

In earlier studies continuation [1,2] on the calcium cyanamide synthesis from lime mixture, the used reaction gas mixture consisted of carbon dioxide and ammonia.

When conducting experimental studies, the CO₂:NH₃ ratio was changed in the range from 12: 1 to 1:12 (table).

Ratio CO ₂ :NH ₃	12:1	9:1	5:1	3:1	1:1	1:3	1:5	1:9	1:12
Nitrogen content in the product, %	26,76	25,90	25,08	25,69	25,90	28,65	29,38	31,27	31,34

The presented data show that the ammonia content in the initial gas mixture has a greater effect than the carbon dioxide content. For example, an increase in the CO₂:NH₃ ratio from 1: 1 to 12: 1 increases the nitrogen content in the product from 25.9 to 26.76, and with a 1: 9 ratio, from 25.9 to 31.27%, i.e. by 5.37%.

With an increase in the ratio CO₂:NH₃ over 1: 9, the nitrogen content in the product practically does not increase, which allows us to consider the optimal CO₂:NH₃=1:9.

For the calcium cyanamide synthesis, the interaction time of the initial gas mixture with lime is a very important factor, since this determines both the gas mixture flow rate and the installation productivity.

In further experiments, the passage duration of the gas mixture through the charge was varied in the range of 15-120 minutes.

The obtained data showed, as we expected that with an increase in the effect duration of the gas mixture on the solid phase, the nitrogen content in the product increases and the nitrogen content dependence in the product on time largely correspond to equilibrium processes.

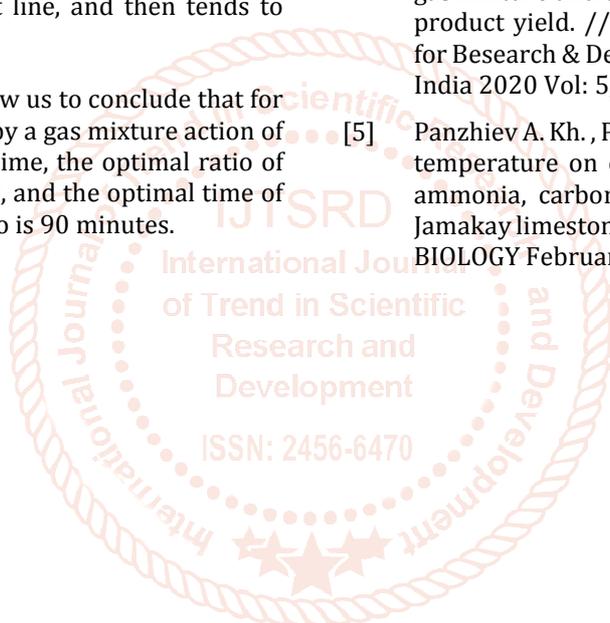
The process driving force, which is determined by what difference between the partial and equilibrium pressures ($\Delta P = P_{\text{partial}} - P_{\text{equ}}$) is more important in the initial period, when the system is still far from equilibrium. As equilibrium is approached, the ΔP driving force decreases, which cause a decrease in the rate of nitrogen accumulation in the product. At the moment of reaching equilibrium ($\Delta P = 0$), the nitrogen amount in the product reaches its maximum (equilibrium) value.

This confirms the nature of the experimental data, in which, in the initial period (up to 90 minutes), the nitrogen content practically increases in a straight line, and then tends to constancy.

The above experiments series allow us to conclude that for the calcium cyanamide synthesis by a gas mixture action of carbon dioxide and ammonia on lime, the optimal ratio of carbon dioxide to ammonia is 1: 9, and the optimal time of chemical components interaction is 90 minutes.

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Interdisciplinary Interaction Issues in Orthodontics

Gafforov Sunnatullo Amrulloevich¹, Asal Anvarovna Berdieva²,
Sevara Sunnatulloeva Gafforova³, Akbar Kurambaevich Kuryazov⁴

¹D.m.sci, Professor, Head of the “Dentistry, Pediatric Dentistry and Orthodontics” Department,

²Assistant “Dentistry, Pediatric Dentistry and Orthodontics” Department.

³Doctoral Student of “Dentistry, Pediatric Dentistry and Orthodontics” Department,

⁴C.M.Sci., Associate Professor, Head of the “Dentistry and Otorhinolaryngology” Department,

^{1,2,3}Tashkent Institute of Postgraduate Medical Education, Tashkent, Uzbekistan

⁴Urgench Branch of Tashkent Medical Academy, Urgench, Uzbekistan

KEYWORDS: *Interdisciplinary interaction, missing teeth, congenital missing tooth, children, cooperation*

Abstract:

In modern conditions of dental practice, the interdisciplinary interaction issue is extremely urgent and acute. The high level of training and literacy of narrow specialists allows dentists to look broadly at the whole spectrum of dental problems. The global development of modern dentistry requires specialized specialists to join forces to achieve new high goals, change priorities and expand their views. And all our efforts pursue one goal: to do the best that is in our power for the patient. The world-famous luminaries of modern orthodontics, such as Prof. William R. Proffit, Prof. Vincent G. Kokich, Prof. Charles J. Burston and others recognize the importance and devote particular attention to this issue in their writings. In 21st century medicine, when an orthodontist offers the best treatment and the best care to his patient, the specialists involvement from related fields in the oral rehabilitation process is the best indicator of our patient care.

Internationally recognized luminaries of modern orthodontics such as Prof. William R. Proffit, Prof. Vincent G. Kokich, Prof. Charles J. Burston and others recognize the importance and emphasize this issue in their writings.[3, 4, 5].

In 21st century medicine, when an orthodontist offers the best treatment and the best care to his patient, the specialists' involvement from allied fields in the oral cavity rehabilitation process is the best indicator of our patient care.

Speaking about interdisciplinary cooperation, we are talking not only about dentists, such as a therapist, orthopedist, orthodontist, periodontist, maxillofacial surgeon, but also about motor otorhinolaryngologists, allergists, neurologists and even osteopaths.

Computerization and the technologies development expand the horizons in diagnostics, treatment, prevention, and simply in the daily routine work of dentists in various fields. In modern realities, a competent doctor understands that one is not a warrior in the field and connects his colleagues to work with the patient to provide better treatment and rehabilitation.

This is especially true in cases associated with secondary deformation of the dentition in connection with the permanent teeth loss due to caries complications [1]. Orthopedic surgeons are faced with the problem of dental alveolar lengthening, the medial tilt of the posterior teeth, the spaces appearance between the teeth, and it is often not possible to cope with these problems alone. Such a one-sided approach will not give an adequate maximum result. And then the orthodontist rushes to the rescue, armed with braces, microimplants and springs [2]. The orthodontist uses the entire knowledge arsenal and modern orthodontics mechanisms to restore the position of displaced teeth, intrusion, distalization, upwringing and other displacement types to achieve optimal occlusion.

The research purpose was the studying theme the importance of interdisciplinary interaction between various specialties doctors, both in dentistry and in related specialties.

Research results: Patient H. D., who was born in 1991, came to the clinic. He was 25 years old at the time of his request. Complaints were about the reverse incisor overlap, the lower jaw protrusion, gaps between the lateral teeth in the lower jaw due to the 35 and 45 teeth loss. After collecting diagnostic data and making a diagnosis, it was decided to install a removable device (articular splint) on the lower jaw. For correction in the sagittal direction, an inclined plane was provided on the device, and then the correction was performed on a DamonQ bracket. After reaching normal overlap, work began to redistribute the space and prepare the patient for implantation. The correct ratio of canines and molars was achieved according to Engle class I classification. After the dental implants installation in the lost teeth area and after three months allotted for osseointegration, the patient was successfully fitted with artificial crowns. (Fig. 1)





Fig 1 Intraoral photographs of patient H. D., 25 years old. Before treatment, during and after the installation of artificial crowns on dental implants

Patient B.S., 46 years old, came to the clinic with a complaint of the absence of 46 and 47 teeth. Due to the long-term loss of these teeth, a dentoalveolar lengthening of the antagonist occurred. Microimplants were installed on the vestibular and palatal sides of the 16th tooth, and within 5 months the intrusion of the 16th tooth was performed using elastic traction. Thus, adequate space was obtained for high-quality dental implant prosthetics and good occlusion was achieved. (Fig. 2)



Fig 2 Intraoral photographs of patient B.C., 46 years old, during and after treatment

In cases of permanent teeth retention, an orthodontist cannot do without the help of a dental surgeon, who makes his invaluable contribution to pulling out process the impacted tooth, and then this fruitful cooperation gives its results. It allows you to restore the dentition integrity with care for function and aesthetics.

A 16-year-old S.G. patient came to the clinic with a complaint about the 23 teeth absence in the dentition. After collecting

diagnostic data (Fig. 3), it was found that the 23rd tooth was impacted. The canine is part of the smile line and is an important part of the facial and smile aesthetics. To solve the retention problem, a bracket system was installed on both jaws to align the dentition. After opening the adequate space, the pulling out process the impacted tooth began. The treatment was completed when an adequate ratio of dentition and aesthetics was achieved. (Fig. 4,5)



Fig 3 X-ray 3d image of patient S.G. before treatment and in the space opening process.



Fig 4 Intraoral photographs of patient S.G. before treatment

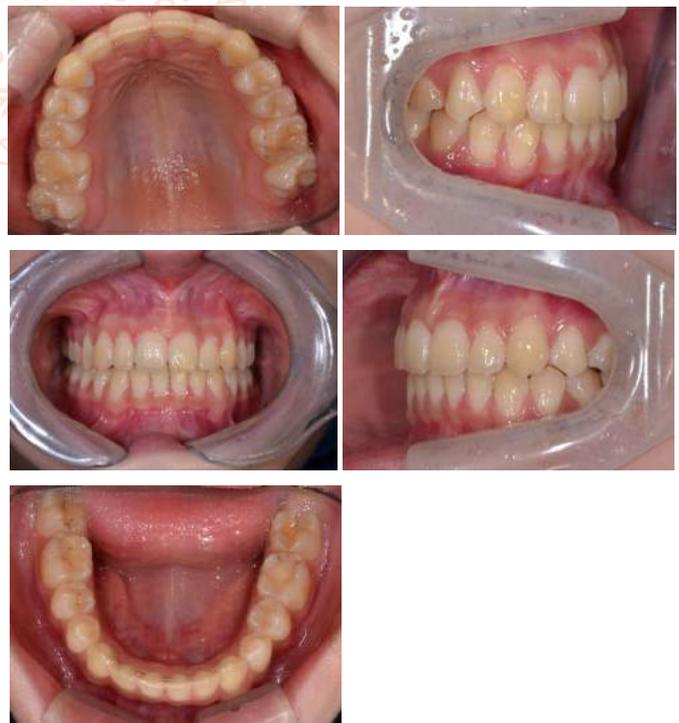


Fig 5. Intraoral photographs of patient S.G. after the end of treatment

In those moments when general practitioners, during the diagnosis, reveal the primary adentia of permanent teeth, it

is the orthodontist who takes over the relay of helping the patient. Places braces and creates an adequate space for the dental implants placement and, in turn, involves a surgeon-implantologist and an orthopedist in the rehabilitation process for the further prosthetics purpose. It is such a well-coordinated and skillful work of different specialties doctors that brings satisfaction both to professionals in their field and to patients who turn to us for help.

The parents of a 7-year-old girl S.O. turned to the clinic with anxiety about the possible absence of 12 and 22 teeth. The therapist - dentist, who had a girl, knowing the family history of primary adentia of the 12th and 22nd teeth in the mother, and noting the importance of the genetic and hereditary factors influence on this pathology formation, advised to undergo an X-ray examination for these teeth presence or absence. After revealing the primary adentia of 12 and 22 teeth, the patient was referred to an orthodontist for further observation. Due to the slight narrowing of the upper dentition, an apparatus for expanding the upper dentition was made. After reaching the expansion and after the retention period, it was proposed to install a bracket system on the upper and lower jaws. The patient also had microdentia. It was decided to prepare the space for further implantation. By the age of 17, orthodontic treatment was completed and retention devices were installed. After the patient reached 18 years old, it was decided to perform implantation. After the expiration of the period allotted for osseointegration, artificial crowns were installed on the dental implants in the 12 and 22 teeth area. (Fig. 6)



Fig 6 Intraoral photographs of patient S.O. before installing the bracket system and after installing the retention device

A 16-year-old patient H.G. came to the clinic with gaps complaints between the teeth, lack of contact between the upper and lower dentition in the anterior region. After collecting diagnostic data, primary adentia of the 35th tooth was found. A bracket system was installed on the upper and lower dental arches. Medical measures were taken to solve orthodontic problems, the lost space in the 35th tooth area was also restored, as a result of which the surgeon, the implantologist, was able to carry out surgery to install a dental implant, and after the time expiration allotted for osseointegration, an artificial crown was installed. Due to the measures complex taken to eliminate the problems, the patient received a beautiful smile and the functional dentition component was restored. (Fig. 7)



Fig 7 Intraoral photographs of patient H.G. before and after treatment

But not only adults need such an integrated approach. Unfortunately, our smallest patients sometimes face early loss of milk molars and it is in the power of a competent doctor - therapist to prevent medial displacement, as well as permanent molars rotation. By sending the patient to the orthodontist in a timely manner to install an apparatus to retain space, the therapist will thereby help the baby to avoid significant complications in the future.

Patient M.U., 8 years old, turned to the clinic due to the need for oral cavity sanitation and was sent to an orthodontist by a physician-therapist to carry out preventive measures in connection with the early loss of milk molars. The orthodontist, in turn, made a removable apparatus to retain space in order to prevent 36 and 46 teeth displacement.

The anomalies problem in the shape and size of permanent teeth, for example, the "subulate" shape of lateral incisors or microdentia, brings us to the dentist's office, who, in turn, will make a high-quality restoration of these teeth or to the orthopedic dentist's office with a request to restore the shape and size using veneers.

A 16-year-old female patient D.A. came to the clinic with an unsatisfactory aesthetics complaint when smiling. After collecting diagnostic data, an anomaly in the maxillary lateral incisors size was found. It was decided to install a bracket system on both jaws in order to align the dentition and achieve optimal occlusion. A space was prepared for a therapist to carry out work on the size and shape restoration of the 12th and 22nd teeth. Upon the treatment completion, the ratio of canines and molars according to Engle class I was achieved, adequate overlap was established, and the patient's desire for aesthetics was satisfied. (Fig.8)

In modern conditions of orthodontic practice, one cannot fail to mention the invaluable contribution of doctors - otorhinolaryngologists and allergists. Indeed, it is precisely their timely intervention and competent treatments that help the orthodontist prevent the pathology development and facilitate correction in case of the upper jaw development violation due to unsatisfactory nasal breathing.

Summarizing all of the above, modern orthodontics is moving by leaps and bounds towards expanding the integration boundaries with other related specialties. This kind of interdisciplinary interaction for the competent purpose and patients' full-fledged rehabilitation brings enormous benefits.

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Fig 8 Intraoral photographs of patient D.A. before and after treatment

Methods of Macroeconomic Modeling

Mukhitdinov Khudoyar Suyunovich¹, Juraev Farrukh Do'stmirzayevich²

¹Professor of Karshi Engineering-Economics Institute, Qarshi, Uzbekistan

²Researcher of Karshi Engineering-Economics Institute, Qarshi, Uzbekistan

ABSTRACT

The article describes the importance and relevance of macroeconomic modeling in the development of economic sectors. The problems of applying the methods of macroeconomic modeling (both optimization and simulation) in the practice of planning and managing the national economy are analyzed.

KEYWORDS: *Economy, macroeconomic modeling, forecast, optimization, imitation, national economy, regulation of the economy*

INTRODUCTION

Large-scale reforming of the economy of Uzbekistan during the period of renewal and social progress is primarily aimed at "creating a powerful, stable and dynamically developing economy, ensuring the growth of national wealth, independence of the republic, decent living conditions and people's activities; gradual formation of a socially oriented market economy ..."¹.

In this process, macroeconomic models, which are a mathematically formalized concept of the functioning of the national economy as a whole, have a particularly important role in the analysis and forecasting of structural and dynamic changes in the national economy and in identifying the effectiveness of state economic regulation.

Thus the basic problems of these models should be a life focused on the study of market and economic conditions of growth, commodity or financial flows, the social protection of the population and others.

FORMULATION OF THE PROBLEM

The main purpose of modern macroeconomic models is to determine the rates and proportions of the development of the national economy of the republic and its most important sectors and to identify the effectiveness of state economic regulation during a gradual transition and market relations.

"State regulation of economic and social will be carried out with the help of well-known instruments-financial, credit, tax, currency policy, price control, and other measures of indirect influence. It is in this way that you can come to a civilized market; create the necessary conditions for it"².

In developed countries, macroeconomic modeling has become indispensable.

¹Указ Президента Республики Узбекистан №УП-4947 от 7.02.2017г. «О стратегии действий по дальнейшему развитию Республики Узбекистан»//Собрание законодательства Республики Узбекистан, 2017, №6, ст.45

²Указ Президента Республики Узбекистан №УП-4947 от 7.02.2017г. «О стратегии действий по дальнейшему развитию Республики Узбекистан»//Собрание законодательства Республики Узбекистан, 2017, №6, ст.70

An element of the system of state regulation of the economy. For example, in Japan on the basis of long-term and medium-term forecast calculations, which use complex macro model systems of different sectors of the economy (production and consumption of tangible and intangible products and services, financial performance, demographics and labor activity, foreign trade and others), formed by the government's economic policy based on purely economic regulators (tax and credit rates, customs duties, volumes and directions of the state investment and others).

In the USA, there is an extensive and I have a network of scientific and business entities dealing with the socio-economic forecasts for the national economy as a whole, its individual sectors and regions, the analysis of individual problems (in particular, employment in connection with the spread of information technology), the collection and statistical processing of various macroeconomic information, as well as quickly providing it to consumers in a convenient form using computer networks and computer facilities.

In the 70s, the development of another direction of economic and mathematical tools and simulation, based on principles other than optimization, began.

Their essence lies in the fact that if in optimization approaches the role of the leader (decision-maker-decision maker), in fact, fulfills the criterion of optimality, then in imitation dialogue systems (they are also called interactive systems), the decision is made by a person based on formal and intuitive ideas about the goals of management, based on their knowledge and experience. In this case, the system itself, or rather, its algorithmic part, plays the role of a calculator of alternative options at the request of a person.

However, active attempts to introduce methods of macroeconomic modeling (both optimization and simulation) into the practice of planning and managing the national economy of the CIS republics have been unsuccessful for the following reasons:

1. Planning "from achieved" did not require subtle optimization approaches;
2. There was an unqualified intervention of administrative and bureaucratic bodies in the course of the implementation of the national economic plan;
3. Incomplete combine the interests of economic entities-population, organizations, and before the enterprises, ministries and score, states, regions, foreign partners;
4. extensive and ruinous methods of management have created a "shadow economy", ordeal with Twain preserving scarcity of raw materials and consumer goods, and not to succumb to the economic dimension;
5. As a result of unsatisfactory material and technical

equipment, undeveloped statistical base, low level of payment for intellectual labor, and other reasons, the theory, methodology and practice of such modeling have significantly lagged behind world achievements.

ANALYSIS AND RESULTS

The retrospective analysis of predictive macroeconomic studies indicates that in recent years more attention has been paid to the development of specific methods of macroeconomic modeling, as a result of which the relationship between the theory and practice of applying the methods of system analysis, complex modeling of the desired (or expected) trajectories of development of the regional economy, taking into account market behavior and harmonization of subjective economic interests. So, for example, in work³ the idea of creating an imitation system of macro models to substantiate the consolidated economic indicators of the development of Uzbekistan is embodied in the work. The basis of the proposed system is made up of private econometric macro models, which are practically used for the analysis and forecasting of summary indicators of the regulated market economy of the region (gross national product, consumer price indices, parameters of economic interrelation, summary financial and other indicators), based on optimization of the industry (sectoral) the structure of production capital investments according to the criterion of the maximum national income and expert assessment of the quality of options for macroeconomic decisions.

In our opinion, the prospect of these studies consists in the creation of a flexible and universal cybernetic subsystem of complex macroeconomic modeling within the framework of the integrated republican information processing system and the national accounting system.

The figure shows a schematic diagram of the development of macroeconomic forecasts based on a multi-stage iterative approach, the essence of which is as follows. At the initial stage, an autonomous forecasting of aggregate macroeconomic indicators is carried out using macroeconomic models and general trends in the rate and proportion of national production are determined. Based on this approach, those upper and lower boundaries of reproduction processes are identified, within the framework of which private, local, sectoral, regional and other types of forecasts should be determined, i.e. these latter should be based on the preliminary parameters of the aggregate macroeconomic forecasts. On the other hand, private local, sectoral, regional and other types of forecasts make it possible, by summing their indicators, to obtain consolidated macroeconomic forecasts. They make it possible, by summing up their indicators, to obtain a consolidated macroeconomic forecast as a whole at the republican level. On the basis of integrated forecasts, the initially compiled orienting consolidated macroeconomic forecasts are corrected. Thus, the consolidated macroeconomic forecast acts as both the initial (initial, orienting) means of autonomously carrying out various forecast calculations, and the final, final tool for the formation of a comprehensive national economic forecast.

The proposed complex of macro models for forecasting the socio-economic indicators of the republic in the sections of the most important sectors (industry, agro-industrial complex, construction, transport and about them) and regions is based on the complex application of the following methods:

- inertial-genetic methods of macroeconomic research (passive forecast);
- normative-target methods of macroeconomic research (active forecast);
- mathematics and statistical methods of forecasting resources and factors of national production;
- methods for assessing, agreeing and making macroeconomic forecast decisions.

Inertial genetic methods, taking into account retrospective trends and patterns, are used to identify the expected trajectories of regional or sectoral macroeconomic development. Prospective development characteristics are assessed on the basis of the most adequately constructed extrapolation and adaptive econometric models of passive forecasting. The main function of passive macroeconomic forecasting is the preparation of analytical and signal information on the rates and proportions of economic development in order to compare with the desired options for long-term development, as well as identify and substantiate especially important, programmatic national economic problems (fig.1).

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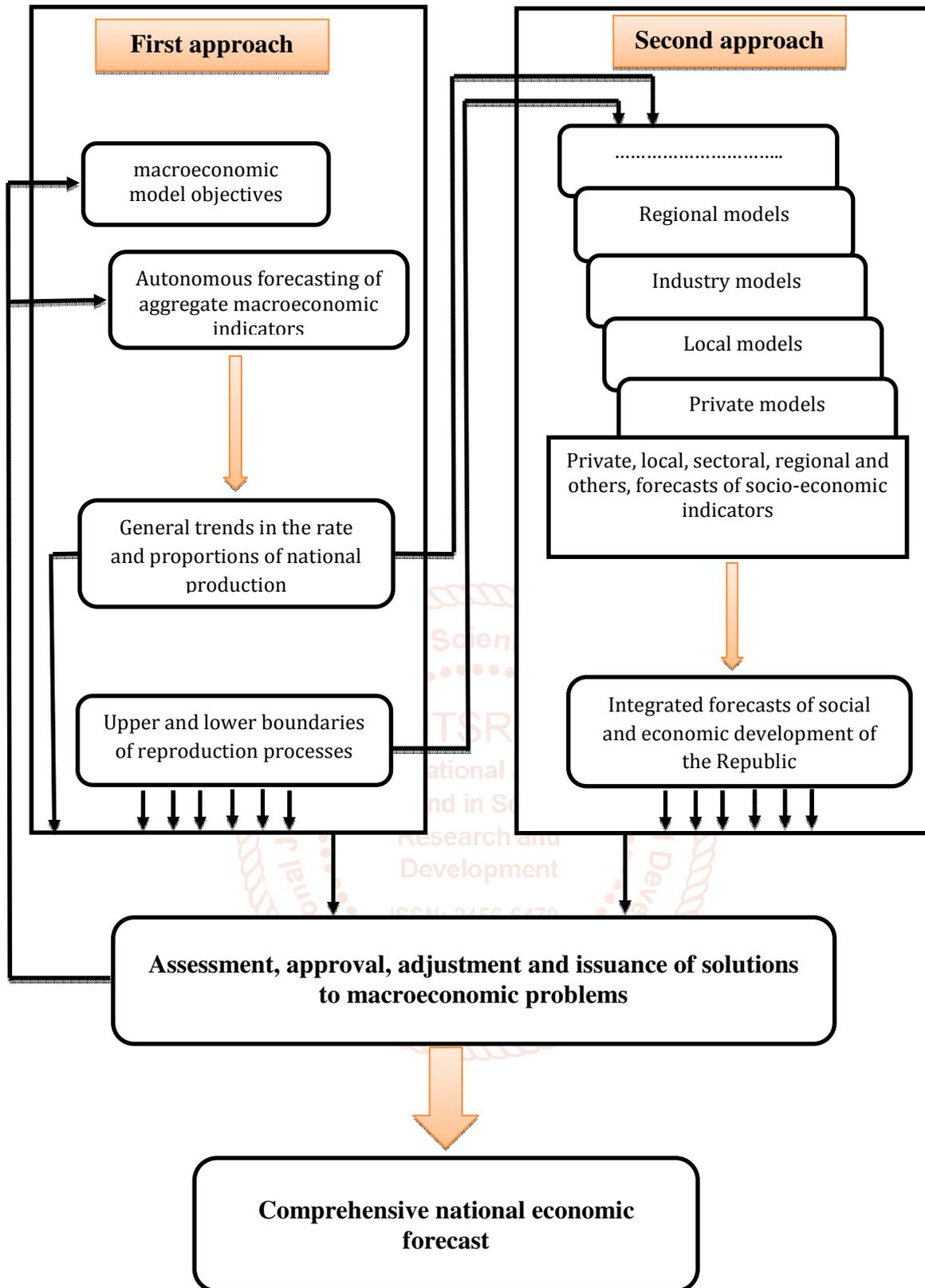


Fig.1. Comprehensive national economic forecast scheme

When determining the "desired" options for long-term development, it is advisable to use normative-target research methods based on pre-formulated goals and scientifically grounded rates of production costs, consumption, accumulation, foreign economic activity, etc. Active forecasts carried out using models of natural value and dynamic inter-sectorial balances, one and many product optimization models, are designed to determine various options for macroeconomic development with the aim of directing the socio-economic system along the "desired" trajectories. They use various (hypotheses of changes in the main regulatory (control) parameters, established

depending on the availability of resources, market conditions, standards and targets.

Forecasting methods for assessing resources and factors of production are based on the use of private economic and mathematical models: reproduction of the population and labor resources; demand and consumption of the population; economic growth (equilibrium); forecasting financial resources; scientific and technical progress (STP) and ecological condition of the region and others. Methods of purposeful enumeration of development options by varying the values of macroeconomic regulators (such as tax and

interest rates, directions and amounts of financial benefits, government investment, financing of social programs and other.) are used as a reliable tool for obtaining coordinated macroeconomic decisions. are the basis of simulation. A series of variant calculations is performed within the framework of a human-machine simulation system, which includes a simulation model and a human-expert - decision maker, who manages the entire process of assessing and choosing the best option. This choice is made by comparing the options for macroeconomic development in dynamics based on comparing the meaning of various formal criteria and informal assessments. In this case, the decision maker has the ability to change not only the sets of values of the control parameters (regulators), but also to vary the estimates of the significance of various goals. It is on this principle that the simulation model developed by the author for assessing the effectiveness of social production is built⁵.

CONCLUSION

In general, the development of macroeconomic models is broken down into the following six interrelated stages:

1. Socio-economic analysis - identification of cause-and-effect relationships, theoretical principles and stable patterns of development of the national economy;
2. Construction of a formalized model in the form of a system of identities, equations and inequalities, i.e. economic and mathematical formalization of the model in order to assess the value of control parameters and endogenous variables based on exogenously set indicators;
3. Selection of strategic (key) variables of the model and determination of alternative options for macroeconomic management decisions;
4. Development of an algorithm and application programs for automating the solution of macroeconomic models;
5. Checking the adequacy of the model on empirical material;
6. Conducting macroeconomic forecasting calculations using a real example, assessing and analyzing the feasibility of the solutions found.

The practical significance of the conducted macroeconomic model developments is determined by their flexibility, multi functionality, orientation towards the existing static nature, reliability and explain ability of the results obtained, which serves as the basis for their recommendations as a toolkit for monitoring the economic situation, i.e. tracking the state of the market system based on intellectualized information technology.

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Providing Trade Services to the Population of the Region

Mukhitdinov Khudoyar Suyunovich¹, Makhmatkulov Golibjon Kholmuminovich²

¹Professor of Karshi Engineering-Economics Institute, Qarshi, Uzbekistan

²Assistant of Karshi Engineering-Economics Institute, Qarshi, Uzbekistan

ABSTRACT

Analyzing the details of providing trade services to the population of the region of the service sector, the sequence of choosing and modeling the main factors which influence their development are represented through simulation schemes in this article.

KEYWORDS: service sector, complex modeling, econometric modeling, differential equations, static and dynamic parameters, structural analysis, synthesis, optimization, multifactorial empirical models, regression equation, correlation coefficient, Darbin-Watson criterion, Fisher and student criteria

I. INTRODUCTION

The development of digital (information) technologies at the present stage affects almost all spheres of economic activity. The article highlights the results of providing trade services to the population of the region to the population of the territory based on empirical models.

The research was carried out using analysis and generalization tools to determine and classify the boundaries of the problem area. When forming an empirical forecasting model and describing its individual elements, a systematic approach and digital information technologies were used.

Of the foreign scientists in this field, the research was conducted by an English economist M. Keynes and one of the Russian scientists V. M. Granberg[5; 14], but the research of scientists of our country has studied some aspects of optimal regulation of the economic system of regions. In particular, the theoretic and methodological aspects of the complex and proportional development of the territories were considered in the works of B. Ruzmetov[15]. Despite many years of research, the issue of accurate forecasting of the development of the economic system remains relevant.

II. Methods

Only in 2004, the Russian economist scientist S.G. Svetunkov for the first time created the theory of constructing complex numerical econometric models [16;17;18;21]. This marked the beginning of the formation of an integrated digital economy. As noted in the studies of A. A. Afanasyeva, O. S. Ponomareva. And G. B. Kleiner "such production functions as describing the influence of production resources on the result of production, help to solve many practical issues." [19; 20]. T. V. Merkulov F. I. Prikhodko in his studies, "the advantages of complex numerical econometric modeling lie in the fact that with their help there are opportunities for solving complex problems that cannot be solved by functions with real variables." An important factor in the territorial system is the theory of optimal regulation. Its distinctive feature is

analyzed and the corresponding scientific conclusions are drawn on the need for consistent application of the principle of optimality in solving the entire complex complex of problems of regulation and management of the economic process in the region [22].

According to the famous American researcher P. Strassman, investments in information technology are most closely related to such indicators of service enterprises as administrative and management costs[6]. Media and technology can reduce the cost of internal governance in the industry. In his works, P. David[7].argues that information technologies are "General-purpose technologies". Harvard Business School professor G. Loveman[8] .also emphasizes a similar point of view. Information technology creates the potential for the development of other digital technologies, but technologies that do not exist without digital technologies will not bring immediate benefits by themselves. Information technology provides a platform for improving organizational processes and introducing fundamentally new tools into the existing service sector.

A similar operation was carried out by scientists E. Brinolfsson and L. Hitch, having studied the activities of 527 large American firms. In this approach, the authors note, an essential role is played by additional assets (assets that change under the influence of information technologies: experience and qualifications of employees, communication tools and technologies, quality of decision-making, changes in business processes, etc.). Over time, the results of the introduction of digital technologies appear gradually, in a general form. The complexity of public service systems (systems based on the use of information technologies) requires taking into account the specifics of digital technologies.

III. Results and Discussion

There are two approaches to creating a digital economy: planned and market-based. For developing countries, the development of the service sector is one of the most effective ways to improve the living standards of the population.

Empirical methods do not negate simple, traditional methods, but help to further develop them and to analyze objectively variable outcome indicators through other indicators.

The real object is presented in the form of two systems: control and controllable (control object) in econometric modeling of the development of service sectors, in the description of management processes.

In the modern era of development of social and service sectors, the provision of services is gaining popularity. Therefore, the labor efficiency per unit of achieved output

is required to be able to calculate fixed assets, material and financial costs.

Production and services have long been a part of human economic activity, social community life. The interaction among people as a social community institution of services, the existence of useful activities - are considered necessary condition of society and life of human. It should be noted that it is not exaggeration if we say that services will increase the level of development of society, not only at the level of its productive forces, but also taking into account its spiritual and enlightenment status.

In this study, we will mark public service sectors as a system by improving the development models of public service sectors as a basis for systematic analysis. At the same time, we consider a single object and the types of services as a collection of collected elements in order to achieve the goal. Namely, we will systematically study to increase the efficiency of public services and living conditions. These researched types of services are understood as interconnected integrity in their integrity. As a result of systematic analysis, the economic-effectiveness indicator will be determined.

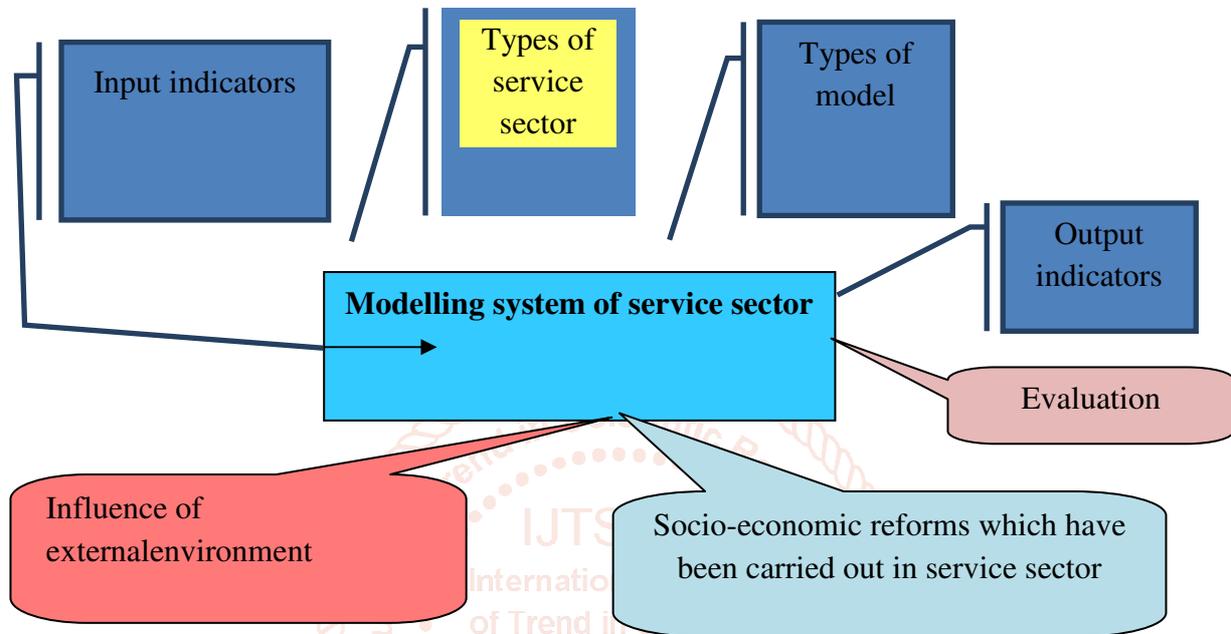


Figure 1 Systematic analysis, synthesis and optimization in the modeling of service sectors

If we consider the process as a system in the modeling of service sectors, we must choose the main influencing factors, namely, input indicators. When modeling a process, we will choose the type or appearance of the model to be generated, if we choose which type of service sector. It is not impossible to take into account all factors in modeling, so we must choose the main influencing factors and take into account the ongoing socio-economic reforms which have been carried out in this field. The outcome factor and evaluation criteria are determined from the generated model (Figure 1).

It should be noted that the attitude of the population to the service sector is formed in the conditions of social ownership to production tools, a single centralized system of economic movement, limited economic independence of enterprises.

In the condition of market economy, service enterprises operate in a variety of forms of ownership, full economic independence and competitiveness. This market involves the flexible use of different methods of house holding management and the choice of econometric models of service, in this case, it creates opportunity for rapid adaptation to changes in the external environment in a competitive environment.

A systematic methodology of complex problems in the field of services is developed on the basis of a systematic approach and general concepts. During the analysis, we take into account the internal and external environment of the service sectors. This means that it must be taken into account not only internal factors, but also external factors such as economic, geopolitical, social, demographic, environmental and other factors.

Each system of the service sector includes its own service elements, while at the same time it reflects the low-level subsystem elements. In other words, the elements of the service sector will be interconnected with different systems in many ways, without interfering with each other.

The systematic approach is expedient for each element of its structural structure in ensuring the completeness of the public service system.

In order to do this, the service sector is considered as a complex system, quantitative and qualitative aspects of its expression laws are studied. Imitation has important role in the analysis of the activities of the service sector which is considered as a complex economic process.

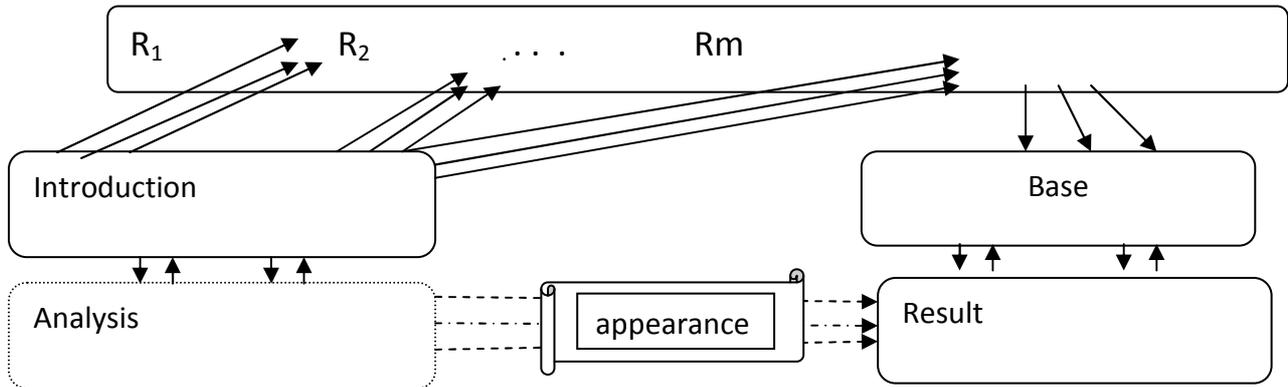


Figure 2 Scheme of systematic imitation of econometric modeling of the public service sector

The imitation model is constructed for each sector to predict the future state of the public service sector. The following tasks should be done in order to do this (Figure 3):

- forming database of service sector networks and factors which influence it;
- identifying the relationship between each service sector and the factors which influence it, the factors which influence it;
- developing a separate model for each service sector;
- examining developed models according to evaluation criteria;
- forming a database forecast on the basis of certain legitimacies of factors which influence forecasting through models which are considered significant;
- achieving outcome factors on the basis of databases and models.

In this case, special functions are reviewed, attention is paid to the algorithms of system operation. It is implied the properties which lead to the goal as function. In this case, performing functions of the system are evaluated on the basis of a functional approach. It creates opportunity to determine the activity of the system, to determine its status, to mark the management legitimacies of systems. An important aspect of this is considered appearing hierarchical subordination among these parts and reflecting it in the relative independence of these parts. This will help the population to develop an integrated systematic imitation model of all elements of its service sector on the basis of a single system.

It is expedient to study the correspondence of different values to the factors which influence to the social phenomena, not the same values, and the correlation connection of their interdependence. Because a characteristic feature of the social spheres is that it is impossible to determine a complete list (strength) of all the factors which affect this sphere.

Besides, only approximate expressions of the connections can be written using the formula. Because the number of factors which influence the living conditions of the population is so large, it is impossible to determine a complete list of them and write an equation which fully represents the connection with influencing outcome sign.

The development of the living conditions of the population is considered so incompletely connection, that different values of the results of the factor which influence it in the different time and space, correspond to each value of the factors. Hence, the total number of influencing factors will be unknown. It is expedient to study such a dependence through correlation connections.

Our task consists of evaluating the existence of strong and weak connections which influence the development of public service sectors. We use the correlation analysis method in order to perform this task. Because our goal is considered to evaluate the importance and reliability of the interdependencies which influence the development of each sector which serves the population. We measure the criterion of dependence which influences the living conditions of the population through correlation analysis, but we cannot determine the cause of the relationships.

We selected information which belong to the reporting years 2004 - 2018, these information identified the areas of service and the factors which influence them, on the basis of certain signs (Table 1).

Table 1 Providing Accommodation and Food Services to the Population of the Region

(billion sum)

N	years	Sales services	Transportation services	Accommodation and catering services	Rental services	individual	Other services
1	2004	83,9	37,6	7,9	7,6	13,5	10,8
2	2005	98,7	59,9	10,4	9,1	17,9	15,1
3	2006	116,1	85,1	17,2	12,3	20,4	19,1
4	2007	145,6	91,8	18,1	15,6	22,7	22,6
5	2008	192,7	110,2	18,9	16,3	28,9	31,9
6	2009	223,8	172,5	29,6	21,7	37,6	37,8
7	2010	312,6	198,9	31,4	29,7	57,1	39,2

8	2011	458,8	299,7	27,8	38,9	56,7	53,2
9	2012	734,4	355,2	26,3	44,8	78,3	79,8
10	2013	928,8	476,2	26,9	70,6	112,4	101,4
11	2014	1133,8	652,2	20,9	88,1	150,8	142,3
12	2015	1290,6	792,8	25,4	109,1	158,3	180,2
13	2016	1646,3	910,1	146,9	135,9	209,2	172,8
14	2017	1935,8	1491,5	185,1	158,0	234,5	212,2
15	2018	2337,0	1608,9	220,8	197,7	262,9	272,2

In this case, the factors which influence the development of each service sector are separately divided in the modeling. Therefore, we took the development of some service sectors as a factor which influences to other service sectors. The impact of influencing factors affects service sectors in different degrees. Selected factors may be involved in modeling once or more. Because we consider one factor as the main factor which influences each service sector, and we can consider another factor as the main factor which influences only one service sector.

Table 2 Service sectors for the population of Kashkadarya region and the factors which influence them

S_x - providing trade services to the population of the region (in billion soums)	Y_3
A_s - total number of the population of region (thousand people)	X_1
I_{ba} - employed part of the population of the region (thousand people)	X_2
A_d - total income of the population of region (in billion soums)	X_3
U_i - total consumption of the population of the region (in billion soums)	X_4
SH_i - personal consumption of the population of the region (in billion soums)	X_5
I_i -social consumption of the population of the region (in billion soums)	X_6

We created the following functional view on the basis of the service sectors in Table 1 and the factors which influence them (Table 3).

Table 3 A functional view of the empirical models which are structured for each providing trade services to the population of the region for the population of the region

$$S_x - \text{providing trade services to the population of the region} \quad S_x = \varphi_3(A_s, A_d, U_i, K_m, C_m, Q_{xm}) + \varepsilon_3$$

We used statistical data from 2004 to 2018 to create multi-factorial empirical models through the service sectors for the population of Kashkadarya region and the factors which influence them.

Table 4 Statistical data of the providing trade services to the population of theKashkadarya region

Y1	X1	X2	X3	X4	X5	X6
83.9	541.7	430.3	339.3	773.9	432.36	2378.2
98.7	653.5	539.1	437.3	1375.3	538.5	2419.8
116.1	850.3	701.75	697.9	1896.5	670.63	2462.2
145.6	1068	877.8	830	2257.2	796.13	2506.2
192.7	1376.6	1130.7	1630.7	3049.5	949.9	2565.9
223.8	1803.4	1494.4	2193	4082.9	1079.8	2615.5
312.6	2380.4	1938.7	1598	3958.8	1329.8	2671
458.8	2692.1	2199.4	1802.8	4759.2	1407.3	2713.2
734.4	3186	2596.5	2030.3	5313.2	1552.1	2762.3
928.8	3723.5	3027.4	2257.6	5862.3	1696.9	2895.5
1133.8	4304.4	3492.1	2484.5	6406.7	1841.7	2958.9
1290.6	4928.9	3990.5	2711.4	6946.2	1986.5	3025.6
1646.3	5597.1	4522.6	2938	7480.9	2131.3	3089.4
1935.8	6308.6	5088.6	3164.5	8010.7	2276.1	3148.1
2337.0	7063.8	5688.3	3390.8	8535.7	2420.6	3186.8

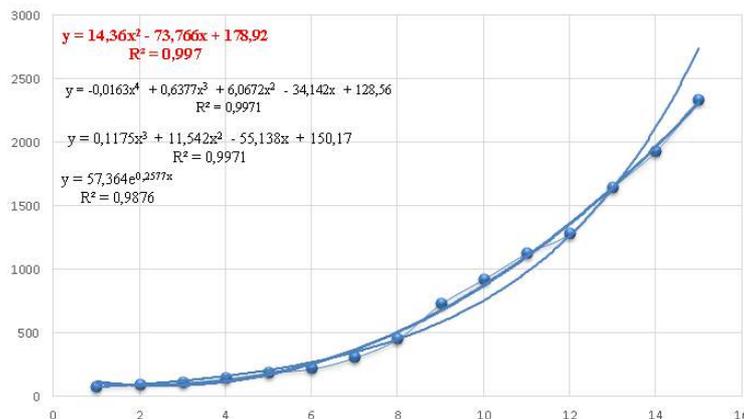


Fig.1.Sales services

One of the main rules of constructing a multi-factorial empirical model is considered to determine the connection densities among the factors which are selected for the model, namely, to investigate the problem of multicollinearity of the connection among the selected factors. To do this, the correlation coefficients among the factors are calculated in order to do this, and when x_i and y_i variables accept the values of $i = 1, \dots, n$, they are considered the most common indicator which shows the linear relationship between x and y , and the correlation coefficient. It is calculated as follows[23,24]:

$$r_{xy} = \frac{Cov(x, y)}{\sqrt{Var(x)}\sqrt{Var(y)}} \tag{1}$$

The value $Cov(x, y)$ in the dividend of the fraction of equation (1) is determined by the following ratio:

$$Cov(x, y) = \frac{1}{n-1} \sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y}) \tag{2}$$

and it is called the covariance of the variables x and y and it is found as follows:

$$Cov(x, x) = Var(x), Cov(y, y) = Var(y). \tag{3}$$

The correlation matrix among the factors which influence the development of each sector of the service sector in Kashkadaryaregion, was calculated in the program EvIEWS9. For example, we have selected the number of teachers per thousand students in the region, the total expenditures of improving the living standards of the population of the region, the expenditures for public education in the region and providing household goods and computer repair services to the population of the region as factors which influence modeling quality education services. We carry out an autocorrelation analysis in order to determine if there is not multicollenity among these factors (Table 5).

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Table 5 Correlation matrix among factors which influence the educational service sector to the population of the region

Covariance							
	Y3	X3	X4	X7	X10	X8	X1
Y3	1.255058						
Correlation	1.000000						
SSCP	18.82586						
t-Student criteria	-----						
Probability	-----						
X3	0.900800	0.665278					
Коррелация	0.985814	1.000000					
SSCP	13.51200	9.979175					
t-Student criteria	21.17709	-----					
Probability	0.0000	-----					
X4	0.895553	0.662259	0.659356				
Correlation	0.984463	0.999921	1.000000				
SSCP	13.43330	9.933878	9.890346				
t-Student criteria	20.21488	287.1062	-----				
Probability	0.0000	0.0000	-----				
X7	0.703569	0.542158	0.541221	0.490731			
Correlation	0.896505	0.948860	0.951464	1.000000			
SSCP	10.55353	8.132369	8.118314	7.360969			
t-Student criteria	7.296052	10.83688	11.14690	-----			
Probability	0.0000	0.0000	0.0000	-----			
X10	0.717710	0.544414	0.543415	0.470891	0.468033		
Correlation	0.936438	0.975640	0.978212	0.982561	1.000000		
SSCP	10.76565	8.166216	8.151227	7.063358	7.020501		
t-Student criteria	9.623851	16.03490	16.98885	19.05297	-----		
Probability	0.0000	0.0000	0.0000	0.0000	-----		
X8	0.570485	0.426195	0.424644	0.354285	0.354912	0.275180	
Correlation	0.970742	0.996088	0.996912	0.964102	0.988949	1.000000	
SSCP	8.557272	6.392920	6.369665	5.314279	5.323682	4.127699	
t-Student criteria	14.57601	40.64484	45.77264	13.09110	24.05149	-----	
Probability	0.0000	0.0000	0.0000	0.0000	0.0000	-----	
X1	0.106375	0.076489	0.076046	0.059995	0.060855	0.048363	0.009156
Correlation	0.992303	0.980019	0.978703	0.895010	0.929600	0.963478	1.000000
SSCP	1.595626	1.147337	1.140686	0.899921	0.912829	0.725446	0.137347
t-Student criteria	28.89251	17.76496	17.19009	7.234669	9.093873	12.97257	-----
Probability	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-----

Table 6 Build an empirical model to provide educational services to the population of the region

Method: the least squares method				
Variable	Model coefficients	Standard errors	t-student criteria	P-value
X ₃	43.49010	13.80558	3.150184	0.0136
X ₄	-43.54139	14.47025	-3.009028	0.0168
X ₇	-1.164721	0.302940	-3.844723	0.0049
X ₁₀	4.795962	1.502857	3.191231	0.0128
X ₈	-3.688429	1.358397	-2.715280	0.0264
X ₁	5.175837	1.753005	2.952552	0.0184
C	-48.22153	14.77718	-3.263243	0.0115
R – determination coefficient	0.926997	The average value of the dependent variable		6.110852
Flattened R – determination coefficient	0.914744	The standard deviation of the dependent variable		1.159614
Standard error of regression	0.084068	Akayke's information model		-1.809665
The sum of the squares of the remains	0.056539	Schwartz's information model		-1.479241
The value of the maximum similarity function	20.57248	Hannan-Quinnriter.		-1.813184
F–Fisher criteria	442.6285	DW-Darwin-Watson criteria		2.649359
Prob(F-Fisher criteria)	0.000000			

It was determined that the value of the DW criterion which were calculated the empirical models which were constructed for each sector of the service sector was higher than the table value. This indicates that there is not autocorrelation in the residues of outcome factor. The Fisher and Student criteria were calculated and the calculated value was compared with the table values, the magnitude of it was determined that they were higher than the table values.

The results of the analysis of the empirical models constructed for each sector of the public service sector in the region are presented in Table 7.

Table 7 Empirical models which were built for each sector of the service sector to the population of the region

Nº	The view of empirical models	R ²	F	DW
3.	$Y_3 = e^{-48.222} * X_3^{43.490} * X_4^{-43.541} * X_7^{-1.165} * X_{10}^{4.796} * X_8^{-3.688} * X_1^{5.176}$ $t \quad (-3.263) \quad (3.150) \quad (-3.009) \quad (-3.845) \quad (3.191) \quad (-2.715) \quad (2.953)$	0.9270	442.629	2.649

The parameters which were taken into account in the models which were built for each service sector (for linear regression equations) consist of different indicators. Therefore, it is necessary to calculate the coefficients of elasticity in the analysis. For example, we calculated the coefficients of elasticity in the analysis of the model built for the sector of communication and information services to the population of the region (Table 8).

The results of the empirical model which is built for providing trade services to the population of the region (Y₃) show that the volume of trade services to the population of the region (Y₃) will increase by 5,18%, if the total number of the population of the region (X₁) increases by 1%, if the total income of the population of the region (X₃) increases by 1%, the volume of trade services to the population of the region (Y₃) will increase by 43,49%, volume of total consumption of the population of the region (X₄) increases by 1%, the volume of trade services to the population of the region (Y₃) will decrease by 43,54%, if capital investment of the population of the region (X₇) increases by 1%, the volume of trade services to the population of the region (Y₃) will decrease by 1,17%, if the volume of regional industrial production (X₁₀) increases by 1%, the volume of trade services to the population of the region (Y₃) will increase by 4,8%, and if the amount of regional agricultural production (X₈) increases by 1%, the volume of trade services to the population of the region (Y₃) will decrease by 3,69%.

IV. Conclusions

It is expedient to separate econometric modeling of each service sector. Because development of each sector of the service sector has a positive impact on development of another sector. Therefore, the use of econometric models in the form of interconnected equations system has particular importance in development of service sectors. Together with this, the organizational-economic mechanism of development of service sectors represents a hierarchical system of interconnected elements and groups (subjects, objects, principles, forms, methods and tools) at different levels, as well as their interrelationships, innovative infrastructure form relationships with market participants.

According to forecasts which was carried out, the total volume of services which are provided to the population of Kashkadarya region is expected to increase by 3,46 times

by 2025, at the expense of saving the current trend. Providing educational services sector is expected to increase by 4.85 times by 2025 compared to 2019, providing health care services sector is expected to increase by 2, 68 times by 2025.

It is expedient to pay essential attention to the innovation factor for the sustainable development of the service sector for the population of the region in the future. It is necessary to encourage innovative ideas and newly opened service sectors, to encourage the factors which create conditions for the development of high-quality service sectors for developing and organizing service sectors on the basis of innovation in the region.

It is necessary to econometrically model the management plans for the elimination of imperfections in the way of achieving the social goals which are set for the economic

growth and living standards of the population and the development of the living conditions of the population. During 2017-2021 years (also, in next periods), it is expedient to develop long-term forecasts (2020-2025) in order to plan policy and projects which will be accepted as the part of action strategy of regional development of the region, plan technologic modernization and service sectors, intensive development of infrastructure, orient them to the welfare of the population.

In the current situation, the service sector to the population offers a variety of additional services, the main content of these services composed of releasing the population from the anxieties in living conditions, improving the quality of services and achieving to live in meaningful daily life.

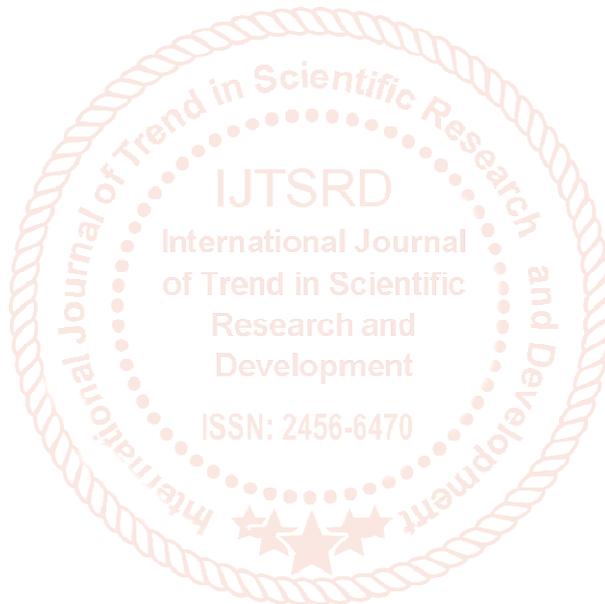
As a result of the research, recommendations are made on forming the methodology and development goals of the service sector, choosing options for decision-making methods and evaluation criteria variants, developing optimal options.

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Providing Accommodation and Food Services to the Population of the Region

Mukhitdinov Khudoyar Suyunovich, Rakhimov Abdihakim Muhammadiyevich

Professor of Karshi Engineering-Economics Institute, Qarshi, Uzbekistan

ABSTRACT

Analyzing development processes of each providing accommodation and food services to the population of the region, the sequence of choosing and modeling the main factors which influence their development are represented through simulation schemes in this article.

KEYWORDS: multifactorial empirical models, regression equation, correlation coefficient, complex modeling, econometric modeling, differential equations, static and dynamic parameters, structural analysis, synthesis, optimization

I. INTRODUCTION

The spread of digital technologies in Uzbekistan today is reflected in the "strategy of action on five priority areas of development of the Republic of Uzbekistan in 2017-2021", presented in Annex 1 to the Decree of the President of the Republic of Uzbekistan dated February 7, 2017 No. 4947, which States that "by expanding the scale of modernization and diversification of the regional economy, social growth will be ensured - accelerated development of comparable districts and cities by reducing differences in the level of economic development and, above all, improving the quality of public services".

In the implementation of these tasks, in terms of further deepening reforms, "in the future, there should be important tasks for the comprehensive development of not only the basic sectors of the economy, but also, above all, the regions, ensuring the vital interests of all citizens of the country and increasing their incomes»[1; 2].

Over the past 30 years, the issues of empirical modeling, the information technologies' influence on the activities of the service sector and the optimal management of the economic system of the territory have received much attention in the scientific works of foreign and domestic scientists.

II. Methods

There have been many discussions about building an empirical model for predicting the provision of services to the population of a territory using digital technologies. In the scientific studies of R. Arens, N.R. Goodman and R.A. Wooding, it was noted that the use of complex numerical econometric models in forecasting economic growth is one of the most promising methods. Interest in regressive complex-numerical econometric models and complex-numerical variable functions with statistical observation arose in the 50-60s of the XX century. G. N. Tavares and L. M. Tavares in their research they also focused in this direction.

In the works of modern authors, a number of areas for assessing the implementation of information technologies

in the service sector are distinguished, it can be divided into the following classification[9; 11; 12; 13]:

using the classical methodology for evaluating investment projects and programs based on international standards;

use of economic methods for calculating the inclusion of a factor in the overall result, cost savings, calculation of the system of financial indicators, assessment of the level and dynamics of indicators by industry (when using an information system)

Application of expert assessment methods (usefulness, prospects, accessibility, ease of use of information resources, etc.);

Use of information diagnostic methods (netmetry, webometry)

III. Results and Discussion

In econometric modeling, the task of control systems is considered change of the variable $y(t)$ in given accuracy (with permitted error) in accordance with the law. When projecting and operating automatic control systems, it is necessary to select the parameters which can ensure the required control accuracy of the S system, as well as its stability during the transition process.

If the system becomes stable, then its behavior by time, the maximum deviation of the adjustment variable $y(t)$ in the transient process, the transient process time, and others are of practical interest. The properties of different classes of automatic control systems can be concluded by the types of differential equations which most closely describe the processes in the system. The order of the differential equations and the value of the coefficients completely determine the static and dynamic parameters of the system.

Using Figure 1.gives opportunity to accept analytical or imitation approaches which are developed in the form of appropriate language for modeling continuous systems or using analog and hybrid computational techniques in forming the process of continuous-determined S systems activity and evaluating their basic characteristics.

The importance of econometric modeling of public service sectors is reflected in the followings:

The material, labor and monetary resources are rationally used;

It serves as a leading tool in the analysis of economic and natural processes;

it will be possible to make some adjustments during the forecasting of the development of public service sectors;

It gives opportunity not only in-depth analyzing service sectors, but also discovering their unexplored new laws.

They can also be used to predict the future development of service sectors;

It facilitates mental work along with the automation of computational work, creates the opportunity to organize and manage the work of personnel of service sector on the scientific basis.

In our opinion, there are the following actual issues which are waiting for their solution, in the development of the service sector: identifying classification of the types of services which are provided to the population, evaluating the nature of the service sector, developing a system of indicators of service sectors in current situation, improving the process of econometric modeling of development of public service sectors and forecasting it through them.

Human creates and serves the object of service to himself. Because of this, it is possible to introduce the belief that services are for the human and performing the service is also a human. This means that both the producer of the services and its consumer are also human. This can be expressed as follows:

It is known that as a result of the service, the GDP (Gross Domestic Product) of country will increase. This will be done in the following directions: a gross domestic product will be created in the conditions of market relations, as a result of service, irrespective of creating or non-creating a material wealth. Therefore, it is expedient to look at services not from the point of view of the creation of material wealth, but from the point of view of the creation of gross domestic product.

In the modern era of development of social and service sectors, the provision of services is gaining popularity. Therefore, the labor efficiency per unit of achieved output is required to be able to calculate fixed assets, material and financial costs.

Production and services have long been a part of human economic activity, social community life. The interaction among people as a social community institution of services, the existence of useful activities - are considered necessary condition of society and life of human. It should be noted that it is not exaggeration if we say that services will increase the level of development of society, not only at the level of its productive forces, but also taking into account its spiritual and enlightenment status.

In this study, we will mark public service sectors as a system by improving the development models of public service sectors as a basis for systematic analysis. At the same time, we consider a single object and the types of services as a collection of collected elements in order to achieve the goal. Namely, we will systematically study to increase the efficiency of public services and living conditions. These researched types of services are understood as interconnected integrity in their integrity. As a result of systematic analysis, the economic-effectiveness indicator will be determined.

In the condition of market economy, service enterprises operate in a variety of forms of ownership, full economic independence and competitiveness. This market involves the flexible use of different methods of house holding management and the choice of econometric models of service, in this case, it creates opportunity for rapid adaptation to changes in the external environment in a competitive environment.

Our goal consists of analyzing the service sectors in the region and improving its models.

I. First of all, modeling gives opportunity to express a large and complex system using a simple model. The process of providing services to the population is a difficult system. It can be expressed through a systematic analysis scheme.

The mechanism of public service can be described graphically. Of course, this creates many problems.

II. The wide field is created for making experiments with the structure of the econometric model of public service sectors. We can determine the most optimal state of activity of service enterprises by changing several times the parameters of the model. We can experiment on electronic computing machines through this model and then we can apply it in life.

Experimenting on real objects can lead to many mistakes and huge costs.

III. The service sectors will be studied and analyzed in detail in order to create a model. After the model is created, it can be obtained new information about processes of service sector with using it. Thus, the process of service sector becomes a continuous process.

A systematic methodology of complex problems in the field of services is developed on the basis of a systematic approach and general concepts. During the analysis, we take into account the internal and external environment of the service sectors. This means that it must be taken into account not only internal factors, but also external factors such as economic, geopolitical, social, demographic, environmental and other factors.

Each system of the service sector includes its own service elements, while at the same time it reflects the low-level subsystem elements. In other words, the elements of the service sector will be interconnected with different systems in many ways, without interfering with each other.

The systematic approach is expedient for each element of its structural structure in ensuring the completeness of the public service system.

In order to do this, the service sector is considered as a complex system, quantitative and qualitative aspects of its expression laws are studied. Imitation has important role in the analysis of the activities of the service sector which is considered as a complex economic process[19; 20].

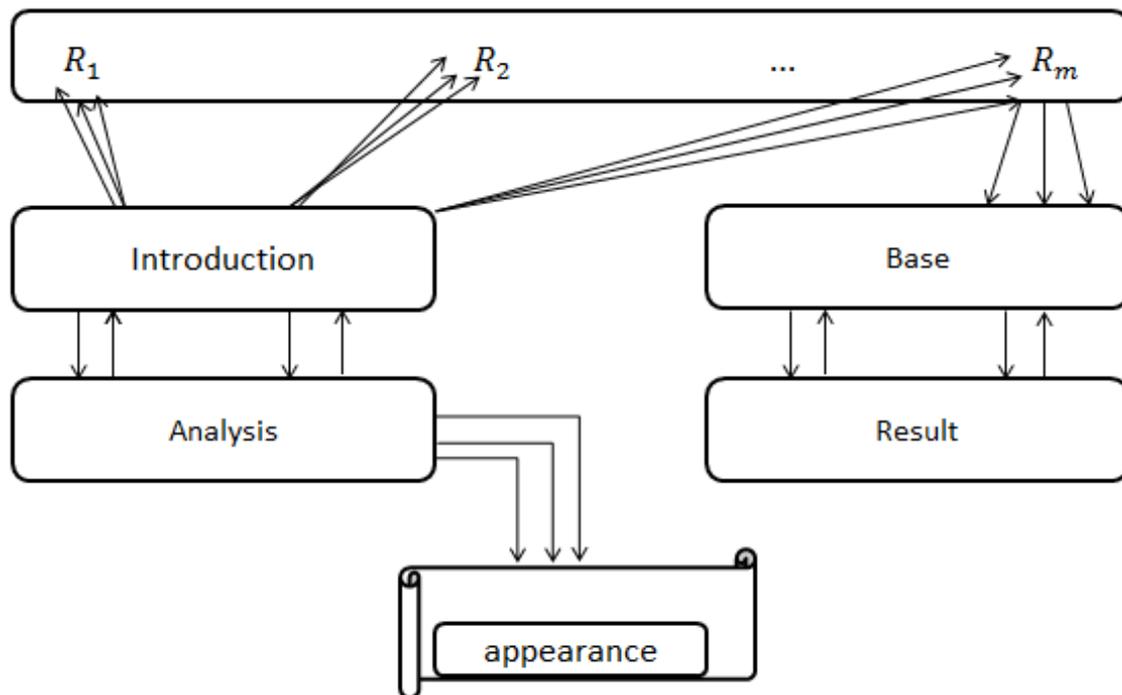


Fig.1. Scheme of systematic imitation of econometric modeling of the public service sector

The imitation model is constructed for each sector to predict the future state of the public service sector. The following tasks should be done in order to do this (Fig.1):

- forming database of service sector networks and factors which influence it;
- identifying the relationship between each service sector and the factors which influence it, the factors which influence it;
- developing a separate model for each service sector;
- examining developed models according to evaluation criteria;
- forming a database forecast on the basis of certain legitimacies of factors which influence forecasting through models which are considered significant;
- achieving outcome factors on the basis of databases and models.

In this case, special functions are reviewed, attention is paid to the algorithms of system operation. It is implied the properties which lead to the goal as function. In this case, performing functions of the system are evaluated on the basis of a functional approach. It creates opportunity to determine the activity of the system, to determine its status, to mark the management legitimacies of systems. An important aspect of this is considered appearing hierarchical subordination among these parts and reflecting it in the relative independence of these parts. This will help the population to develop an integrated systematic imitation model of all elements of its service sector on the basis of a single system.

It is expedient to study the correspondence of different values to the factors which influence to the social phenomena, not the same values, and the correlation connection of their interdependence. Because a characteristic feature of the social spheres is that it is impossible to determine a complete list (strength) of all the factors which affect this sphere.

Besides, only approximate expressions of the connections can be written using the formula. Because the number of factors which influence the living conditions of the population is so large, it is impossible to determine a complete list of them and write an equation which fully represents the connection with influencing outcome sign.

The development of the living conditions of the population is considered so incompletely connection, that different values of the results of the factor which influence it in the different time and space, correspond to each value of the factors. Hence, the total number of influencing factors will be unknown. It is expedient to study such a dependence through correlation connections.

Our task consists of evaluating the existence of strong and weak connections which influence the development of public service sectors. We use the correlation analysis method in order to perform this task. Because our goal is considered to evaluate the importance and reliability of the interdependencies which influence the development of each sector which serves the population. We measure the criterion of dependence which influences the living conditions of the population through correlation analysis, but we cannot determine the cause of the relationships.

We selected information which belong to the reporting years 2004 - 2018, these information identified the areas of service and the factors which influence them, on the basis of certain signs (Table 1).

Table.1 Providing Accommodation and Food Services to the Population of the Region

$Y_j O_x$ -Providing Accommodation And Food Services	A_s -population	A_d -icome	K_m -capital	TFO_{bx} -cost
Y1	X1	X2	X3	X4
7.9	2378.2	541.7	339.3	20.3
10.4	2419.8	653.5	437.3	26.1
17.2	2462.2	850.3	697.9	34.5
18.1	2506.2	1068	830	43.9
18.9	2565.9	1376.6	1630.7	79.2
29.6	2615.5	1803.4	2193	108.3
31.4	2671	2380.4	1598	128.1
27.8	2713.2	2692.1	1802.8	127.3
26.3	2762.3	3186	2030.3	149.4
26.9	2895.5	3723.5	2257.6	136.5
20.9	2958.9	4304.4	2484.5	147.1
25.4	3025.6	4928.9	2711.4	165.6
146.9	3089.4	5597.1	2938	150.7
185.1	3148.1	6308.6	3164.5	165.6
220.8	3186.8	7063.8	3390.8	239.9

We created the following functional view on the basis of the service sectors in Table 1 and the factors which influence them (Table 2).

$$Y_j O_x = \varphi_5(A_s, A_d, K_m, TFO_{bx}) + \varepsilon_5$$

$Y_j O_x$ -providing accommodation and food services to the population of the region.

In this case, the factors which influence the development of each service sector are separately divided in the modeling. Therefore, we took the development of some service sectors as a factor which influences to other service sectors. The impact of influencing factors affects service sectors in different degrees. Selected factors may be involved in modeling once or more. Because we consider one factor as the main factor which influences each service sector, and we can consider another factor as the main factor which influences only one service sector.

Table 2 Correlation matrix

Covariance					
	Y_5	X_1	X_3	X_7	X_{12}
Y_5	4449.870				
Корреляция	1.000000				
SSCP	66748.06				
t-Стъюдент мезони	-----				
Probability	-----				
X_1	13389.11	70201.80			
Корреляция	0.757537	1.000000			
SSCP	200836.7	1053027.			
t-Student criteria	4.184087	-----			
Probability	0.0011	-----			
X_2	113451.0	544619.2	4299322.		
Correlation	0.820228	0.991331	1.000000		
SSCP	1701765.	8169289.	64489825		
t-Student criteria	5.169905	27.20475	-----		
Probability	0.0002	0.0000	-----		
X_3	45670.95	240924.0	1851442.	897866.4	
Correlation	0.722538	0.959622	0.942333	1.000000	
SSCP	685064.2	3613860.	27771631	13467996	
t-Student criteria	3.768302	12.30018	10.15195	-----	
Probability	0.0023	0.0000	0.0000	-----	
X_4	2753.150	14807.64	115695.1	54162.45	3648.468
Correlation	0.683284	0.925245	0.923761	0.946318	1.000000
SSCP	41297.25	222114.7	1735426.	812436.7	54727.01
t-Student criteria	3.374106	8.793548	8.696946	10.55573	-----
Probability	0.0050	0.0000	0.0000	0.0000	-----

One of the main rules of constructing a multi-factorial empirical model is considered to determine the connection densities among the factors which are selected for the model, namely, to investigate the problem of multicollinearity of the connection among the selected factors. To do this, the correlation coefficients among the factors are calculated in order to do this, and when x_i and y_i variables accept the values of $i = 1, \dots, n$, they are considered the most common indicator

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On the Content of Words in Studying Samples of the History of Modern

Tojjeva, Holida Bakhtiyorovna

Lecturer at Samarkand State University, Samarkand, Uzbekistan

ABSTRACT

This article provides information on the role of dictionaries in the study of the history of Uzbek literature. The history of the creation of dictionaries, a number of dictionaries, encyclopedias covering various fields of science, mainly provides information on language and literature, pedagogy, oratory, writing, etiquette, logic, teaching methods.

KEYWORDS: dictionary, encyclopedia, complex text, literary history, textbook

INTRODUCTION

The study of the history of Uzbek literature is a complex process, and, of course, it is impossible without dictionaries. It is well known that in addition to commonly used words, dictionaries include common Turkish, Arabic, and Persian-Tajik words that are obsolete or rarely used.

The interest in understanding the meaning of the text has a long history. This need has led to the creation of different types of dictionaries at different times. The dictionary, in particular, in a sense served as a key. Because the dictionary has the magic power to renew any complex text, a simple, old text. It is well known that the history of society is the history of words, and the history of words is the history of society. Dictionaries are, of course, a collection of words, syllables, and syllables of words of a particular period. It is no coincidence that the famous French writer Anatole Franz said, "... the dictionary is the whole world in the alphabet." The history of Uzbek lexicography goes back to the work of Mahmud Kashgari, "Devonulug'otut-turk", written in the XI century. Later, at different times, dictionaries covering various fields were created one after another. Some dictionaries are currently kept in the fund of the Institute of Manuscripts named after Hamid Suleyman, in the fund of the Institute of Oriental Studies, in the fund of the library of Samarkand State University.

Material and Methods

Literary critic Botirbek Hasanov gives a classification of 45 dictionaries kept at the Hamid Suleyman Institute of Manuscripts. In particular, Mahmud Zamakhshari's "Asosul-balog'a" and a four-language dictionary "Muqaddimatul-adab" (XII century), the unknown author's dictionary "Attuhtuz-zakiyatifil" (XIII century), Muhammad Yaqub Chingiy's "Kelurnoma" (XVII century), Muhammad Riza Khoksor's Muntaqabul-lug'ot (18th century), Mirzo Mahdikhon's Sangloh (18th century), Suleiman Bukhari's Lugatichigatoyi and Turkic Ottoman (19th century) and others.

This manuscript deals with the classification of dictionaries, their authors, structure, size, factors that led

to the formation of the dictionary, and sponsors in scientific collections.

In particular, during the XIII-XIV centuries, many Turkish-Arabic and Turkish-Persian dictionaries were compiled. Among such dictionaries are "Translator of Turkic and Arabic" (1245), "Kitabulidrakmelisanulatrak" (Abu Hayyan). Alisher Navoi was followed by various dictionaries dedicated to the interpretation of his works. Among them is Tali Heravi's Badoyiul-lug'at (late 15th century) and Abushqa (16th century).

Mawlana Sheikh Ilahdad Faizi ibn Asad al-Ulama Alisher Sirihindi's dictionary Mador al-Afozil (1593) contains explanations of Arabic, Persian and Turkish words. Most importantly, in interpreting the meaning of Persian words, the author cites examples from hundreds of poets, such as Salman, Saadi, Khoja Hafiz, Kamal Isfahani, Nasir Sherozi, Mansur Sherozi, Ustod, or works whose authors are not identified. That is why the scholar calls this dictionary the best guide.

When we look at the history of these dictionaries, the need for in-depth study of the Arabic, Persian and Tajik languages becomes clear. Because of the growing popularity of the Arabic language from the VIII century, the creation of religious and mystical works in this language, or the widespread use of Persian-Tajik as an official language, it was natural that dictionaries were needed for peoples who spoke and learned other languages. The compiled dictionaries also served as a much-needed guide, especially for scholars and educators, as well as for madrasa teachers and students. Because without dictionaries, without explanations, the secret of the text could not be known.

Muhammad Husayn Burhan, a scholar who lived and worked in the 17th century, compiled a dictionary called Burhani Qote. The dictionary classifies more than 20,000 words, mostly with weighty, melodic words side by side, and takes into account the rules of correct reading and pronunciation.

Among the dictionaries we can take the work of Muhammad Hoksor "Muntahabul-lug'at", which is recognized as an important source and example in the field of fiction. In this work, unlike other dictionaries, the author makes extensive use of dictionaries created before him. Taftazani also cited works by Hussein Waz and poems by famous Eastern poets. M. Giyosiddin's "Giyosul-lug'at" should also be mentioned here.

Munaqqid Ibrahim Haqqulov defines the word as "a word is a key, a word is a stone, a word is a criterion for determining the level of talent." We have become accustomed to reading and accepting "modern" poetry,

which is like a wall without a foundation, and to accept and study poetry not with knowledge, but with ignorance. This ability has taken our classical poetry so far away from the world of pleasure, spirit and art that, as a result, many of us have been unable to chew the content of a poem, weave the qualities and attributes and praise it.”

Results

The history, literature and culture of our country date back to antiquity. And this glorious history is an integral part of human progress. Therefore, a concise form of this history is reflected in encyclopedias. In determining the content of the encyclopedia, in addition to the traditions of world encyclopedia, the experience of the East was used.

Regardless of the period in which the encyclopedia was compiled, it includes all the concepts that reflect the state and history of each science, terms related to the field, historical names, and explanations given to them. Sa'diddin Taftazani's *Miftoh al-Ulum* (The Key to Knowledge), 19th-century stylist Wahid Ali Mujmal's *Matla' al-ulumwamajma' al-funun* (The Beginning of Sciences and the Collection of Sciences), Yusuf Sakkoki's Encyclopaedic works such as *Miftoh al-Ulum* (The Key to Knowledge) can be mentioned. Since these sources are encyclopedias covering a wide range of disciplines, we have focused mainly on language and literature, pedagogy, public speaking, writing, speaking, logic, and other teaching methods.

Discussion

The encyclopedias provide information on each field in a certain order and the necessary recommendations are scientifically based. For example, information on literature, art, poetry, aspirations, and teaching methods begins in a simple way and then becomes more complex.

One of the remarkable features of the encyclopedia is that it pays great attention to the issues of morality, etiquette and spiritual education. Educational (didactic) issues are mainly explained in the context of oriental moral traditions, and teachings are given in several chapters through the opinions and stories of judges, sages, and scholars.

The creation of textbooks and manuals was also the basis for the establishment of methodological schools of encyclopedias. Naturally, the emergence of such schools encouraged methodologists to write commentaries on complex texts and to create the necessary textbooks and manuals.

In fact, the history of creating encyclopedic works goes back to Ancient Rome and Movarounnahr. In addition to the creation of separate encyclopedias, the works of some thinkers were encyclopedic works that covered the

sciences of their time. Among such works are Yusuf KhosHajib's "Qutadgubilig", Mahmud Kashgari's "Devonulug'otitturk" and Bobur's "Boburnoma", which are included in the textbooks of secondary schools.

Acknowledgement

Most importantly, these encyclopedias explain the content of each science studied in its time, its tasks, and the interpretation of key terms. Special attention was paid to the laws of poetry and poetry from the literary and theoretical sciences. In particular, the poetic dimensions (weight), some of its shortcomings, rhymes, and literary language are discussed. This fact alone proves that the interest in fiction and the study of the science of dreams dates back to antiquity. At the same time, it is undoubtedly the main textbook for students and teachers. It is worth noting that this is the first textbook. Academician I.Yu. Krachkovsky, thinking about textbooks such as "The Key to Science", said that they also served as "... an explanatory terminological dictionary covering all areas of knowledge."

These works are not only encyclopedic works, but also valuable sources of terminology. It reflects the unique way of life, cultural situation, customs, history, traditions and even the landscape of our nation.

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- [8] Husanboyeva K., Niyozmetova R. Methods of teaching literature. Study guide. - T.: "Fayz-media", 2018 - 352 The study of the history of Uzbek literature is a complex process, and, of course, it is impossible without dictionaries. It is well known that in addition to commonly used words, dictionaries include common Turkish, Arabic, and Persian-Tajik words that are obsolete or rarely used.

Improving the Socio-Psychological Preparation of Children for School

Fayzullayev Sh. N¹, Kuvondikova M. A²

¹Associate Professor of Samarkand State University, Samarkand, Uzbekistan

²Master of Preschool Education, Samarkand, Uzbekistan

ABSTRACT

The article focuses on pre-school students in innovative pedagogical and psychological activities to prepare children for school and through this activity they are given theoretical and practical concepts of socio-psychological development of children in pre-school education groups.

KEYWORDS: Social training, Socio-psychological training, innovative activity, psychological readiness for school, teamwork, creativity, development of communication

There is a piece of flesh in the body, and if it is clean, the whole organ is healthy. It is the heart. People's actions depend on the intentions of their hearts! (NABIY (r.s.a))



The great scholar of the East, the philosopher Al-Farabi, interprets the issues of upbringing of the younger generation and the psychological and physiological problems associated with them as an important part of philosophy, as well as the comprehensive and interconnected parts of man was able to show that he was in favor of the study. According to him: "The human body, the brain, the senses are present at birth, but mental knowledge, spirituality, spirit, intellectual and moral qualities, character, religion, customs, education, other external environment, in the process of communication with other people, etc., a person through his activities occupies them, achieves them. His mind is the perfect product of spiritual growth. Man develops his knowledge, his intellect, and eventually reaches the knowledge of the beginning of existence".

Socio-psychological preparation for school is a set of mental qualities that a child needs to start school successfully.

One of the main requirements of a school for a child's personality is **psychological preparation**. The psychological readiness of a child is inextricably linked with changes in his social status in society and the specificity of children's educational activities in the early school years.

Psychological readiness for school is the child's objective and subjective suitability for school requirements. The child is first psychologically prepared for school. His psyche is sufficiently developed to acquire knowledge. A child differs from children of other ages in ontogenesis by the sharpness, clarity, purity of his perception, his curiosity, the brightness of his imagination, the strength of his memory, the clarity of his thinking. At this age, attention is relatively long-term and conditionally stable. Features of the child's attention in role-playing and plot games, drawing and construction lessons, making toys from clay and plasticine, to comprehend and understand the speech of others, to solve mathematical problems, it is evident in listening and composing the story. Until now, the child has mastered this or that information under the direct guidance of an adult, but now he voluntarily tries to gather the necessary information, to set a clear goal and task. Today, the growing awareness of social life of preschool children and the complexity of the content of social relations require the preparation of the younger generation for social life, their socialization. The First Step program, developed in accordance with the state requirements for the development of preschool children, pays special attention to the formation of communication with adults and peers in the field of socio-emotional development. Naturally, the study of the child's personality, his development, taking a special responsibility is the first duty and responsibility of every parent, educator. In order to successfully perform this task, a parent, educator must first of all have theoretical and practical pedagogical and psychological knowledge and experience. Preparing preschoolers for the proper organization of social relationships will allow them to work effectively in a very complex process in the future. Kindergarten is a very difficult and responsible time for a child's mental development. The period from 3 to 7 years old is the kindergarten age period. Basically, it is from this period that the child's independent activity begins to grow. In kindergarten, a child has two powerful forces needed to be independent.

First of all, it has a certain degree of subordination.

Second, he has a speech that allows him to interact more freely with the adults around him and his peers. That is why the behaviors, interests and needs of preschool children are different from those of preschool children.

Socio-psychological preparation This component involves developing the qualities needed to communicate with other children and with the teacher. When a child works collaboratively in a student community, he or she should be able to interact freely with his or her classmates, act together, be supportive, or have self-defense skills. This

component teaches children the desire to interact with others, to obey the interests and habits of the group of children. At the same time, the concept of preparation for school education includes the formation of important conditions and foundations of educational activities.

Social readiness is the process by which a child acquires the traditions and cultural riches of the society in which he or she lives. Through play and exercise, they learn to live in a collaborative environment with adults and peers, to take into account their interests, and the rules and norms of society. By interacting with others, children gradually develop an understanding of their own thoughts and feelings. The development of communication, the formation of friendly, sincere relations with peers - are important factors in the social development of the child.

If the education of preschool children is mainly focused on the regulation of their food hygiene and the development of sensory organs, the education of preschool children is aimed at improving their complex movements, developing basic hygiene, cultural and labor skills, developing their speech, and forming the first buds of social morality and aesthetic taste. This means that, starting from the preschool age, the individual characteristics of the child begin to emerge, which will find content throughout his or her entire personal life. That is why the development of a person in all respects, and especially mentally, depends on the education he received during kindergarten. N. K. Krupskaya wrote about this: "Impressions from childhood are very important". According to Lestgaf, a well-known Russian educator, the period of a person's other age is a period in which the character traits of the future are determined and the foundations of moral character are formed. Lestgaf's view of the importance of kindergarten in the development of man is fully consistent with the opinion of the great Russian pedagogue A. S. Makarenko. Speaking about the need to bring up children from an early age, A. S. Makarenko said that the most important foundations of upbringing are formed during the period of a child up to 5 years. It was said that the work done during

this period accounted for 90% of the whole educational process.

Indeed, the period of kindergarten is so meaningful and active that it will be reflected in the future development of the child. But that doesn't mean that a child's age in kindergarten determines what kind of person he or she will become. That is why the formation of a child's personality is not limited to kindergarten. In general, man is by nature a creature that is nurtured for almost his entire life. But the development of personal qualities in each person is reflected in the education he received at each age.

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Problems of Formation of Cartographic Competence at the Modern Stage of Higher Education Development

Ibragimov Utkir Nurmamat o'g'li

Researcher, Lecturer at the Karshi Institute of Engineering and Economics, Karshi, Uzbekistan

ABSTRACT

This scientific article describes the results of research on the transition from the traditional knowledge paradigm of education to the level of personal development for the modern stage of development of higher education, the formation and development of cartographic competence of students in higher education.

KEYWORDS: *Geographical map, language of maps, cartographic skills, social pedagogical degree, scientific-methodical degree, scientific-theoretical degree*

INTRODUCTION

For the modern stage of development of higher education, the transition from the traditional knowledge paradigm of education to the level of personal development, which provides the formation and development of cartographic competence qualities of students in higher education institutions.

Cartographic competence is an integral part of students in a number of natural sciences. This is primarily explained by the fact that in modern society cartography plays an important role as a database of nature, society and their interactions. Geographic maps cannot be replaced with text or live word because they do not give the original image of the area. This allows him to see and compare the properties of any object from space at the same time. The language of the cards is a special language. It has qualities such as brevity, firmness, precision and clarity. The language of the maps can be recognized as one of the economic features that gives a complete and scientific description of the area.

The main part

Therefore, we consider it expedient to use person-centered learning technology to form cartographic competence, which represents a certain sequence of pedagogical procedures and techniques that form an integrated system that leads to the achievement of guaranteed educational goals in pedagogical practice. At the same time, the study of methodical literature, dissertations, analysis of conference materials, the study of the experience of cartographic training of students in higher education revealed the following. First, there is no single approach among local scholars to define the meaning and content of the concept of 'cartographic competence of a university student'. Second, over the past decades, the level of cartographic training of university graduates and the demands placed on them by society have been increasing due to a set of differences. It should be noted that the exact ways to solve the problem of increasing the level of cartographic readiness of students, which guarantees the achievement of educational goals,

have not yet been identified. Third, the use of educational technologies has not been considered before, taking into account the different initial levels of education in the process of cartographic training of students, the individual characteristics of students and its personal growth opportunities in the teaching of cartography.

It follows from the above that, despite the great interest of researchers, the problem of shaping students' cartographic competence through geographers in higher education remains poorly understood and very relevant.

Thus, there is a need today to resolve objectively created contradictions;

- at the social pedagogical level (between the requirements of the bachelor's cartographic competence and the actual state of his training in the higher education system);
- at the scientific and theoretical level (between the need for higher education in substantiating the problem of formation of cartographic competence and the solution of its level of scientific and theoretical development);
- at the scientific and methodological level (between the possibilities, methods and forms of teaching subjects in terms of the formation of cartographic competence and their insufficient use in the higher education system).

The pedagogical process of formation of cartographic competence of university students is characterized by the following "productive ability":

- "Fundamentals of Topography", "Cartography", "GIS" is a guaranteed effectiveness of the pedagogical process, expressed at the level of predetermined knowledge, skills and abilities in the disciplines. This implies a certain stage and logic of the organization of the pedagogical process aimed at the implementation of the norms of the state educational standard in the field of preparation and qualification requirements for graduates of higher education;

- The direction aimed at the formation of cartographic competence among students;
- Consistency and integrity, which is reflected in the interdependence and interdependence of the use of standard forms, methods, tools and procedures of teaching in educational, training and methodological work;
- The mechanism considered in terms of the search and implementation of new reasonable forms, methods, tools and procedures of educational activities used in solving current and future problems of educational, training and methodological work, ensuring a high level of training of graduates;

Thus, the above allows us to emphasize that the essence of the technological approach to the organization of teaching cartographic sciences in higher education is as follows:

- in the preliminary design of the educational process with the possibility of subsequent repetition of this project in pedagogical practice;
- taking into account the active role of the student in the organization of the educational process, his personal needs, characteristics and abilities at all stages of the development and implementation of person-centered learning technology;
- in setting specially organized goals that provide the possibility of objective quality control of the achievement of the set goals;
- the structural and content integrity of teaching technology, ie the inadmissibility of changes in one of its components without affecting others;
- in the selection of optimal methods, forms and means, determined by the natural connections of all elements of teaching technology;
- The presence of rapid feedback, which allows you to correct the learning process in a timely and effective manner.

The development of person-centered technology for teaching cartographic subjects in higher education stems from the need to change the educational process, which is carried out using traditional approaches to education and does not ensure guaranteed achievement of set learning objectives, including the formation of cartographic competencies of students.

Another important reason for the creation of specially developed technology is the readiness of students for educational activities in the framework of initial diagnostics of the level of readiness, the basics of topography, cartography, person-centered training on GIS. Such diagnostics allowed to obtain information about the initial level of knowledge and skills of students, the level of motivation to study the topic, the students' understanding of the objectives of the study of cartographic sciences.

A questionnaire was also conducted among the students to determine the initial level of education and motivation of the students. The survey was conducted to determine the level of readiness and desire of students to study cartographic subjects at the time of admission to the university. Data obtained during experimental studies to determine the elementary level of education confirm the hypothesis that many students enter higher education without adequate preparation to study cartography, topography, and GIS. All students surveyed were divided into three groups according to their level of readiness to study cartographic subjects. Preparation is presented as follows: not enough, enough and high.

The research led to the following conclusion: with a general positive attitude towards cartographic subjects, students are not ready enough, they feel the need to acquire knowledge, skills and competencies in this field.

The urgency of this problem is related to the current situation.

In recent years, there has been a growing conflict between the need of society and the state for high quality higher education and the insufficient readiness of applicants to study in the new environment of interaction with the

educational environment of higher education.

With the significant increase in the interest of young people in higher education, there is a decrease in the requirements for higher education to select applicants. As a result, universities often accept applicants with low readiness to study at higher education institutions. In particular, elementary school knowledge is lacking in the teaching of cartography, topography, and GIS: students read poorly, do not know the definition of geographic coordinates, cannot add positive and negative numbers, and do not even know how to use a ruler (they measure from 1 instead of 0). They don't know what a counter is. They don't know how to count on a column, they don't know how to calculate $1^\circ 60'$, and so on, not to mention trigonometry. There is not only a general decline in education, but also a large stratification of a group of students according to the initial levels of teaching, learning ability and motivation, which also complicates the work of the teacher.

Conclusion

Faced with new content, forms and methods of teaching, more stringent requirements, a sharp increase in the volume of teaching materials, a different work schedule, a team of teachers, etc., freshmen face great difficulties in learning both general education and special subjects. As a result, some students have to be expelled.

The reason for these difficulties is the inability of junior students to adapt to the new conditions. Let us now explain the meaning of the concept of 'adaptation'. This concept has emerged in biology to indicate that the structure and functions of organisms adapt or become accustomed to the conditions of existence. It affects all levels of the organism: from molecular to psychological regulation, to the functional, psychological and moral state of the individual. The concept of adaptation to people has the same meaning. For him, such types of adaptation are social, psychological, pedagogical (educational) and professional.

As for freshmen, two aspects of adaptation are particularly important: socio-psychological and educational.

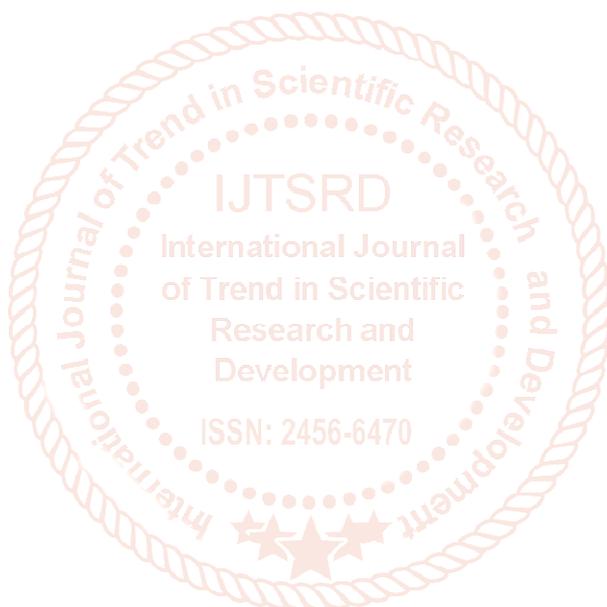
Adaptation of freshmen to study in higher education is the process of adapting students to the educational process of higher education: a new structure (new forms, methods of teaching), a new social environment - the teaching staff of the university (student group, teaching staff), learning new subjects, including number and cartography, topography, GIS.

In our research, we consider the elements of human socialization, which is a complex multi-stage process of forming the basic personal qualities of an individual necessary for life in society, as well as mastering certain knowledge, norms and values that allow him to work fully as a member of society.

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Linguacultural Aspects of Uzbek National Subject Dances

Hulkar Hamroeva

Candidate of Philological Sciences, Senior Lecturer,
State Choreography of Uzbekistan, Uzbekistan

ABSTRACT

The dance has a national color, which is embedded in the socio-cultural life of the Uzbek people and reflects the character and way of life of the people. It is extremely important to study the dialectical principles of the art of dance, which gives a person aesthetic pleasure, pleasure and peace of mind, romantic inspiration, in connection with the national character and centuries-old traditions, spiritual values of the people. It is well known that social realities, including the art of dance, develop in sync with the times.

KEYWORDS: *tradition, national color, choreographic terminology, cultural heritage, folk customs, , amateur dance, professional dance, subject dances, lagan, kayrak, teapot, lyak, sozana, angishvona, durra*

Uzbek national dance art consists of folk dance styles that have been formed over the centuries. Some types of dances have disappeared and new dances have appeared. In particular, the role of the people in the creation of ceremonial dances is invaluable. Therefore, the creator of ceremonial dances, which form a whole system, is also the people. These are the dances associated with the season or work process, everyday life. "The study of the heritage of the art of dance, the knowledge of the basic forms of dance can serve as a basis for creative change, giving them a new style, reflecting new views on the basis of ethical and aesthetic standards, rules of etiquette that meet the needs of different segments of modern society." [2]

Over the centuries, in line with the development of society and culture, the art of choreography has also gradually developed, forming dance styles, specific types and genres. The Uzbek people are famous for their unique and ancient culture, extremely valuable spiritual values. The peculiarities of the art of national dance are fully reflected in the interaction of performance and ¹creative processes, which are inextricably linked with the national character of the people. According to art critic L. Avdeeva, "Dance is a kind of modern and spatial art in which the artistic image is created by the rhythmically organized, pictorial and expressive movements of the human body"² [1]. Well-known linguist R. Sayfullaeva rightly noted, "The history of the formation and naming of each nation is a

very complicated issue, often leading to various controversies. This complexity in the study of the history of all peoples also applies to the history of the Uzbek people.³ This is due to the fact that in the history of its formation, each nation has a long and close relationship with different peoples, languages and cultures, and goes through a long historical development until it rises to the level of nation, people, nation." [2]

Uzbek national dance art consists of folk dance styles that have been formed over the centuries. Some types of dances have disappeared and new dances have appeared. In particular, the role of the people in the creation of ceremonial dances is invaluable. Therefore, the creator of ceremonial dances, which form a whole system, is also the people. These are the dances associated with the season or work process, everyday life. "The study of the heritage of the art of dance, the knowledge of the basic forms of dance can serve as a basis for creative change, giving them a new style, reflecting new views on the basis of ethical and aesthetic standards, rules of etiquette that meet the needs of different segments of modern society." [3]

The term "choreography" means everything that is the basis of the concept of dance art in the broadest sense, or the art of dance in the narrowest sense. Choreography is the transmission of a person's thoughts, feelings, and experiences through speech, movement, ⁴ and facial expressions. Choreography consists of three parts: folk dance, folk (or ball) dance, and classical ballet, including the art of professional dance.

Uzbek dances can also be classified on this basis:

a) public folk dances and lapars of folklore performed at public festivals, celebrations; б) non-professional dance movements, amateur dances performed by the people in ordinary everyday life, gossi⁵p, weddings, concerts; в) dances as a work of art performed by professional dancers and dancers, ensemble teams.

Dance has always played an important role in the development of Uzbek culture has taken place. According

¹ Avdeeva L. From the history of Uzbek national dance. National dance association "Uzbekraks" named after M. Turgunbaeva. T.2001. B.-4.

² Tsorn A.Ya. Grammar of dance art and choreography. St. Petersburg, Izd. "Planet of Music"; 2011 329-s.

³ Decree of the President of the Republic of Uzbekistan "On measures to further develop the Uzbek language and improve language policy in our country", UzA, October 20, 2020

⁴ Berg E.B. Choreographic terminology in Russian. Diss. kand.filol.nauk. Ekaterinburg, 1999

⁵ Qurbonov R. The mysterious world of art. Art 1, T. 2011., 32-p.

to Rahmatjon Kurbanov⁶, a well-known performer of Khorezm magic horses and Honored Artist of Uzbekistan, "Dance is a very ancient art, born before the formation of the human language. ... The level of a person who observes the art of dance and understands its meaning is ten times higher than that of a person who can listen to music." [4] It can be said that the dance is deeply rooted in the socio-cultural life of the Uzbek people and has a national color that reflects the character and way of life of the people. It is extremely important to study the dialectical principles of the art of dance, which gives a person aesthetic pleasure, pleasure and peace of mind, romantic inspiration, in connection with the national character and centuries-old traditions, spiritual values of the people.

It is well known that social realities, including the art of dance, develop in sync with the times. Like other forms of art, artistic generalization as a figurative image is a spiritual wealth that enriches human spirituality, cultivates aesthetic taste, teaches to understand the concepts of beauty. Only in this case the figurativeness arises through the harmony of the subtle expressive movements of the human body. Dance costumes, accessories, every elemental point helps to complement this image. In the expression of dance, each nation reflects the lines of its national-cultural world, national values, and, in this respect, rises to the level of a unique work of art.

One of the most important aspects of the years of independence is that our fascinating art of dance, which has been formed and polished for thousands of years, has once again begun to show itself in all its beauty and charm. Concepts and terms related to the art of Uzbek dance have also become the property of the people as part of the richness of language. It is important to study their ethnosociolinguistic and culturological aspects.

Along with modern charming dances, our dances play an important role in transmitting to the new generation the features of the life, customs, lifestyle and profession of our ancestors. After all, one of the achievements of the art of dance is the harmonious expression of the national spirit, national identity, along with modernity.

"There are two tendencies⁸ that express the interrelated interaction of choreographic terminology and universal language. On the one hand, the specialization of everyday words in the field of choreography, on the other - the determinologization of the general language of choreographic words (for example, pa, anthracite). [5] For example, the first trend is "finger play", "leaf fall", "flange", "flower leaf", "tattoo", "snake trail", "tulip", "propeller", "water wave". Language units such as "scales", "imagination", "scissors", "wings", "buds" make up a significant part of the terms used to describe concepts related to the art of Uzbek dance. "When a lexeme is used in a figurative sense, the noun semantics in its semema

⁶ Berg E.B. Choreographic terminology in Russian. Diss. kand.filol.nauk. Ekaterinburg, 1999

⁷ Sayfullaeva R.R. Modern Uzbek literary language. study guide. - Tashkent, 2006 100-b.

⁸ Sadokov L.R. »Musical archeology of ancient and medieval Central Asia: percussion instruments.« M.1996.s.35.

disappears, and the semantics of expression and function increase in accordance with the speech reality." [6] Most terms in Uzbek choreography are general lexemes, formed by sign semantics of word semantics related to the nationwide character.

However, in Uzbek choreographic terminology, the phenomenon based on the second trend was not observed. This is explained by the fact that the terms of dance appeared almost on the basis of words in the Uzbek language (sometimes Tajik in bilingual areas). The art of dance is a unique musical and plastic expression of creative figurative thinking, and Uzbek dances reflect the life experience and skills, social status and national character of our people formed over the centuries. From this point of view, one of the most important aspects of the art of dance of the Uzbek people, which bubbly demonstrates nationalism, is subject dances. In his research, the well-known Russian archeologist, Prof. L.R. Sadokov, writes about percussion instruments, musical circles where ceremonial songs were performed, and dancers playing with plates, based on sources found in Tuprakkala. [7] "Uzbek folk dance has been a tradition since ancient times. For example, the girls' "Jar Dance" is a plot dance that depicts the adventures of girls swimming in the mountain river. In addition, dances such as "Teapot Game", "Spoon Game", "Knife Game", "Stick Game", and "Bowl Game" have existed since ancient times. " [8] Also, if "Sadr" reflects a ceremony, "Black Bell" - The black bell, "Duchava" - means played with two sticks. "[9]

One such tool is the Uzbek tray. It is known that soup (pilaf) is the royal dish of Uzbeks, it is usually prepared on the days of Arafa, holidays, the most precious days, and the tray is eaten by many people together. As an expression of our national values, the men's dance "Lagan" appeared. The expression of enthusiasm, arrogance, enthusiasm of the Uzbek guys, as a unique example of the national color, is gaining acclaim from the audience. Probably executed, polished, and passed down to us over the centuries.

"Lagan dance has long been performed among our people by talented people. This men's dance is created in the style of Fergana, and the dance is performed to the accompaniment of popular musical instruments such as the circle, drums, trumpets, trumpets of our people. These instruments are accompanied by sharp stones in the hands of the dancer. Some authors call it the "Osh" dance. [10] In our opinion, the name "Lagan" is more appropriate. During the dance, the dancer will be in a white floral doppia with a black rectangular garmdor. This doppia is moistened with a little cold water as the soaked doppia sticks to the head and serves to prevent the tray from slipping.

A forehead is tied over the dope so that it does not fall off. He is wearing a bekasam coat and a white jacket. The 'belt' is a special rectangular scarf that is folded into a triangle and tied at the waist. He then wears black pants and black lacquered boots. The dancer also has two sharp stones in his hand, one 16 cm long from the iron and the other 10 cm from the stone. The sharpened stone is pressed into

⁹ Islomov D. National Dance Schools Magazine "Guliston", 2018 No. 5, p. 18.

¹⁰ G'ofurov N. Real masters of "Lagan" dance // https://www.kultura.uz/view_2_r_9590.html

the palm of the hand with the help of a thumb. A sharp iron stone is placed in the same way and struck with the help of the third and fourth fingers of the hand. By lightly tapping the sharp stones, the dancer creates techniques that have a distinctive sound. This dance shows how agile the Uzbek guys are, how much they amaze everyone by playing the bowl in their hands in different ways, and how hospitable the Uzbek people are. "[11] I. Akilov, K. Muminov and N. Ibragimov performed the "Lagan" dance. The Shermatovs performed with skill and in a unique style.

Khorezm "Chanoq lazgi" also has a bowl. That's why among the people "Chanoq lazgi" is also called "Lagan lazgi". The dance begins as follows: The dancer stands in a circle with a bowl in his hand, bows, and enters with his feet into a small bowl. He greets the audience once more, gesturing, "Bless me," and blesses his face with his hand. begins, the hands rise high at lightning speed and freeze. With traditional music, the hands come to life in the paws, and the dancer begins to dance while standing upright in the bowl:

The hands fall down slowly, with a gentle motion. The fingers begin to vibrate to the music; Wavy motion and nozbilan right hand rises upwards; The left arm also rises and both vibrate in an equal position. In the trembling position, the fingers of the first hand begin to separate from the fingers of the second hand with a flirtation; The fingers of the second hand come down with musical, graceful movements; The feet stand alone in the bowl without moving. Facial movements: eyes, eyebrows, cheeks, lips, begin to make gestures in accordance with the music; The condition of the "bowl lezgi" is that any action is twice will not be repeated.

In the preface of the dance, he takes the bowl in his right hand and goes around the circle. The hand holding the bowl suddenly freezes. Then it rises high and begins to vibrate.¹¹ The dancer's wrists and shoulders begin to tremble as if they are dying. The hand that lifts the bowl begins to slide down with a musical movement and the bowl passes to the left hand. His right hand (up, down) claps and points to the bowl in his left hand. The dancer skillfully moves the bowl from the palm of the hand to the back of the palm. Turn your empty hand on the bowl and dance. The dancer takes the bowl in his right or left hand with different movements. In the vibrating movement of his body, the dancer puts it on his head. The bowl seems to stick to his head. The rhythm changes rapidly, and the movements of the dancer's legs accelerate. He starts to spin in a circle, snapping his fingers back and forth as if he has forgotten the bowl on his head. As the music reaches its climax, the dancer's ¹²movements become more intense, and the bowl on his head seems to excite the audience and fall. In the most exciting moments, the dancer moves in a circle with one hand, takes the bowl on his head with the other hand and completes the dance.

¹¹ Uzbekistan "On measures to further develop the Uzbek language and improve language policy in our country", UzA, October 20, 2020

¹² G'aniev S. Hamroeva H. Harmony of values: the national dance art of the Uzbeks of Kazakhstan. Cultural perspectives of the peoples of Central Asia. T.2020. B.-92

Issues such as the restoration, further development and promotion of lost dances play an important role in determining the place of dance in our cultural and educational, social life. According to the People's Artist of Uzbekistan, art historian and ethnographer G. Matyakubova, "Khorezm art has become even richer due to hard work. Folk clowning games, various mass games and dances, especially customs and ceremonies, retain the signs of antiquity in Khorezm and enrich it with modern traditions, more than in other regions of Uzbekistan.

Special performers appeared in his seat, playing to the sound of a trumpet, and he added to the interest and nationality of the Khorezmian art of dance. "[1] Indeed, each national dance reflects the national characteristics of the people to which it belongs and is closely connected with folk music and songs, values, customs and traditions. National dance is created by the people and marks an important stage in its socio-cultural development. According to the sources collected by the researcher M. Hamidullaeva ¹⁷ Gavharhonim Matyokubova, "Kayrak lazgisi" or "Kayroq oyun" appeared under the influence of Zoroastrianism, ie in the process of driving the goddess of evil Ahriman and his armies. admits. In "Kayrak Lezgis" or "Kayrak Oyun", a method suitable for the¹³ melody is given by beating and reviving the kayaks. The variety of methods depends on the skill of the dancer or dancer. Dance movements are used according to the methods and they vary. "Kayrak Lazgisi" is performed by both boys and girls. The "dance game" can be performed mainly by men's dancers, solo dancers or in public. In the ensemble, violence is required in the method of sharpening. In Khorezm, the method is brilliant, as one of¹⁴ the two blades is made of iron. [2]

In the Uzbek national dance art, in the Fergana Valley, instead of kayraks, they dance with plates, and in Surkhandarya and Kashkadarya regions, they dance with knives, spoons and sticks. [4] "In Samarkand, dancers play on a plate with an angishvana. In the Surkhandarya Valley, women¹⁵ play with wooden spoons. "[5] The origins of these methods can be traced back to the daily lives and lifestyles of our grandmothers, who were busy with household chores. The gentle rhythmic tone that emerges when the plate is tapped with an ¹⁶ angishvana or when wooden spoons are gently tapped on each other creates a special charm and increases emotional sensitivity in the quiet women's dances. Tamarakhonim, one of the masters of Uzbek art, also performed the lapar "Khurshidi

¹³ See: Dance movements were prepared on the basis of the following manual materials: Hamidova H.V., Sayfullaeva D.I., Zokirova S.M. Masterpieces of inherited dance. Cholpon Publishing House, 2003, pp. 74-88.

¹⁴ Avdeeva L. From the history of Uzbek national dance. National dance association "Uzbekraks" named after M. Turgunbaeva. T.2001. B.-54.

¹⁵ Decree of the President of the Republic of Uzbekistan "On measures to further develop the Uzbek language and improve language policy in our country", UzA, October 20, 2020

¹⁶ Decree of the President of the Republic of Uzbekistan "On measures to further develop the Uzbek language and improve language policy in our country", UzA, October 20, 2020

toboniman" to the accompaniment of lyric and angishvona melodies.

Surkhan oasis is famous for its men's dance "Knife". This dance, which has a centuries-old tradition, is performed to the accompaniment of a trumpet and a circle. The "knife" dance is symbolic and has its own set of rules. Just like wrestling, Surkhan has been decorating weddings since ancient times. It mainly demonstrates the strong will, courage, ingenuity, vigilance and agility of Uzbek guys. The courage and strength of the dancers are evident in every movement. The dance "Knife", which preserves the ancient national features and national nature of the Uzbek people, requires great ¹⁷ skill and agility. Its roots go back to the people's struggle for national liberation and war.

The Uzbek people have many traditions related to knives. According to experts, "The game of knives (knife ufori). The dancers (only men) beat the blades of the knives together to create a rhythm, and at the same time perform simple and complex tricks: stab the two knives to the ground and pass between them at the tip of one foot so that the knives do not move. While playing the knives, the dancer knives he grabs his knife and suddenly cuts off the mustache of a staring spectator." [6]

Art critic L. Avdeeva notes that there is a bit of humor in this dance. However, it should not be forgotten that the knife is not an ordinary household item for the Uzbek people, but a symbol of courage and bravery. Uzbek dances, such as "Knife", which show the courage and bravery of the audience and give aesthetic pleasure to the audience, are a bright example of the living traditions inherited from great ancestors.

In the subject dances analyzed above, we observed that objects such as bowls, teapots, sharp stones, and knives were directly involved as an integral element of the dance. There is another series of dances in which, although the objects are not directly involved, they are pointed at by dance movements, with the aim of revealing their essence through plastic movements. For example, folk dances from different regions of the country, labor-related dances such as "Cotton", "Grapes", "Fisherman and Fish", "Shepherd" depict the enjoyment of the labor process and the harmony of human ¹⁹ experiences and emotions through actions related to certain labor activities. The reference of artistic thinking plates based on reality is aimed at arousing aesthetic pleasure in the viewer.

In the Pilla dance, both methods are used, a mixture of live use of objects and a method of pointing to certain objects.

Pilla dance was created by Mukarrama Turgunbaeva in 1952 in a new form and is performed in a circle. The dance depicts the process of labor, from feeding a silkworm to collecting cocoons, spinning on a loom, weaving cloth, and sewing scarves decorated with patterns. This dance was later staged by Mukarrama Turgunbaeva as a mass dance for the band "Bahor". The dance is performed to the accompaniment of a circle.

The dance is a play with several plots:

With the help of the "official ufori" movement, actions are performed as if holding a mulberry branch. With hand movements and shaking of the head to the side, it is as if the situation is "throw, the silkworms are not well fed." With the tip of the right foot in a position as if lifting a basket, a stressed step is taken back. The knees bend. The right hand is bent and the fingers are turned inwards as if they had taken a mulberry branch from a basket, as if it had put the branches into a silkworm. It is indicated to cut a leaf from a mulberry branch. The hand throws the leaves to the silkworms. Pulls the thread from the cocoon. The drying action of the threads is characterized by the fine movement of the fingers. As if a dancer is holding a bundle of yarn. The hanging of the strings is described. Describes the process of working on the machine. The durra is pulled from the edge of the nimcha. The hands hold the edge of the durra, the durra is brought forward and the face is closed, the edge of the durra is held. The dancer throws the durra on his head and gently holds the edge gives a gentle greeting (bride greetings). After the salutation, the body is straightened and rotated completely, slowly. Durra is brought to the left, the head is bent to the right. Holding the edge of the durra in front of the face, the spectator faces the face, the durra stumbles and sits on the left knee, the durra is placed on the right knee. All these movements are performed while kneeling. The palm is brought to the head and the skullcap is straightened. The waist is pulled with both hands. Chevar movements (imaginary threading a needle, inserting a needle into the hand, holding the finger with the other hand to leave the pain) are performed. The dancer turns the fingers of the right hand over the fingers of the left hand, finishes the thread in her mind, completes the stitching, and stretches the thread. He takes the durra and stands up, shakes the durra, looks at the circle, the body is slightly forward, the arms are outstretched, as if he is handing the durra to the circle. The circle goes to him, at which point he turns the durra and holds the ends with his fingers. Wrapped around the circle, he went from right to left and finished the durra. Hand movements are performed in front of the circle, in the palm of the left hand strikes the circle. [7] H. Khamidova, D. Sayfullaeva, S. Zokirova's textbook "Masterpieces of Heritage Dance" talks about the dance "Cocoon", "From feeding silkworms to collecting cocoons, spinning on the machine, weaving fabrics and sewing scarves decorated with patterns described the process" [8]. In the following paragraphs, the word "durra" is used instead of "scarf": Wrapped around the circle, he went from right to left and finished the durra. " [9] In the "Dictionary of Music" by musicologist I. Akbarov it is said that "at the end of the dance is danced with a silk scarf woven from silk" [10]. Even now, "groom's belts" are sewn separately. After all, "in Uzbek, such expressions as" there is a belt on the waist, the strength of the waist "are attributed to the young man. Strength, bravery, bravery, service to the Motherland, justification of the people's trust are applauded" [12]. An explanatory dictionary of the Uzbek language defines a quilt as follows: "A quilt is a rectangular fabric around which flowers are usually sewn to tie a belt; a belt."

The long history of the Uzbek national dance art, the process of its formation and the naming of dance movements also have their own confusions and

¹⁷ Karimova R. Bukhara dance. T., 1977 93-98-s.

¹⁸ Narzullaeva S. The role of Uzbek men's dance in the art of folk dance <https://www.kultura.uz>

¹⁹ Murodova M. Folk art. (study guide). T., 2015 y. 48-b.

ambiguities. Therefore, the names of Uzbek dances and dance movements are, first of all, the priceless wealth of our native language. This is an extremely topical issue awaiting its researchers. One of the main spiritual-spiritual-enlightenment pillars in the process of understanding the national identity of our people is the love for the native language and a sense of national pride.

The Decree of the President of the Republic of Uzbekistan dated October 20, 2020 "On measures to further develop the Uzbek language and improve language policy in our country" states that "the Uzbek language should be radically enhanced in the social life of our people and internationally, patriotic, national traditions and values." ²⁰upbringing in the spirit of devotion, ensuring the full introduction of the state language in our country ". In short, the art of dance emerges as a result of combining different movements in accordance with tone and rhythm, which are specific to a particular ethnocultural group and carry certain paralinguistic meanings for the members of that group. Dance movements are not only related to a person's activities, lifestyle, but also are filled with content through gestures, which are an expression of inner experiences, delicate emotions, and even gestures, eyebrows. These movements and gestures have long been artistically refined and polished.

Therefore, along with many other intangible cultural heritage values, it is necessary to pass on to future generations the rich experience accumulated in the art of Uzbek national dance. "Preservation of the art of dance, which embodies national values, customs and traditions, as an ancient source of our spirituality and culture, the restoration of its disappearing forms and movements, terms, the nature of dance, its structure, performance features, objects, clothing and jewelry." The scientific study of the role of performance in complementing, perfecting and polishing is one of the urgent tasks facing the executive choreographer, organizer and researcher working in the field of dance." [16]

To this end, one of the important issues facing the scientific community is to improve the textual and video recording system of dance performances, as well as to create a special terminology of national dance names and movements.

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From the History of Trade Relations in the Khanate of Kokand

Zokhid Madrakhimov Sharofovich

Associate Professor of History, NamSU, Namangan, Uzbekistan

ABSTRACT

In the the Khanate of Kokand, which was formed in the early XVIII century, economic life gradually took shape. Domestic and foreign trade has developed and the welfare of the population has increased. In turn, the rulers of the khanate also sponsored the development of trade, built markets, Inn on the caravan route, stalls and shops, and controlled the process of trade in the markets. At the end of the XVIII century, the lack of money of the the Khanate of Kokand became an important factor in the development of trade relations.

KEYWORDS: *Central Asia, the Khanate of Kokand, handicrafts, silk, cocoon, chilla, skein, silk and semi-silk fabrics, Norbotabi, Umarchan, Kokand, Tashkent, Namangan, Margilan, Osh, merchant, tanga*

As a result of the political turmoil in the Khanate of Bukhara, an independent the Khanate of Kokand was formed in the Fergana Valley in the early XVIII century. The political history of the Khanate of Kokand (1709-1876) can be conditionally divided into four stages:

1. The period of formation of the khanate (1709-50s of the XVIII century). During this period, the the Khanate of Kokand consisted mainly of the Fergana Valley, and the rulers of the khanate were engaged in unifying the country, eliminating internal conflicts, fighting external enemies, and strengthening the country's position.
2. The beginning of the period of development (from the 60s of the XVIII century to the end of this century). It was mainly during the reign of Norbotabi (1763-1798) that the territory of the khanate expanded and began to rise politically and economically. The country also had a small position in Central Asia.
3. Period of development (first half of the XIX century). During the reigns of Alimkhan (1798-1810), Umarchan (1810-1822), Muhammadalikhan (1822-1842) the territory of the khanate was expanded. The southern regions are connected to the Pamir mountains. The khanate not only strengthened its political position in Central Asia, but also rose significantly economically.
4. The period of decline (50s-70s of the XIX century). During this period, internal conflicts and external wars culminated. The country is in political and economic decline. Struggles for the throne intensified, and the rulers of the khanate were constantly changing. In fact, Khudoyorkhan came to the throne three times (1845-1858, 1862-1863, 1865-1875) and was forced to resign three times as a result of internal conflicts. The khanate could not defend itself from an external enemy. As a result, in 1842 the Emirate of Bukhara temporarily occupied the Khanate of Kokand, and in 1876, the Russian Empire abolished it.

It is in this system of political realities that the economic life of the country has developed. In the years when the potential of the centralized state is strong, the development of economic life, the development of handicrafts and trade, which constitute it, is clearly visible. New markets, stalls, shops were built, the existing ones were repaired. In turn, the trade process was regulated. The Khanate of Kokand, which had regained its political position from the second half of the XVIII century, had little money and goods-money relations were under control. Trade was an integral part of the khanate's economy and an important source of income for the country. Russian diplomat and ethnographer A.P Khoroshkhin, who was in the khanate in the 70s of the XIX century, spoke about the attitude of the population of the Khanate of Kokand to trade "... 20-30 rub. the sart, who had the money, immediately went into business" [1].

The economic and social situation of the khanate in their time was not so good, as the rulers of Kokand Shahrukhbiy (1709-1721), Abdurahimbiy (1721-1734) and Abdulkarimbiy (1734-1750) were engaged in strengthening the political position of the new state, eliminating internal and external enemies. During this period, although traditional trade relations took place, they were chaotic and almost uncontrollable. From the reign of Erdonabiy (1750-1752, 1753-1762) economic life improved slightly and the welfare of the population increased. According to the historian Makhmud Khakim Yayfaniy (1850-1930), everyone lived prosperously during the time of Erdonabiy. The people were grateful for the behavior of the khan [2].

After the coronation of Norbotabi (1762-1798), a period of relative development of the khanate began. The territory of the the Khanate of Kokand expanded and its position in Central Asia increased. Domestic and foreign trade is developed. The historian Mulla Alim Makhmud describes the rule of Norbotabi as follows: "In the time of him there was no anxiety, restlessness, costliness and famine. The money was introduced during the reign of that khan, and no one could find any other way but to give the grain to the citizens in the warehouse of all the people. In this way, cheapness and generosity were heard in the surrounding provinces, which led to the arrival of large numbers of people in Khokand and the prosperity of Fergana" [3]. This tariff can also be seen in the work of Makhmud Khakim Yayfaniy. In it: "... everyone was rich and equal, in every house there was a storehouse of grain and there was no choice but to cancel the grain. He would give a sheep for a tanga (one pound), and the black money was taken out and introduced by Norbotabi" [4]. It was noted that strangers would come from all over and gather here. Mulla Niyaz Mukhammad Khokandiy, on the other hand, noted that the improvement of the internal and external situation during the reign of Norbotabi had a positive effect on the development of trade [5].

During the reigns of Alimkhan (1798-1810), Umarmkhan (1810-1822) and Muhammadalikhan (1822-1842) the development of the Khanate of Kokand reached a new stage. The Khanate became one of the largest states in Central Asia. The economy also grew, and the development of domestic and foreign trade had little effect on the well-being of the population.

The urban and rural population exported agricultural and handicraft products to the country's markets, while the mountainous population and nomadic pastoralists exported livestock and livestock products. Local traders went to the remote villages of the khanate and bought the products grown or prepared in that area at low prices, wholesale, and brought them to the big city markets. In turn, there were traders who bought the goods of artisans, and a few who went to the market, the city to the city, the village to the village.

Mukhammad Aziz Margilaniy, a historian of luxury and cheapness in the khanate, "...said that during the time of the Kokand khans, there was little money and cheapness among the people of Fergana. In summer, a cart sells for two and a half to five tangas, a cart sells melons for 3,5 tangas, a basket of apricots for three tangas and 1 tanga, a chaksa (a unit of weight equal to 1/3 pud per chaksa. One pud is 16,3 kg.) the price of rice ranges from one to two tangas, a pud of fresh flour costs more than a tanga, a pistachio costs from fifty paysa (a paysa is given here instead of a small tanga), a pud of pure yellow nuts costs a hundred paysa, some apricots, carrots and onions. You could buy one pud to six puds, you could barely carry it, you could give 40 chaqas (penny) for a tanga, you could put that money in your wallet and go to the market and spend it all night, and it would all come back without spending it, and again ... citizens could collect royalties in a short time. He wrote that they were tortured without giving" [6].

In the large cities of the khanate there was a market two or three times a week, in smaller towns and large villages, and once in places where several small villages adjacent to each other were connected.

The city of Kokand was the largest economic center of the khanate and played an important role in domestic trade. According to Philip Nazarov, a Russian diplomat and orientalist who was in the khanate from 1813 to 1814, there was a three market which was made of stone, in the center of Kokand, with a market twice a week [7]. N.I. Potanin, a Russian orientalist who visited Kokand in 1830, pointed out that there were six markets in the capital of khanate [8]. According to the anonymous author, in the 1840s, 2 out of 6 markets in Kokand were traded by local traders and 4 by traders from different regions [9].

Some of the Kokand markets were covered with pineapples, which existed in Central Asia, and were also suitable for the rainy season. Kokand market was one of the best markets in Central Asia after the market of Bukhara.

Typical of Central Asian cities, the main market of Kokand is located in the center of the city, at the junction of various streets and is known as the big Market. The Russian orientalist A.L Kun noted that when he came to the capital in 1875, there were about 2,000 shops in this market. The main market is divided into separate outlets or small markets, depending on the type of product [10].

The shops in the markets of the cities of Kokand are divided into three types: those belonging to the ruling dynasty and those belonging to various officials, private and Waqf shops. According to archival data, on the eve of the end of the khanate, there were 1911 shops in the markets of Kokand, of which 599 belonged to the ruler, 1312 were private shops [11].

According to the Russian orientalist N.Pantusov, during the reign of Khudoyorkhan most of the inns on the caravan route, shops, baths and other commercial buildings in the capital were not taxed. This is because most of them belonged to the khan or were considered the property of the Waqf [12]. In particular, during this period, 5 out of 10 inns on the caravan route in the city belonged to the khan [13]. The shops were leased to traders and rent was paid from them in the prescribed manner. In 1874, the khan's treasury received 2131 gold coins from 575 shops in Kokand [14].

The largest trade in the markets of the the Khanate of Kokand took place in the open market areas, while the Inns on the caravan route traded in relatively expensive goods, foreign goods and wholesale goods. The Kokand markets were crowded with traders and buyers, with about 600 traders in the main market engaged in small-scale trade alone [15].

In the middle of the XIX century, when the economic life of the khanate reached a more moderate level, the market in Kokand lasted three days a week on Wednesdays, Thursdays and Sundays from morning to evening. Wednesday is the main market day, and traders from different cities of the khanate and neighboring areas came to the market on this day.

The locals brought handicrafts and agricultural products from the suburbs to the Kokand markets. Also, a variety of products made and grown in different regions of the khanate were sold in Kokand markets. The Kokand market was the main distribution center for goods entering the Fergana Valley from neighboring areas, and traders from different parts of the khanate could be seen in its markets.

Located in Tashkent, one of the largest and richest markets of the the Khanate of Kokand, it was famous not only for its local handicrafts, farming, and horticultural products, but also for its market of goods from Russia and the Kazakh steppes.

In the XVIII and XIX centuries, there were few markets in the Sebzor, Kokcha, Beshyogoch, and Shaykhantakhur districts of Tashkent. The largest market was located in the city center, at the intersection of town's part, and was called Joba (or Jova) market. According to historian Mukhammad Salikh, "...the market stalls continue to the confectionery shop in Chorsu. During the month of Ramadan, there is a market here at night, and people trade and have fun" [16].

At the beginning of the XIX century, there were more than 3,000 shops in the Joba market (now Chorsu), including shops in the main rows and Inn on the caravan route. In the 60s of the XIX century, the market was 400 sarjins (1 sarjin- length of the earth, equals 2,13 meters) and 100 sarjins wide, with 16 inns on the caravan route and 2,400 shops. The number of shops in the city reached 4,548 [17]. In the 1960s, the rent for shops in the Tashkent market was 2 to 4 gold coins a year [18].

The central market in Tashkent was also divided into rows according to the type of product, and in the 1960s the number of rows was about 40 [19].

In Tashkent, as in Kokand, there was a market three times a week on Wednesdays, Thursdays and Sundays. On Sunday, there was a large market, and on that day there were also money exchange shops [20].

Tashkent market is a competitive center of Khojand, Bukhara, Kokand, Margilan silk fabrics. In the middle of the XIX century, 10 to 15,000 camels of cotton, paper, raw silk and silk fabrics, dried fruits were transported from the Fergana Valley to Tashkent via Kokand, 500 dried camels, 1,000 camels of silk and 1,000 camels a year silk fabrics, royan dye, and so on [21].

In the first half of the XIX century, more than 10,000 camels brought grain, iron, steel, cast iron, copper and copper products, sugar, leather, oil and other Russian industrial goods from Tashkent to the Fergana Valley. In the middle of the XIX century, goods worth 4,580,000 rubles were exported from the valley to Tashkent, while goods worth 2,375,000 rubles were exported from Tashkent. During this period, the annual trade turnover of Tashkent and Kokand amounted to 7 million rubles [22].

In the early XIX century, Namangan was also famous for its market, which played an important role in trade in handicrafts and horticultural products, as well as in the mountainous Kyrgyz. In the 1860s, Khudoyorkhan built a large market of 500 shops in the city. The bulk of the income from this market went to the khan's treasury [23]. Each shop brought in 5 to 10 tangas a year to the khan's treasury. A.L. Kun wrote in 1875 that there were more than 1,000 shops in Namangan [24].

The main market of Namangan is divided into rows and small markets, depending on the type of product, as in the major cities of the khanate. While the small market in the city market was held every day of the week, the large market was held several days a week on Saturdays and Sundays from morning to evening, as in the markets of Kokand and Tashkent [25].

Margilan was distinguished from other markets of the khanate by its market of silk and semi-silk fabrics, which played an important role in foreign trade. With this in mind, the Kokand khans paid great attention to the Margilan market, expanded it and built new rows, shops and Inn on the caravan route. During the last reign of Khudoyorkhan (1865-1875) there were 2246 shops in Margilan, of which 489 belonged to the ruling dynasty, 686 to Waqf property, and 1071 to private property. Of these shops, 214 sold meat, 401 sold fruits and vegetables, dried fruit, 109 sold shoes, 46 sold silk fabrics, 3 sold cotton, sold clothes 81, sold manufactured goods 86, sold perfumery 140, and 4 sold silver jewelry [26]. In the Margilan market, small trade operated every day of the week, on Thursdays and Sundays [27].

Andijan was one of the centers of the khanate famous for its small markets. The Russian orientalist P.I. Nebolsin described the market in Andijan as follows: "You can see traders from the largest cities of the Andijan khanate, where trade is developed, and in the markets from Bukhara, Khojand, and Kokand" [28]. The market, located in the city center, had more than 1,000 shops in the 1970s [29]. The market is divided into separate stalls and small

markets depending on the type of product. In the north of the city there was a horse market, in the south there was a sheep market, in the center there was a shoe market, a horse-drawn carriage, a horse-drawn carriage, a horse-drawn carriage.

In Andijan, Mondays and Sundays were market days, and trade caravans came from different parts of the khanate, as well as from neighboring countries. On other days of the week, small trades took place in the market.

Located on the border of the the Khanate of Kokand and one of the largest trade cities, the Osh Khanate played an important role in trade relations with Kashgar and the Kyrgyz, and its markets were home to many local and various traders. According to Mir Izzat Ulla, an Indian merchant who visited Osh in 1812, Osh was a large city on the Kokand Kashgar road, where goods from different countries were exchanged, and on Tuesday there was a large market in O'sh [30].

In the middle of the XIX century, there was a large market in the city center with about 1,000 shops. On the banks of the White Bura River, which runs through the center of the O'sh market, there was a covered market Tim. The two banks of the Ak Bura River are connected by a 900-meter suspension bridge, and market stalls are located on both banks of the river [31]. The Osh sheep market was one of the most popular livestock markets in the the Khanate of Kokand [32].

Khojand, one of the largest cities of the Khanate of Kokand, had 14 market areas for its Thursday and Wednesday markets, where small trade took place. Thursday's market is located east of downtown, and Wednesday's southeast. There were 510 stores in the Thursday market and 280 in the Wednesday market [33]. In Khojand, three days a week are Wednesdays, Thursdays and Fridays. In the center of the city, near the intersection of four Street, there was a covered market Tim, which was the center of Khojand market [34].

The cities of Turkestan, Shymkent, Avliyoota, Sayram of the Khanate of Kokand are also famous for their small markets. These cities were located on the Russian caravan routes of Central Asia and were known for their Russian cattle and Kazakh livestock as well as livestock products. The Russian orientalist V.V. Velyaminov-Zernov reported that in the middle of the XIX century Turkestan had a large market and three inns on the caravan route [35].

To the west of Shymkent is a large market, which before the Russian invasion had 220 shops, and there were such shops in inn on the caravan route. The annual turnover of each store was 1000 to 5000 rubles, and that of the market was 250-300,000 rubles [36].

One of the parts of the market infrastructure formed in the khanate was inn on the caravan route. They had facilities built specifically for the accommodation, storage of goods and animals of traders from different regions. In addition to the residence of traders in the Inn on the caravan route, there was also the opportunity to trade in its shops. There was also a supply of water in the Inns on the caravan route in the towns and villages along the road. The Inns on the caravan route in the khanate were owned by rulers, private individuals, and religious institutions, such as shops.

There were many inns on the caravan route in Kokand, the capital of the khanate. V.V Velyaminov-Zernov reported that there were 9 inns on the caravan route in Kokand in the middle of the XIX century [37]. There were 10 inns on the caravan route in the city of Kokand in the 70s of the XIX century, and one of them- in Zakotasaray there were Russian traders, in another there were cotton traders [38]. Also, according to an unknown author, there were 15 large and several small inns on the caravan route in Kokand in the 1970s [39].

Tashkent was one of the cities famous for its inns on the caravan route in the khanate. As the city's role in the economic life of Central Asia grew, so did the number of inns on the caravan route. According to the Cossack Maksimov, who was in the khanate in the 1930s, there were 12 two-storey Urgendjaroy, Kizilboshsaroy (Persian Palace), Orussaray, Nogaysaray, Kashkarsaray and other inns on the caravan route in Tashkent during this period. Four of these inns on the caravan route were occupied by local merchants, two by Russian merchants, two by Kashgar merchants, and two by Bukhara merchants [40]. S.Ya. Klyucharov, a Russian merchant who visited Tashkent in the spring of 1852, indicated that there were 15 inns on the caravan route in the city [41], while the Russian orientalist A.N Teterevnikov wrote and listed 16 inns on the caravan route in the 1960s [42]. A.P Khoroshkhin, who was in Tashkent in the 70s of the XIX century, also named 29 inns on the caravan route in the city market [43].

The largest inns on the caravan route in Tashkent are located around the central market, and the Russian orientalist P.I Pashino cites 18 inns on the caravan route in the city and their annual income as follows:

1. Said Azimboy 400,000 rubles,
2. Shirin Khoja Rais 400,000 rubles,
3. Khishtin 280,000 rubles,
4. Isabek (Qadi Isohoja)) 200,000 rubles,
5. Tablecloth 160,000 rubles,
6. Isabek (Qadi Isohoja) 160,000 rubles,
7. Abdurasul 160,000 rubles,
8. Zakat 150,000 rubles,
9. Anonymous 150,000 rubles,
10. Rais 1-120,000 rubles,
11. Rais 2-80,000 rubles,
12. Margilan 80,000 rubles,
13. Mulla Salikh (Solikhbek dodkhokh) 60,000 rubles,
14. Namangan 40,000 rubles,
15. Ismailjon 28,000 rubles,
16. Yolbarskhon 5,000 rubles,
17. Makhramboshi 80,000 rubles,
18. Maiz 32,000 rubles [44].

Russian and Indian in Said Azimboy inn on the caravan route in Tashkent main market, Russian and flower in Nurmuhhammad Kushbegi, Margilan and Indian in 3 inns on the caravan route named after Beklarbegi, Tashkent and Samarkand in Isabek, Kokand in Makhrambashi, Tashkent and Kokand in Shokhbek, Tashkent and Namangan in Tashkent, Shirin Khoja Rais was stopped by Indians and Mulla Abdul Mutallif by Kazakh traders [45].

In the large market in the center of Namangan, one of the economic centers of the Khanate, 3 inns on the caravan route named - Begi, Degbiz and Mavlavi were active, and the Degbiz inn on the caravan route was two-storied. The inns on the caravan route of Namangan were built of baked bricks and were rectangular in shape, with a single entrance. There was a special area in the center of the inns on the caravan route and the cargoes of trade caravans were unloaded in this area. Near the walls of the inn on the caravan route were trade shops with awnings, while the awnings protected the shops from the rain, while the second floor of the two-story inns on the caravan

route served as a porch. The Mawlavi inn on the caravan route was the largest inn on the caravan route in the city, with about 30 to 40 shops [46].

On the eve of the Russian invasion, the largest economic center of the khanate, Margilan, had 8 inns on the caravan route in the central market, 2 of which belonged to Indian merchants. The Margilan inns on the caravan route were beautiful and convenient for traders [47].

In the mid-1960s, there were five inns on the caravan route in Khojand [48]. Of these, 4 were considered local and 1 belonged to Indian and Jewish merchants [49].

In Turkestan, an important transit city of the Khanate of Kokand, there were four inns on the caravan route in the 1960s, two of which were built by the mayor Mirzabi. There were 106 shops in Turkestan inn on the caravan route [50].

On the eve of the invasion of the Russian Empire, there were two inns on the caravan route in Shymkent, one private and one built by the governor of Tashkent Mirzo Akhmad (who was the governor of Tashkent in 1854, 1858 and December, 1864). There were 24 shops in the Mirzo Akhmad inn on the caravan route and 8 shops in the second inn on the caravan route. The inn on the caravan route of Mirza Akhmad was in the shape of a square and there were shops under the walls of the inn on the caravan route [51].

Inns on the caravan route also functioned in the settlements and villages along the important caravan routes that passed through the territory of the Khanate, and they had a positive effect on the development of trade relations.

In addition to living in inn on the caravan route, merchants also had the opportunity to trade. Typically, each of the khanate inns on the caravan route had 12 to 35 shops, and they were mainly engaged in wholesale trade. The merchants rented the inn on the caravan route shops and paid a certain amount of rent. In particular, according to the data of the XIX century, depending on the conditions created in the inns on the caravan route of Kokand and Tashkent and the prestige of the inn on the caravan route, traders paid the manager 3 to 5 tillo a year for the rent of the shop [52].

The inns on the caravan route also had special places for storing camels and horses, and food was provided to them at the expense of the inn on the caravan route. In the middle of the XIX century, merchants paid 5 kopecks for a camel and a horse in the inns on the caravan route of Kokand, Tashkent and Turkestan.

There were a number of opportunities for the rest of the population in the khanate markets. These include teahouses, bathrooms, barbershops and other public facilities. The markets of the khanate of Kokand were also famous for their teahouses. There were dozens of teahouses in Kokand, Tashkent, Namangan, Margilan, Khojand and other major cities of the khanate. In particular, on the eve of the Russian invasion, there were 35 teahouses in the Margilan market alone.

In the markets of the Khanate of Kokand there were many baths with the necessary conditions. The baths in the khanate markets were famous for their cleanliness and quality of service. The bathrooms had hot and cold water

in several small domes, a dressing room, a lounge, a well, a hotel, a kitchen and a bathroom in the middle. In the middle of the XIX century, there were 6 baths in Kokand and 11 baths in Tashkent [53]. On the eve of the Russian invasion, there were 7 baths and 38 barbershops in Margilan [54]. According to A.P Khoroshkhin, there were 6 baths of Muhammad Karim khalifa, Normukhammad kushbegi, Mukhammad Saidboy, Borikhoja, Yusufboy in the Chorsu market in Tashkent, and each of them could serve 200 people at a time [55]. In the 1950s, there were two large baths in the Khojand market, among which was the famous bathhouse named Shamsiboy, built by a merchant named Shamsiboy, which was the largest bathhouse in Khojand [56].

The large markets of the the Khanate of Kokand were divided into rows, and each row had a few elders. The elder supervised the little row together with his assistant and took 2 tangas or less from each shop in the row. At night, the elder was also responsible for the safety of the rows [57].

The role of state officials - Rais - was great in ensuring the smooth flow of trade in the markets of the Khanate of Kokand and the cleanliness and order. Rais is sometimes called Qadi-rai in khanate cities. The post is open to people of good character, profound knowledge of Sharia law, and great respect among the population. Qadi were sometimes appointed to this position, which is why the Qadi was called the Rais. There was one Rais in each of the major cities of the khanate, and one in several of the small towns and villages. In particular, in Tashkent and Kokand before the Russian invasion there was only one Rais. In addition to overseeing religious ceremonies, the Rais oversaw the trade process in shops, stalls, and markets. It has become a marketplace with more than 10 assistants called kazi khalfa on Sundays. The Rais prevented clutter, checked that the scales were working properly and even checked the quality of the items made by the artisans. He also fought against the sale of alcohol. The Rais was also responsible for cleaning the streets, canals and market areas. Dissatisfied with the prices in the market, traders and scales, he heard the complaints of buyers and punished the culprits. The punishment was carried out in two ways, in the first, the accused was beaten with 3 to 39 lashes, and in the second, he was beaten in the market and city streets. The Rais's ruling was severe for ordinary citizens of the khanate, as well as officials and foreigners [58].

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Global Threats - The Problem of Protection from Them

Xolbekova Mavluda Usmanovna, Tajibayev Muxiddin Abdurashidovich

Teacher, Department of "Social Sciences" of Jizzakh Polytechnic Institute, Jizzakh, Uzbekistan

ABSTRACT

The article presents scientific views on the history of mankind and the current global threats, their dangers and nature. In particular, the existence of constructive ideas and destructive ideas influences their interests.

KEYWORDS: *people, idea, spiritual threat, globalization, interests, ideology, human consciousness, global threats*

INTRODUCTION:

As long as humanity exists, states, the struggle for interests has not ended. On a global scale, part of the set of many International scientific-practical conferences in the history of mankind has passed under socio-economic, political conflicts of interest, turmoil, various disagreements and under them. Of course, some states have been able to strengthen their borders and unite the people under certain ideas. In the countries that unite their people under one idea and carry out their national statehood, peace, cooperation and development of the will of the whole people will be evident for many years to come. For example, countries such as the United States, Japan, and China have reached today's level of development under a single flag within their ideologies.

The history of world ideologies shows that there are two poles of ideology - creative and destructive, from which creative ideologies unite the country, unite the people and lead to development, while ideologies based on destructive ideas serve the interests of certain groups, gangs and protect their interests. In fact, a healthy, constructive ideology should be a set of ideas that pursue the interests of the whole of humanity, a particular nation, a people, and it should not be directed against the interests of another nation, a people. Only then will it serve man, goodness, progress.

Human history has repeatedly witnessed that destructive ideas have also risen to the level of national ideas. For example, the ideology of fascism, nationalism, racism, chauvinism, which are historically closer and more familiar to us. These ideologies are not a collection of ideas that pursue the interests of a single people, without harming the interests of other peoples, but a set of ideas directed against other political groups, nations and peoples in the interests of a particular nation or political group.

"Could fascism be stopped?" Professor M. Kuronov answers this question as follows: "Yes, humanity, when the European community is not indifferent, but shows an example of high unity and involvement. When spirituality became a powerful force and was activated, this evil idea could be stopped. Unfortunately, this did not happen. Indifference, indifference, living as "it has nothing to do with me" has made spirituality weak and vulnerable. And the Nazis ... that's what they needed." [1]

Behind the conflict of interests in the world, conflicting ideas and ideologies have emerged, and today they have reached the level of ideological aggression. Ideological aggression is actions that are specially organized and carried out in order to achieve political goals by influencing the minds, hearts, and consciousness of people in a particular country or region. At the end of the XX century, at the beginning of the XXI century, such ideological attacks between the regions and countries of the world intensified. This struggle has become the most effective means of struggle for the interests of political and economic groups, religions, different strata around the world.

In the early twentieth century, even in the middle of the twentieth century, when political forces took up arms and attacked each other in the face of conflicting interests, there was no longer a need for it. Ideological struggle, attacking each other with information and thereby achieving political and economic interests has almost become a method of political struggle of the new age. That is, "In the present age in which we live, the idea of creativity is increasingly opposed to destruction and destruction, and tolerance to intolerance of dissenting ideas, beliefs, and lifestyles, the vices of ignorance. International terrorism and ideological attacks, religious extremism and ignorance, which are currently being sharply criticized by the world community, are also based on destructive ideas" [2; 4].

It is certainly a product of globalization, which was predicted 100-200 years ago. Globalization is actually a progressive state in terms of human development. But the fact that some forces in the history of mankind are using globalization for their own evil purposes encourages our scientists to make a serious socio-philosophical observation.

At this point, we will focus on the content of some concepts and expressions that reflect the characteristics of today's ideological landscape. In the dictionary compiled by Tashanov, Globalization (Latin: Globe - "sphere", "Planet Earth", visual, globalization - "popularization") - the second half of the twentieth century. complexity, integration into the global information space, capital, commodity and labor markets, increasing man-made impact on the environment, the spread of popular culture, the growing threat of information-ideological and religious-extremist attacks" [3].

The majority of ideological attacks are manifested, identified with spiritual threats. In this regard, our scholars say that "the spiritual threat is a set of ideological views and practices based on the security of the individual and society, the spiritual world, aimed at weakening and disrupting the political and constitutional order, directed against the peace and stability of a particular nation, society and state." [4]. M. Amin Yahya interpreted spiritual

threats as an aggressive force on the individual's will and spiritual world, saying that "spiritual threat is an ideological, ideological, aimed at destroying the spiritual world of man, regardless of language, religion or belief." and information sensitivity.

An ideological threat is a movement that expresses the ideas of domination, tyranny, aggression, extremism, bigotry, and destruction." [5]

It must be acknowledged that ideological attacks are political attacks carried out by individuals, political, ethnic, national, religious groups, states, regions to gain an advantage over each other, to secure their own interests. Hence, ideological attacks are an active tool in the struggle for interests.

As early as the 6th century BC, the ancient Chinese philosopher and military figure Sun Tszu gave the following recommendations for organizing an ideological struggle.

Destroy all the good things in the enemy country.

Drag your enemy's prominent figures into criminal ventures, cases.

Shed the reputation of the enemy leadership and put him to shame in public when necessary.

To do this, collaborate with the most vile, treacherous, disgusting people in that country.

The fire of civil strife and conflict in a country hostile to you turn on

Put the youth against the older generation.

By using all means, the enemy is obstructing the work of the government of the state read.

Enemy supplies to the country's army at the required level and order there

Do not allow the supply by various means.

Weaken the will of the enemy warriors with song and music.

The devaluation of the traditions and values of your enemy, his own beliefs and do all you can to make your faith in God sound.

It is of a mild nature to that country to exacerbate corruption in society send memories.

Don't skimp on sharing gifts to buy information and like-minded people, be generous, be generous. Be generous in giving money and promises for these things, for these things will yield their wonderful fruit.

Although the Chinese philosopher put forward these ideas in the sixth century, even today the idea has not changed its form and essence in the world. When the interests of the world's strongest and weakest states collide, they use the same methods to destroy their opponents. By the end of the twentieth century, the ideological landscape of the world had changed, albeit slightly. The bipolar world, which has lasted just over 70 years, is new

it was as if he had entered into disguise. The former socialist camp, one of the two poles in the world, has disintegrated. Its largest and most totalitarian state-dominated state - the former union - is a thing of the past.

This state was replaced by independent states. Peoples freed from the ideas of dictatorial ideology are restoring the traditions of their national statehood and following the path of their choice.

But by the 21st century, geopolitical struggles around the world have once again escalated. Behind the ideological games, attacks, bloody wars continue in a number of regions of the world. Even today, in the life of all countries, one can observe certain contradictions of different ideas and ideological concepts. While some of them have a predominance of secular or religious ideas, in many of them the principles of protecting one's own interests through covert means, various political movements, and interfering in the interests of others are obvious. In such circumstances, in assessing some of the ideas and ideologies that have their place in the ideological landscape of the world, it is necessary to pay attention to their content, their current practice.

We have tried to analyze that the threats to the human heart and mind are globalization, ideological attacks, distortions of democratic values, and the popularization of drugs among young people. Threats to our national spirituality are the main sources of all other threats, large and small. Although they appear to be "far from" national spirituality, in practice they pose a great danger as they are aimed at eroding our spirituality "from within" and "from the outside".

Today, it is confirmed that the presence of people whose minds, worldviews and hearts are impoverished among the representatives of the nation will inevitably ruin its prospects. In this sense, too, an important factor in the preservation of national spirituality, protection of the worldview and the heart from any external threats remains the main task.

The growing level of threats is seen as a real factor in the growing globalization. At the same time, some indifference of the population in this process also plays a negative role. Research has shown that in the face of growing external threats, the political consciousness, culture and spiritual and enlightenment development of our population should not lag behind the levels of globalization. However despite our great potential in promoting our national spirituality, the experience of foreign countries is needed. As a result, the negative effects of external threats are reduced. In turn, external threats are prevented from adapting to threats from within. In particular, in some cases, under the influence of the problems of the transition to market relations, it can be seen that some members of our nation are taking part in the mass adoption of all from abroad and their popularization among our people. As a result, new "values" that contradict the national-spiritual character are emerging. It is especially dangerous that they are entering the lives of our young people. As the first President Islam Karimov said, "When we talk about protecting our young generation from various spiritual aggressions, we must speak openly not only about the great features that glorify our people, but also about the bad habits that have negatively affected its development. First of all, we must think about the complete liberation of our society from the evils of selfishness and indifference, nepotism and localism, corruption and selfishness, and disregard for others." 6

In conclusion, we must recognize that we are living in a period of extremely rapid change since the last quarter of the twentieth century, due to the development of science and technology and, in particular, the intensification of globalization. This process does not bypass our Central Asian region either. It is safe to say that geopolitical processes are developing more rapidly here than in other regions of the world. If we add to the processes and problems of natural and historical development (population growth, land, water problems, etc.) external forces and their interest in our region, their policies and the new threats that arise as a result, none of these risks is isolated. It is clear that attempts to resolve the issue will not yield the expected results. It is useful to take into account the fact that the peace and sustainable development of our region, political and economic cooperation based on mutual interests between its states may not be in line with the geopolitical interests of external forces.

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Education of Ecological Culture in Preschool Children through Folklore

Quvvatova Mohira Hikmatillayevna¹, Ravshanova Marvarid Masud qizi²

¹Master's Degree in Theory and Methods of Education (Preschool Education),

²Student of Preschool Education,

^{1,2}Termez State University, Termez, Uzbekistan

ABSTRACT

In this article, you can learn about what aspects parents and educators need to pay attention to when educating preschool children about environmental culture through folklore.

KEYWORDS: ecology, culture, folklore, security issues, environmental literacy, activities

1. INTRODUCTION:

After gaining independence, our country has followed a unique path of development and achieved positive results in many areas. In particular, our government pays great attention to environmental issues. Today, the concept of "ecology" is important for every citizen of our country. We all know that the media provides information about the current environmental problems and efforts to address them. Unconditional implementation of the tasks set out in the Action Strategy for the five priority areas of development of the Republic of Uzbekistan for 2017-2021, contribution to the solution of environmental problems in the regions of the country with the introduction of the education system, growing youth The Cabinet of Ministers approved the "Concept for the development of environmental education in the Republic of Uzbekistan" in order to increase the environmental literacy of the younger generation, the formation and development of



environmental awareness and environmental culture, the effective organization of environmental education. Radical improvement of public administration in the field of environmental safety and environmental protection, improvement of the ecological situation, prevention of harmful effects of waste on the health of citizens, creation of favorable conditions for improving the living standards and quality of life, collection of household waste In order to further improve the system of work, storage, transportation, disposal, processing and disposal: the Decree of the President of the Republic of Uzbekistan "On

improving the system of public administration in the field of ecology and environmental protection" was adopted ? This means that both the problem and the success in one country have the same positive and negative effects on other countries. The current ecological crisis in various parts of the world means that we need to treat nature properly and pay more attention to it.

2. Materials and Methods.

Emphasizing that environmental problems are now a universal topic, the head of state said, in particular, "The problem of environmental security has already gone beyond the national and regional framework and become a common problem of all mankind." Indeed, the preservation of Mother Nature means the preservation of the Motherland. Homeland begins at the threshold. After all, it is clear from my many years of experience that raising children from an early age in the spirit of love for the motherland, the environment is an important task for all of us. Therefore, in environmental education, it is important to involve as much as possible in their living environment - landscaping of urban and rural streets, planting fruit and ornamental trees, keeping parks and ponds clean, caring for pets. has The purpose of ecological education is to cultivate a knowledgeable person who knows the natural environment and its resources, uses them sparingly, preserves them, adds beauty to the richness and beauty of nature, and knows the social and natural laws. Muhammad Musa al-Khwarizmi, Abu Nasr al-Farabi, Abu Rayhan al-Biruni, Abu Ali Ibn Sina and others, who lived and worked in the Middle Ages, made a great contribution to the development of natural sciences. They gave valuable insights into nature and its balance, the flora and fauna, and respect for nature at a time when the science of ecology had not yet been born. Ecological literacy and culture begin, first of all, with the family. The basis for the formation of ecological worldview is directly related to family upbringing. Our ancestors paid special attention to the issue of child rearing and created exemplary traditions in this regard.

3. Results and Discussion.

In pre-Islamic Zoroastrianism, anyone who polluted or wasted nature, especially water, was flogged 400 lashes. Respect for water is also preserved in our Islamic religion. It is under the influence of this respect that many proverbs, legends, exemplary stories, and fairy tales have appeared among the people. For example, "Zafarnoma" tells in detail about such monuments as "Boghi Shamol", "Boghi Dilkusho", "Shahrisabz Fortress" and Oqsaroy, built by Amir Temur. "Since we have set ourselves the great goal of building the foundations of the Third Renaissance

in our country, we must create an environment and conditions that will educate new Khorezmians, Beruni, Ibn Sino, Ulugbeks, Navoi and Baburs. The development of science and education, healthy lifestyles, the development of science and innovation should be the main pillars of our national idea.



"The purpose of giving such examples is to pass on the traditions from our ancestors to us. to inform today's youth about the beautification work that has arrived, to educate them on the example of such work. May they, like Jaloliddin Manguberdi, Amir Temur, Mirzo Ulugbek, Alisher Navoi, grow up to be great sons and daughters who fight for the prosperity of the people, for the prosperity of the country, for the noble people, for the people who love nature.

4. Conclusions.

Preschool education organizations play an important role in the ecological education of young children. The educator draws the children's attention to the beautiful flowering of the plants, the shape and color of the leaves, the beautiful appearance of the fish in the aquarium, and the agile movement. As a result, children learn to enjoy this beauty

and their aesthetic taste grows. From an early age, children began to receive moral and labor education in the family. They have a love of work, respect for the environment, a sense of well-being and landscaping. For example, to avoid littering, to dispose of rubbish in separate pits, to dig latrines away from ditches, streams, and springs, to prevent fires, to use dried ones instead of trees that grow for various needs, not to break the seedlings, behaviors such as not breaking the nest are formed. In the family circle, children are told, "Do not spit on water, do not pollute it, because all animals will enjoy drinking it," "Do not break the branches of a flowering fruit tree, it will bear fruit, you will eat it yourself," "Do not cut unripe grapes, if you cut them." will be a great sin. For the believers have a share in it. " Therefore, parents have a great responsibility to educate children about the environment through folklore.

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Determining the Absolute Height of the Ground using the Global Mapper Program and Creating the Relief of Eroded Lands on the Basis of an Automated System

Shoxrux Fayziev, Zulfizar Esanova, Nuriddin Abdiraxmatovich Abdiraxmatov

Senior Lecturer, Karshi Engineering and Economic Institute, Karshi, Uzbekistan

ABSTRACT

The main goal is to use modern GAT technologies to determine the absolute height of the ground using the Global Mapper program and to create a relief of eroded lands on the basis of an automated system and to create and apply maps that will increase a number of economic savings based on regional data.

KEYWORDS: Height, database, format, icon, topography, topographic map, eroded areas, coordinates

1. Nowadays, GAT programs, such as Global Mapper, can also create three-dimensional images of maps based on altitude data. All you have to do is open the file

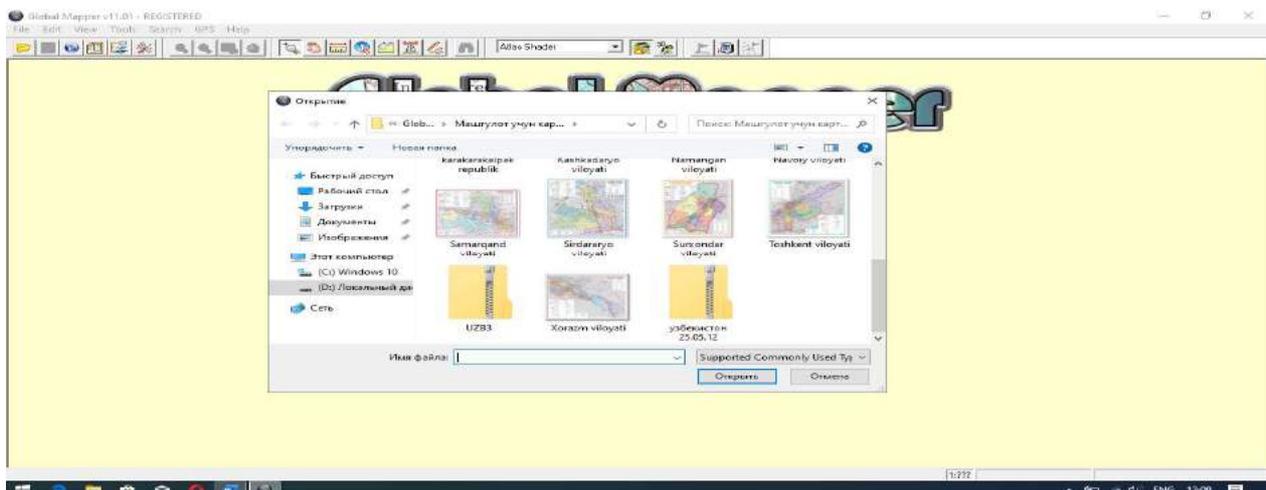
2. Global Mapper can read altitude data in hgt format. There are several types and types of hgt altitude database downloads:

where the altitude database is stored. As mentioned above, the program describes the terrain based on the elevation data of the place, which makes the use of the map a bit more complicated. But there is an opportunity to solve this problem through software. All you have to do is link the thematic map of the area to the relief map. As a result, the program first places a relief image of the place and a thematic map on it. To create 3D geospatials based on GIS technology, we need an altitude database and raster images.



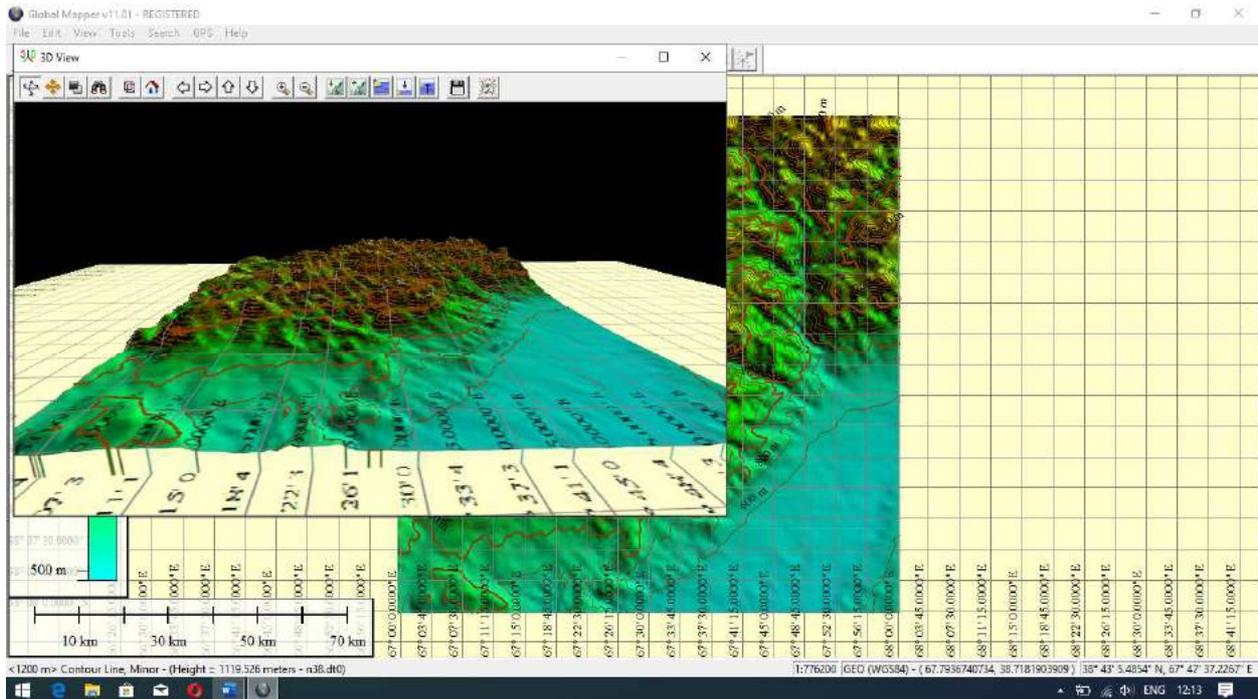
(Figure 1) NGA, DTED is the agency's altitude database.

Once selected, the name of the selected field and the corresponding coordinates will appear on the left side of the map (Figure 1). If we do not like the parameters of the given coordinate system, we select the Raster Exporter button at the bottom of the window, placing the desired coordinates at the desired distance and width (Figure 2).



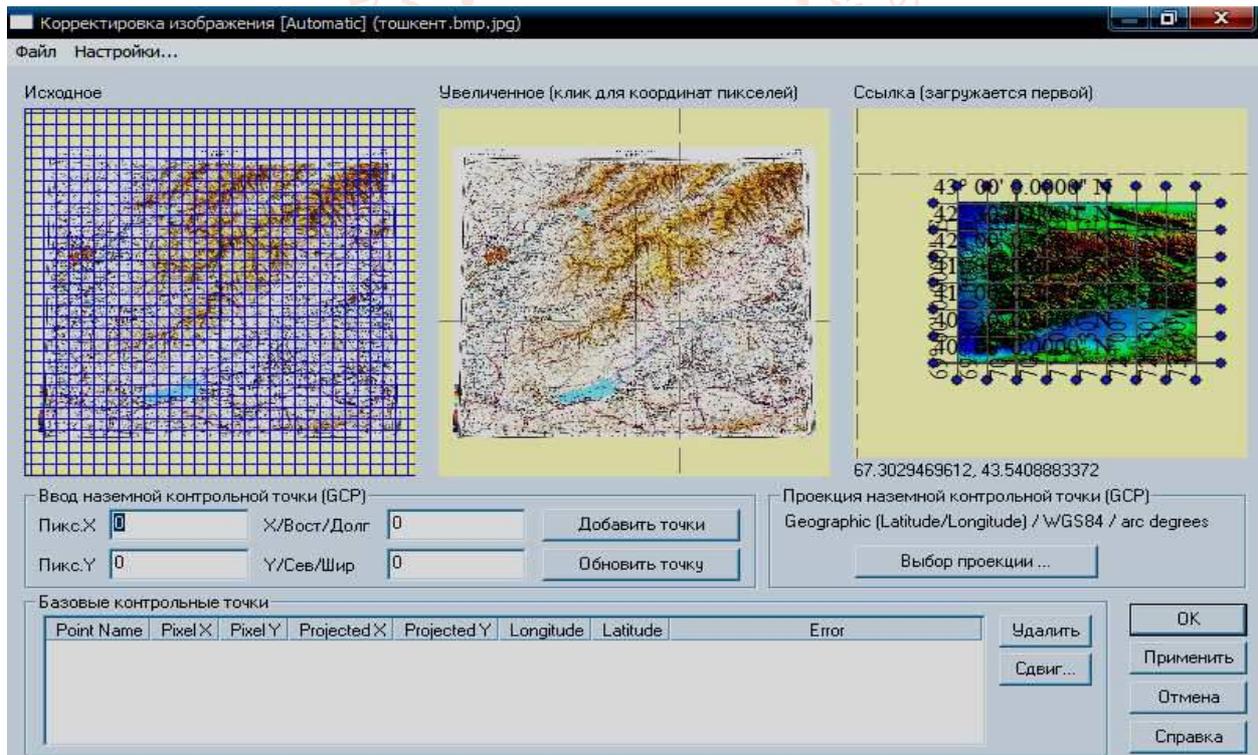
(Fig. 2) Placement in distance and width

As a result, the program describes the relief view of the selected area in the nomenclature. The left and right sides of the image, along with the grids, show the cartographic distance and latitude. In addition, on the left side of the program window, the elevation data of the area are displayed in color in a hypsometric way



(Figure 6) Nomenclature area

The reference points can be the intersection of topographic grid lines, turning points of land use boundaries and the mark of settlements.

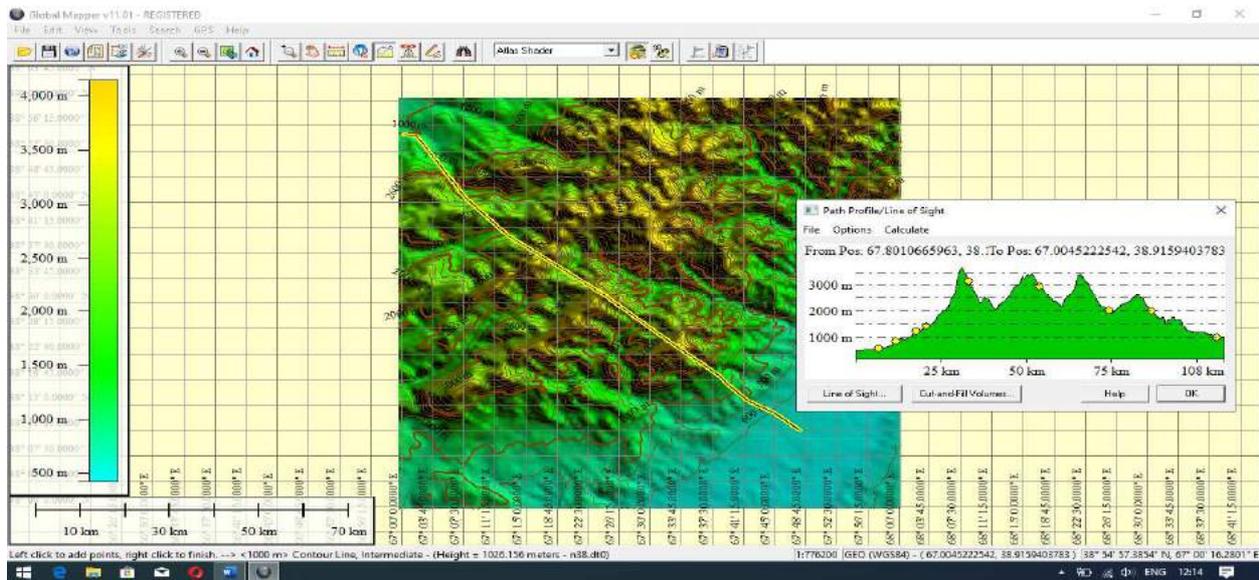


(Figure 7) Definition of boundary turning points and settlements

This dialog shows 3 different types of windows. Window 1 shows our first topographic raster map, window 2 shows a magnified map (to select coordinate values), and window 3 shows a relief map. Enlarge the map in window 2, select point 1, and in window 3, select the location that corresponds to this coordinate and place point 1. Then click the "Add Point" button and save the checkpoint. In this way, we select at least 4 high-resolution points and memorize them.

In this way, we select at least 4 high-resolution points and memorize them.

Once we have saved the points, we click the "Accept" button, which will help us to accept the entered coordinate points. Click OK.



(Figure 8) Acceptance of coordinate points

The relief map serves as the base card when we create a 3D map. After we connect the topographic map to the base map, the program places the base card first and then the topographic map in a layer view.

3. Using the above software sequence, the process of updating topographic maps is followed on the basis of the following step and the map is generated as follows. on the basis of which a number of symbols are equipped with additional diagrams. As a result, data on all indicators of the surveyed area were reflected.

4. Conclusion.

Thus, by using the Global Mapper program to determine the absolute height of the land and create a relief of eroded lands on the basis of an automated system, the region's agricultural land can be used extensively in the development of measures on soil eroded lands using the Global Mapper program. In addition, in the production of a number of relevant industry representatives can be used to generate relief data and obtain distance markings to determine the distance.

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Form Mind and Thinking through Music

Gulnoza Siddikova

Teacher of Jizzakh State Pedagogical Institute, Jizzakh, Uzbekistan

ABSTRACT

In this article, the formation of national consciousness and thinking in the hearts of every young person growing up is the goal of today, the national ideology - a system of ideas and views justifying the existence and development of a particular nation as an ethno-social unit, national values, people. There is information about the role of folk songs, folk festivals, as well as folk songs, sayings and yallas.

KEYWORDS: national ideology, mentality, national culture, national moral customs and traditions, music, national songs, customs and traditions

INTRODUCTION

The problem of spiritual, intellectual and creative development of the modern student's personality as a socio-pedagogical and priority issue of creativity, creative abilities, intellect, intellectual activity, creativity, creativity, intellectual creativity, abilities, intellectual-creative abilities, creative learns concepts such as imagination, intellectual-creative process, activity.

Research methodology

The President of the Republic of Uzbekistan Sh.M.Mirziyoyev calls on students to work and think in a new way in accordance with modern requirements, to constantly study, research, initiative and entrepreneurship in the development of consciousness and thinking. At the same time, to teach young people the proper use of information and communication technologies and the Internet, to improve the system and content of education, to bring it closer to real life, as well as intellectual and creative development of young people; social and communicative skills need to be developed.

The idea has been at the forefront of a number of presidential decrees and decrees in recent years. The spiritual maturity, intellectual and creative activity of students is of great socio-pedagogical importance, which is a factor in the development and improvement of the basic qualities and abilities of a harmoniously developed generation.

Analysis and results

Music takes a person into a world of strange melodies and tones, softens the senses, teaches to love beauty.

The reforms being carried out in our country are of great importance due to their deep social basis. For example, the younger generation has long been taught by our ancestors to express their identity and respect national values and traditions. That is why our first President IA Karimov said, It is known that self-awareness, the expression of national consciousness and thinking, the spiritual connection between generations, is expressed through language or music. All the virtues are absorbed into the human heart, first of all, by the unique charm of the mother goddess, the

mother tongue. It is very important and necessary to inculcate national songs in the human psyche, in the minds and hearts of the younger generation". That is why today the development of national consciousness and thinking among young people has risen to the level of public policy. National songs and values are also important.

In this regard, we believe that in the process of education, it is important to pay attention to the following in the inculcation of national songs, customs and traditions in the minds of young people through such disciplines as the national idea, music, literature. These are:

- The concept of a free and prosperous homeland;
- free and prosperous life;
- national development;
- social partnership;
- interethnic harmony, friendship, brotherhood;
- The integration of ideas such as inter-religious tolerance is desirable if it is carried out in a unique way, ie on the basis of modern pedagogical technologies.

In order to do this fully, it is important that the teacher himself is armed with the concepts involved. These are:

National ideology - is a system of ideas and views that justifies the existence and development of a nation as an ethno-social unit. The role and place of national values, folk dances, folk festivals, as well as folk songs, sayings and yallas are of special importance.

Therefore, in the words of our first president, The national idea is deeply rooted in the hearts of every person and all the people living in this country, passed down from ancestors to generations, and has become a spiritual need and a requirement of life. In other words, if we imagine the most important aspirations and hopes of any nation, I think we are expressing the essence of such a broad concept "[1.71] - describes the national idea with his own opinion. This means that the goal of today is to instill national consciousness and thinking in the hearts of every growing student.

In promoting our nation, we must first instill in the minds of our young people the notions of nationhood, self-awareness, the establishment of inter-ethnic cooperation, respect for them, and the careful inheritance of generations.

Consciousness is the highest form of mental activity. Consciousness is a product of biological and social development. Consciousness consists of a person's thoughts and feelings, intuitions, imaginations, wills and views. Self-awareness, memory, will and speech are the main aspects of consciousness. Nowadays, electronic machines have been created that perform complex creative processes, but they cannot replace the mind, because the mind is a very complex objective being[3,542].

National consciousness is the basic form of ethnic consciousness that is an integral part of social consciousness. [2,267]

Ethnic consciousness is the social life, culture, customs and traditions, historical social psychology, worldview of a tribe, people, nation. [2,690]

Thinking is the highest form of human mental activity and conscious behavior - a means of understanding the social environment, the causes of existing processes and reality. It is also a conclusion and a decision made as a result of thoughts, ideas and views that coordinate activities to meet the needs of all people [2,325].

When we think about the mind and thinking, first of all, we should pay attention to the popular folk holiday "Navruz", which includes songs such as "Dorboz", "Flower Festival", "Top Tosh" and folk games.

Not only the definition of the above concepts, but also the ability to convey to young people the underlying issues that underlie it, creates a sense of self-confidence in the teacher. This, in turn, creates the need for the teacher to use modern tools of modern pedagogical technologies in the educational process. For example, in order for information and telecommunications systems to serve to increase the effectiveness of education, they must be able to use their potential properly. Then the teacher explains to the younger generation the national consciousness and national thinking with clear, interesting, real-life examples, depending on the age and their individual characteristics.

In the process:

- the greatness of the nation;
- loyalty;
- positive attitude to nature;
- conscious attitude to labor;
- the nature of knowledge;
- the consequences of ignorance;
- It is important to teach young people that education is full of national and universal qualities.

Conclusion

In conclusion, the inculcation of the above concepts in the minds of young people on the basis of modern requirements creates the basis for the formation of such human qualities as love for the motherland, respect for parents, compassion, trust, strong will, spiritual growth, humanity through music. This ensures that the educational process is effective.

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Morphofunctional Changes in the Thymus Gland under the Influence of Psychogenic Factors

Asadova Nigora Khamroevna

Assistant of the Anatomy Department, Department of Anatomy of Bukhara State Medical Institute Named After Abu Ali Ibn Sino (Uzbekistan), Bukhara, Uzbekistan

ABSTRACT

In the thymus of animals subjected to acute stress, a decrease in lymphoid tissue was found, accompanied by the death of lymphocytes in the cortex and medulla. Acute stress leads to the appearance in the thymus of a large number of degranulating mast cells and actively functioning epithelial tubules.

Psychological stress has great impacts on the immune system, particularly the leukocytes distribution. Although the impacts of acute stress on blood leukocytes distribution are well studied, however, it remains unclear how chronic stress affects leukocytes distribution in peripheral circulation. Furthermore, there is no report about the role of spleen in the blood leukocytes distribution induced by stress. Here we show that spleen contributes to the alteration of restraint stress induced blood leukocytes distribution. Our data confirmed that restraint stress induced anxiety-like behavior in mice. Furthermore, we found that restraint stress decreased the CD4/CD8 ratio and elevated the percentages of natural killer cells, monocytes and polymorphonuclear myeloid-derived suppressor cell. We demonstrated that activation of hypothalamic-pituitary-adrenal axis (HPA) and sympathetic nervous system (SNS) contributes to restraint stress induced alteration of blood leukocyte distribution. Interestingly, we found that splenectomy could reverse the change of CD4/CD8 ratio induced by restraint stress. Together, our findings suggest that activation of HPA axis and SNS was responsible for the blood leukocyte subsets changes induced by restraint stress. Spleen, at least in part, contributed to the alteration in peripheral circulation induced by restraint stress.

KEYWORDS: *Lymphocytes, thymus, stress, pain, histopathological changes, environment, morphology, external factors, experiment, Gassal cells, epithelial cords, Thymic Atrophy, ThymicHyperplasia, T-cells.*

INTRODUCTION

The experiment involved 30 animals - non-inbred white rats (males and females) of four months of age with a body weight of 150-200 g, kept under standard vivarium conditions (free access to food and water and 12-14-hour daylight hours). Two experimental groups of 10 animals each were formed: I - intact animals in standard vivarium conditions; II - rats subjected to acute cold stress, which was modeled as follows: a single exposure to a temperature of +5 ° C, exposure - 1.5 h. Daily observation of animals included registration of behavior, appearance, physiological functions. On the 7th day, the animals were removed from the experiment under ether anesthesia in

compliance with the rules of euthanasia, and the autopsy material was taken for subsequent histological examination (thymus).

The thymus is covered with a thin capsule of dense unformed connective tissue with a large number of collagen fibers and is divided by trabeculae into indistinctly delimited lobules, consisting of cortical and medulla. In some animals, adipose tissue is found in the trabeculae. In some preparations, the border between the cortex and the medulla is not clearly revealed. The cortical substance of the thymus is represented by weakly oxyphilic epithelioreticular cells, macrophages and basophilic-stained, tightly adjacent T-lymphocytes; a small number of capillaries surrounded by epithelioreticular cells are found in it.

The thymus medulla looks lighter. Lymphocytes, macrophages and epithelioreticular cells are well visualized in it. At high magnification, thymic bodies formed by reticuloepithelial cells are revealed. In the connective tissue of the thymus septa, single mast cells are detected.

In the group with cold stress, by the 10th day of the experiment, the thymus tissue showed, first of all, vascular disorders (edema of the connective tissue and vascular congestion). As for the changes in the lymphoid tissue, they were expressed to varying degrees in different lobules in the same individuals.

In some experimental rats of this group, the disappearance of inversion of layers in individual lobules of the thymus was noted - with the depletion of not only the medulla, but also the cortical layer of the thymus, which was manifested by the depletion of the layers with cells of the lymphoid series and the disappearance of clear boundaries between the layers. In the medulla and cortical layers of the thymus, areas of lymphocyte death were visualized, which manifested itself light-optically as a "picture of the starry sky." In 20% of animals in the lobules, the replacement of lymphoid tissue with adipose tissue was noted.

Main part

The influence of various pathogenic factors on human health leads to morphological changes in tissues, disruption of the function of individual organs, and in particularly severe cases, the entire body as a whole. All this forces scientists to pay close attention to the organs of immunogenesis that provide the body's defense mechanisms [1-6].

The blood system plays an important role in the body's response to any stressful effect [7]. In recent decades, the influence of stress on the mechanisms of regulatory

processes in humans and animals has been actively studied, its role in the adaptation process with the participation of cytokines and antioxidants has been shown on models of emotional, pain, traumatic and other stresses and also the fact that under the action of stress, all regulatory information goes from the nervous system through the pituitary-adrenal, lymphoid system and hematopoietic organs, and the general adaptation syndrome develops against the background of the restructuring of the activity of the local microenvironment, in which stromal elements and cytokines play an important role [7]. Nevertheless, today there are many unresolved issues in the pathomorphological changes in the organs of immunogenesis under stress, which determines the relevance of research in this direction.

The process of age-related involution, an evolutionarily ancient process inherent in all vertebrates, stands apart [15]. One of the characteristic features of true age involution is its irreversibility under physiological conditions. Recovery of the thymus after involution due to gonadectomy, administration of luteinizing hormone or growth hormone is shown.

An absolute decrease in thymus mass correlates with the onset of puberty. The thymus, which has undergone age-related involution, is an accumulation of adipose tissue with remains of the parenchyma containing islets of epithelial cells and thin strands of a few thymocytes with Gassal cells. However, involution is never complete, small islands of the thymus parenchyma are found even in people older than 80 years [16].

In all animals of the group (100%, $p < 0.05$ with respect to control), inversion of layers was also observed, which is typical for the 3rd phase of accidental thymic involution under stress [8].

The blood vessels in the devastated cortex had a structure typical of the vessels of the thymus medulla. It is known that the hemocapillaries of the cortical layer have a relatively thick basement membrane, to which epithelioreticulocytes, macrophages and lymphocytes often adjoin; the basement membrane of the medullary hemocapillaries, on the contrary, is thin [7].

Also, in the cortex and medulla, areas of stromal collagenization and the formation of a large number of thymic bodies were detected.

In the thymus tissue, a large number of mast cells were detected - large cells with basophilic granules. They were found mainly in the interlobular connective tissue, in the connective tissue of the septa inside the lobules in the vicinity of the blood

Mast cells are an integral part of the thymic microenvironment; their main function is to control the composition of tissue fluid, they are regulators of tissue homeostasis and the last link in the general adaptation reaction at the cellular level, in the thymus they are actively involved in the processes of differentiation and migration of thymocytes [13]. In 70% of animals, epithelial tubules lined with cubic epithelial cells were also detected in the cortical layer of the lobules.

It is known that epithelial tissue plays a leading role in the implementation of the functions of the thymus; at the same time, both in the human thymus and in the thymus of

laboratory animals, epithelial tubules, thymic bodies and epithelial accumulations are permanent structures [13]. In 2009, only one term was introduced into the nomenclature, referring to the epithelial structures of the thymus, thymic body; the combination of three types of epithelial formations of the thymus (epithelial cords, epithelial tubules and thymic bodies) under one general term is conditional and inhibits the development of ideas about the structure of the thymus [12].

Most researchers explain the proliferation of epithelial structures in the thymus by the emergence of an urgent need to enhance the secretion of thymic hormones under extreme exposure [9, 10]. The cavity forms of the tubules can be constantly determined with the tension of the functional activity of the thymus, expressed in a change in the emigration and immigration of lymphocytes in the organ - not only in the embryonic, early postnatal and senile periods of genesis, but also under the influence of stress factors on the body. In accordance with modern ideas about the functions of the thymus, all these periods of life characterized by an unbalanced supply of T-precursors from the bone marrow to the thymus and emigration from the thymus to the peripheral lymphoid organs of T-lymphocytes that have passed the intrathymic stage of maturation; at the same time, not only mature T-lymphocytes migrate from the thymus to the lymphoid organs, but also immature forms, which are able to mature in these organs under the influence of thymic factors [12].

Thus, when comparing the data of histological examination of the organs of animals of the experimental and control groups, the following patterns were revealed. In rats subjected to acute stress, changes in the organs of the immune system were found, characteristic of acute stress, a decrease in lymphoid tissue - in the thymus

The study of the thymus as a central organ of the immune system under stress is of particular interest to date.

Later, many researchers have shown that accidental involution of the thymus develops not only when exposed to an infectious agent, but also when various factors affect the body [7].

Under stress conditions, incidental involution of the thymus reflects suppression of its function [11]. Generalization of the information available to date in the literature makes it possible to represent this process as a sequential change of five phases; at the same time, the processes of death and migration of T-lymphocytes in different lobules are uneven, and the absence of strict parallelism of changes in lobules is reflected in the morphological picture of one stage or another, in addition, the nature of the response of the thymus to the stressor depends on the nature of the stressor [7].

At the same time, according to other authors, lymphopenia in lymphoid organs during stress reaction develops not as a result of cell breakdown, but due to a decrease in neoplasm and increased migration of lymphocytes from these organs to the bone marrow with the formation of a "lymphoid peak". It is known that lymphocytopenia accompanies stress practically throughout all its stages, but it is most pronounced in the stage of anxiety and in the stage of exhaustion (especially), which is characterized by almost complete atrophy of the thymus [14].

Thus, in the central and peripheral organs of immunogenesis of animals subjected to acute cold stress, we observed similar changes, which are manifestations of acute stress, the reduction of lymphoid tissue. In the thymus, the reaction of reticuloepithelial structures and mast cells was also revealed.

With acute stress exposure, the central nervous system is activated, which triggers a stress response. It consists in the fact that the peripheral nervous system is activated, and various hormones begin to be released by the endocrine glands. In the body, there is a violation of biochemical processes, which leads to undesirable changes in tissues and organs. The organs responsible for immunity are affected. In the blood, the level of hormones - glucocorticoids, a high concentration of which suppresses the body's immune system, sharply increases. In acute stress, the gender difference is sharply manifested. In female rats, after acute stress, the immune response increases significantly, resulting in faster recovery. In males, the reaction is the opposite, so healing is slower. This study also confirms human sociology, according to which socially isolated men are more difficult to tolerate stress and illness than isolated women. Scientists do not know why women are quicker to restore your immune system after stress than men. Perhaps this is due to the fact that in this way they subconsciously protect the health of their future children. Thus, men who are socially isolated are more susceptible to diseases and live less than women who are isolated. Scientific studies in laboratory mice have shown that short-term stress increases the strength and duration of the immune response. In another study, in which mice were placed for two hours in the same cage with more aggressive counterparts, it was found that such stress increased the response to the flu virus. Acute positive stress strengthens the immune system regardless of gender and accelerates the healing process of minor injuries. In the case of short-term stress effects, in contrast to the effects of chronic stress, there are no clinical manifestations of psychological and physiological dysfunctions associated with a violation of the immune system. Underestimation of the state of health, inadequate treatment and, as a result, aggravation of the picture of the disease can be dangerous here [18].

The restoration of the structure and function of the immune defense occurs gradually. At first, the cell depots begin to fill up, because due to the decrease in the stress effect, there is no need for an increased content of immune cells in the periphery. There is time for the maturation of cellular elements. Soon the periphery is filled with mature immune cells necessary for the life of a healthy body. For future acute stress, there is a reserve of mature and maturing elements in the depot and organs of the immune system. When restoring psychophysiological functions, if the stage of exhaustion has not occurred, and the sympathetic part of the nervous system dominates, with relaxation or active correction, the immune system normalizes [17, 19].

Research results

The experiment involved 30 animals - non-inbred white rats (males and females) of four months of age with a body weight of 150-200 g, kept under standard vivarium conditions (free access to food and water and 12-14-hour daylight hours). Two experimental groups of 10 animals each were formed: I - intact animals in standard vivarium

conditions; II - rats subjected to acute cold stress, which was modeled as follows: a single exposure to a temperature of +5 ° C, exposure - 1.5 h. Daily observation of animals included registration of behavior, appearance, physiological functions. On the 7th day, the animals were removed from the experiment under ether anesthesia in compliance with the rules of euthanasia, and the autopsy material was taken for subsequent histological examination (thymus).

Chronic stress has a marked regulating effect on the immune system of growing animals, one manifestation of which is the change in the structural and immunocytochemical characteristics of the thymus, typical immunosuppressive conditions, namely: reduction in size of the thymus and a decrease in its cellular density, reduction of cortico-cerebral ratio, the number CB90+ and CB8+ thymocytes in the cortical substance of the thymus, DBA+thymocytes in the cortex and the medulla of the thymus, increased death of thymocytes and inhibition of their proliferation in the cortical substance of the thymus.

The sensitivity of the immune system of a growing organism to the action of various types of stressors (physical versus psychoemotional) depends on the initial age. According to an immunohistochemical study, physical stressors cause a sharp immunosuppression in infancy, while emotionogenic stressors significantly less change the immunoarchitectonics of the organ during this period. In the suckling period, a greater sensitivity of the thymus to the action of physical stressors remains with an increase in the strength of the immunomodulatory action of psycho-emotional stressors, and by the end of the infantile period, the immunosuppressive effect of emotsiogenic stressors is practically compared with that of physical stressors.

Conclusion

The thymus of immature experimental animals of the age of transition to independent nutrition is the most sensitive to the immunosuppressive effect of chronic stress, which, according to immunohistochemical research, causes the highest degree of accidental involution of the thymus in animals of the suckling period compared to animals of the infant and infantile periods.

The leading mechanisms of thymus involution in chronic stress in a growing organism are excessive apoptosis of double positive thymocytes of the thymus cortex and inhibition of lymphocyte proliferation in it.

Immunohistochemical methods of research significantly expand the possibilities of assessing the dynamics of thymus immunoarchitectonics under stress, among them the most informative are staining on CD8, PCNA and ED1, which allows not only to state the presence and direction of changes, but also to decipher their mechanism.

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Origin, Forms of Corruption that Negatively Affects Public Life, Causes and Consequences

Raximova Dilshoda Baxritdinovna Samarqand¹, Xidirov Khoshim Ibodullaevich²

¹Associate Professor of Socio-Economic Sciences, The Candidate of Philosophical Sciences, Samarkand Regional Folk Retraining Training and Qualification Hanging Territorial Center, Uzbekistan

²Teacher of Jizzakh Polytechnic Institute, Jizzakh, Uzbekistan

ABSTRACT

This article describes the origins, forms, types, causes and consequences of corruption, as well as the fact that it covers all areas as a negative evil in society.

KEYWORDS: Society, state, social life, corruption, typology of corruption, types of corruption, forms of origin, business corruption, private sector, bureaucratic elite, economic instability, inflation, etc

The typology of corruption is its role in society, which can be divided into several types, depending on the criteria of activity. Accordingly, corruption can be classified according to many criteria. These are mainly:

- by types of interacting entities (citizens and junior staff, firms and officials, national and political leadership);
- by type of profit (profit or cost reduction);
- by direction (internal and external);
- the way of interaction of subjects;
- degree of centralization;
- predictability;
- consistency and others.

Types of corruption include;

- A. This type of corruption in everyday life occurs as a result of the interaction of ordinary citizens and officials. It includes various gifts from citizens and services to the official and his family members. This category includes nepotism.
- B. Corruption in business occurs when government and business interact. For example, in a business dispute, the parties may seek the assistance of a judge to rule in their favor.
- C. Corruption in the supreme power - includes the political leadership and the supreme court in a democratic system. It is a group of unscrupulous people in power pursuing their own interests and pursuing policies to the detriment of the interests of the electorate. (Page 1.5)

Corruption market - the most common thing in the industry is decentralized (external) corruption, which is a mutually beneficial agreement between an official and an individual. At the same time, if the agreement includes internal corruption, which consists of members of a joint organization, they give the appearance of organized crime.

According to the doctrine of behaviorism, when a person enters a community, he or she must also accept the rules of behavior adopted in that community. Therefore, if the culture of the team within the office is related to bribery or giving, i.e. there is an atmosphere of satisfaction,

sometimes irresponsibility in dealing with official matters, lack of transparency in discussing employee misconduct, then newcomers to the team will behave normally. accept and follow it in the future. However, according to other researchers, a person always has a basic opportunity to get out of such an environment, which includes combating disruptions in the community by the micro-community, popularizing this struggle, ignoring them as if nothing happened, preventing disruptions by the individual. (Page 1.7)

The spread of corruption among officials ultimately leads to the interest of both subordinates and leaders.

In the interests of the individual, each person in life will have their own interests. In particular, someone is interested in being an ordinary worker, someone in being a scientist, someone in being an official to lighten the burden of the people, someone in being an official in gaining personal wealth. The worst of these is the extortion of a civil servant.

Extortion ("government racketeering") is the deliberate bribery of government officials to issue licenses, special permits, or other services to other persons within the scope of their authority. Alternatively, if an official has the authority to assess the amount of payments (e.g., taxes or levies) to be paid, this also opens up the possibility of extortion, i.e. extortion.

A civil servant has the right to complain about extortion through an internal or external control body. The decision depends on how expensive the appellate procedure is, as well as the citizen's knowledge of his or her legal rights and obligations as a civil servant.

Mutual collusion takes place under the same conditions as this extortion, but differs in that it consists of concluding an agreement that is beneficial to both parties and is detrimental to the state. For example, a customs inspector may reduce the amount of imports in return for a bribe, thereby reducing the amount that the importing firm has to pay for duties. The agreement may also include structures responsible for controlling the official. (Page 4.6)

In the areas of corruption enrichment, there is a budget of each state, which mainly includes parts of revenues and expenditures. Public spending in this budget is one of the main areas of corruption for the bureaucracy, especially for the upper political elite. These include investment projects, public procurement, extra-budgetary funds.

Investment projects are largely determined by the voluntary decisions of senior officials. Large investment

projects (especially with the participation of foreign corporations) often involve the transfer of monopoly rights to the winner of the tender. Officials are promised large bribes to win. Some projects are created specifically for certain groups to receive rent ("government rent") from those appointed as project executors.

Public procurement, as a rule, involves selectively selecting the best offer from a number of options, but sometimes an official can secure the seller's victory by promising the highest "commission" ("kick") from the deal. For this, participation in the tender is limited, its rules are not fully announced, and so on. As a result, purchases are made at an inflated price.

Extra-budgetary funds are often created for legitimate purposes (pension funds, road funds, etc.) However, in some funds, such as to help the disabled, their income may significantly exceed real expenditures, leading some officials to seek a "surplus". Conversely, in the event of a deficit, officials often decide who gets the money at will. In some countries, funds raised through foreign aid or the sale of natural resources are directed to special funds that are less transparent and less controlled than budget funds. Due to the few-minute change in the price of goods, it is not easy to determine the actual amount of the transaction and the amount of allocations to such funds, which allows a portion of the money to be directed into the pockets of officials.

Other areas that are most lucrative in terms of corruption include:

- tax benefits;
- sale of goods at below market prices;
- zoning of land due to its impact on the value of land;
- extraction of natural resources;
- sale of state assets, especially privatization of state enterprises;
- monopolization of certain types of commercial (in particular, export-import) activities;
- control over the shadow economy and illegal business (extortion, protection from harassment, destruction of rivals, etc.);
- appointment to responsible positions in the government.

At the same time, it should be borne in mind that due to the insufficient formation of economic consciousness, legal thinking of citizens, their lack of free access to information in public administration (i.e., its obscurity) leads to corruption and inevitably leads to economic crisis.

Corruption in the Judiciary The first form of corruption in the country is corruption in the judiciary.

Many norms of "forks" in the legislation allow the judge to choose one of the types of light and heavy punishments to take into account the degree of guilt, the gravity of the offense and other circumstances. In this case, the judge has the means to influence the citizen who committed the offense. The greater the difference between the upper and lower limits of the penalty, the more the citizen is willing to pay a bribe.

As Thomas Hobbes wrote about the harmful effects of corruption, "corruption is" always and in all temptations the root of hatred for all laws ". In highly corrupt officials, most public resources are deliberately diverted to channels where they are most likely to be looted or where

bribes are most easily collected. Policies include mechanisms to control corruption; freedom of the press, independence of the justice system, and further suppression of the personal rights of competing politicians (oppositionists) and citizens. In short, politics is beginning to serve corruption.

There is also a view that corruption can be tolerated. According to historical evidence, in the development history of many countries (Indonesia, Thailand, Korea) economic growth coincides with periods when corruption was accompanied by an increase. Even the increase in corruption during this period did not hinder economic growth. According to another argument, bribery is only the implementation of market principles in the activities of state and local structures. Thus, a tolerant attitude towards corruption is acceptable if it does not affect economic growth or market efficiency in general. Critics of this view argue that for the above reasons, countries with high levels of corruption are at risk of losing stability after a period of growth and falling into a downward spiral. (Page 5.7)

While an acceptable level of corruption eliminates state corruption, the cost of fighting corruption increases to such an extent that endless efforts will have to be made to eradicate corruption completely. By comparing the losses incurred from corruption and the cost of eliminating corruption for each of its levels, an acceptable level of corruption can be found by reflecting the smallest total losses. Apparently, there are those who think that not eradicating corruption to the end is more beneficial to society simply because of the value of the process. However, it is important to keep in mind that the money spent on fighting corruption needs to be constantly considered to be more effective. In addition, the intensification of excessive zeal to fight corruption, the damage caused by the elimination of its causes, can deprive the administrative system of flexibility and civil liberties of citizens. A corrupt ruling group can also make effective use of punitive legislation to strengthen control over society and persecute political opponents. This should also be taken into account.

Corruption in international trade causes billions of dollars in losses in international trade. One of the reasons for the growing interest in the problem of international corruption in recent years is that firms exporting goods and services often lose artificially profitable contracts because they are not legally allowed to bribe foreign officials. Conversely, in most countries, bribery of foreign partners is not only prohibited, but may even be withheld from income when paying taxes. For German corporations, for example, such costs amount to \$ 5.6 billion a year. The situation changed only at the end of 1997, after the countries signed the Convention for the Suppression of Bribery of Foreign Government Officials in International Business Operations. To enforce the convention, a number of laws have been passed in recent years prohibiting national companies from bribing anyone.

The causes of corruption are the activities of organized criminal groups resulting from the misappropriation of property by governmental and non-governmental organizations, as well as international partnerships, using the position of an individual or an organized group in public institutions. The main reason for this is the

existence of fundamental contradictions in the legal and moral norms governing the life of society.

The fundamental contradiction is that the production of any commodity requires the consumption of certain resources, and the costs incurred for these commodities are offset by the funds received from the consumers. Employee wages are one of the costs that are ultimately covered by the consumer, but their activities are determined by the will of the boss and the employer. This leads to a situation where the consumer receives the desired service or product from the employee, but this does not directly affect the employee's performance. A particular case is public property, which is paid by taxes and provided by civil servants. Although the salaries of officials are actually paid by citizens, their employer is the state, which gives them the right by law to make decisions that affect the competing interests of different individuals.

"If there was no voluntary force, corruption would be impossible." However, a person or group with higher authority cannot independently implement the policy it has set. To this end, he appoints administrators, gives them the necessary powers, transfers the necessary resources at their disposal, establishes rules of conduct for them and oversees them. The following problem arises here.

The conservatism of the law is that the guidelines that apply in practice change much more slowly than what happens in the external environment. That is why the bureaucrats leave room for some action of their choice. Without it, the management system will not be completely flexible, and the non-compliance of the established strict norms with the realities of life will lead to the complete cessation of work. However, this means that in a situation not provided for by law, the administrator can start managing with the most favorable rent. So, the conservatism of the laws also leads to corruption.

It is in the impossibility of all-encompassing control. It is known that as long as the state exists, it will also have a control function. Sometimes control is too costly for the state. Excessive control also damages the quality of management and leads to a decline in creative talents. This means that there is a possibility of corruption in the principle of governance itself. This opportunity develops under objective conditions, and the potential rent (profit) outweighs the risk. This problem is repeated several times in the bureaucratic apparatus. The reason for this is that high-ranking officials appoint their subordinates themselves. In representative democracies, the political elite holds the highest positions of power and fears that there is a risk of losing power in the next elections.

In 2020, a total of 1,723 officials were prosecuted in 1,148 criminal cases across the country. This was reported by the press service of the Prosecutor General's Office.

Of the prosecuted officials, 9 worked in ministries, departments and organizations of the republic, 45 in the region and 1,669 in the district and city levels. Of the prosecuted officials, 835 were involved in embezzlement and robbery, 227 in fraud, 132 in bribery (bribery) and bribery, 58 in abuse of office, and 31 in the exercise of official authority. deviation, 25 indifference to career, 16 committed career fraud and 399 committed other crimes.

As a result of the crimes of officials, 500.1 billion soums were lost in the interests of the state and society. In the course of the investigation, the damage amounted to 355.7 billion soums. sum was collected.

Today, under the leadership of the President of the Republic of Uzbekistan, a number of anti-corruption measures are being taken. Also, on January 24, 2020, in the address of our President to the people of Shabbat, there was talk about the purification vaccine. Proof of this is the establishment of the Anti-Corruption Agency on June 29, 2020 in accordance with the Decree of the President of Uzbekistan "On additional measures to improve the anti-corruption system in the Republic of Uzbekistan," the press service of the Ministry of Justice said. is a specially authorized state body in the formation and implementation of state policy in the field of struggle.

The Agency reports to the President and is accountable to the chambers of the Oliy Majlis. The decree defines the main tasks and activities of the agency. In particular, the Agency provides a systematic analysis of the state of corruption in the country. The Agency has also been granted the following rights:

- request, receive and study materials related to the use of budget funds, the sale of state assets, public procurement, implementation of investment projects and the implementation of government programs;

- to consider appeals of individuals and legal entities on corruption issues and to take measures to restore their violated rights and protect their legitimate interests;

- conducting administrative inquiries on corruption offenses;

- to make proposals on suspension or cancellation of the execution of decisions of the executive and economic management bodies and their officials in case of detection of signs of corruption. The Agency's warnings, submissions and appeals must be considered within ten days and the results must be reported in writing. It is reported that for the first time in our society in 2020, 1723 cases were prosecuted by officials working in higher organizations, as well as a total of 1148 crimes were committed in the country. Therefore, today Uzbekistan's position in the international rankings in the field of anti-corruption was reported. These include:

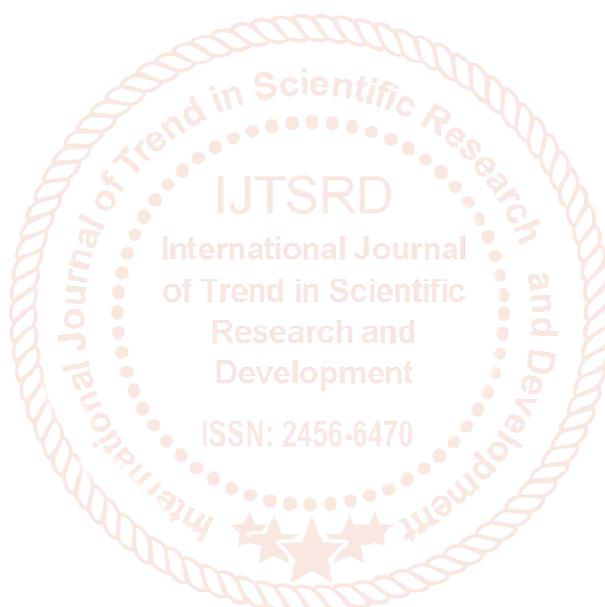
According to the World Bank's 2018 Governance Quality Indicators Index, published in September 2019, Uzbekistan ranks 183rd out of 209 countries with 28.6 points, up one place. In addition, in the Transparency International Corruption Perceptions Index for 2019, published in January 2020, Uzbekistan ranked 153rd out of 180 countries with 25 points, rising 5 places. In 2018, the figure was 158th with 23 points.

Cameroon, the Central African Republic, the Comoros and Tajikistan are ranked 153rd with Uzbekistan. The report of the international non-governmental organization Transparency International acknowledges that Uzbekistan's performance in this rating has been growing in recent years, and restrictions on the media have been eased. In addition, Uzbekistan ranked 89th out of 128 countries with a score of 0.40 and rose six places in the World Justice Project's Rule of Law Index 2020, published in March 2020.

On June 2, 2020, the Presidential Decree "On improving the position of the Republic of Uzbekistan in international rankings and indices and the introduction of a new mechanism for systematic work with government agencies and organizations" was adopted. All this is evidence of the fact that the fight against corruption, which today hinders the development of our society, is yielding good results.

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Anthropometric Parameters and Facial Analysis in Adolescents

N. P. Alimova

Bukhara State Medical Institute Named After Abu Ali Ibrnsina, Bukhara, Uzbekistan

KEYWORDS: anthropometry, facial anthropometry

Facial anthropometric analysis is essential for planning cosmetic and reconstructive facial surgery. In this study, multiple face measurements were performed on adolescents to provide a complete anthropometric profile of the face of this group and to compare their facial morphology. The standard of a perfectly proportioned face is one that is distinguished by balanced individual parts and smooth outlines that form an oval.

Materials and Methods: Anthropometric measurements of the face were obtained from 92 adolescents. In addition, the prevalence of different types of face was determined. The data obtained were compared with published data.

The overall attractiveness of a face depends on all anatomical elements, including skin, subcutaneous tissue, muscles, bones, and teeth. To achieve or approach the aesthetic ideal, doctors must have a clear idea of the proportions of facial features, the method for analyzing its defects and the possibility of using special methods for eliminating them. The etiological factors contributing to the development of dentoalveolar anomalies are numerous and varied [7].

Anthropometry is one of the main methods of anthropological research, which consists in measuring the human body and its parts in order to establish age, sex, racial and other features of the physical structure, which makes it possible to give a quantitative characterization of their variability. Anthropometric methods are of great importance in applied anthropology, and in recent years have begun to play an important role in anthropometric (orthopedic) cosmetology. [2]

By examining various ethnic, age and sex groups, and measuring the size of various parts and recording variations in the position and shape of cranial and facial structures, broad standards have been developed that describe the human head. As a specialized part of anthropometry, "human measurements", the study of the head came to be called "craniometry" or "cephalometry". [1]

Cephalometry (measurement of craniofacial parameters), an ethnographic definition of skull morphology, has been studied by anthropologists for centuries. [6] Cephalometry is an effective method for assessing the structure of the individual's dentoalveolar system, identifying the formation features inherent in variants of dentoalveolar anomalies, and studying the changes that occur during the growth of the face [4].

Diseases of the ENT organs, in particular hypertrophy of the pharyngeal tonsil and "adenoid" growths, play an important role in changing the parameters of the face and the dentoalveolar system [4]. The trend towards an

increase in the incidence of pathology of the pharyngeal tonsil in children is steadily growing, which negatively affects the formation of the structures of the nasomaxillary complex [3,5].

Results: A complete set of mean anthropometric data was obtained for each sex. It was found that boys compared to girls have statistically significantly longer foreheads, as well as higher values for morphological height of the face, width of the lower jaw, distance to the arch of the upper jaw and distance to the arch of the lower jaw. In both sexes, the most common face types were mesoprosopes, leptoprosopes, and hyperleptoprosopes. The boys 'students had significantly wider faces and mandibles than the girls, while the girls' mandibles were only significantly longer than their boys.

Conclusions: Differences in statistical significance were noted in the head and face regions among the sexes, as well as among the age group. By establishing facial standards for patients, this study facilitates preoperative planning as well as postoperative evaluation of patients who are accordingly planned or to undergo facial reconstructive and aesthetic surgery.

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The Importance of Investing in Human Resources

Norqulova D. Z PhD, Usmonov B. Sh

SamISI Talabasi, Uzbekistan

ABSTRACT

This article is about the importance and prospects of investing in human capital, which includes the health, knowledge and skills, experience and lifestyle of the population.

KEYWORDS: *resource, psychology, capital, investment, material, spiritual, incentive, privilege, education, economy, society, security*

The territorial wealth of Uzbekistan is its hardworking, generous and hospitable people.

(Islom Karimov)

INTRODUCTION

As of today, in the twenty-first century, all the developed countries of the world are in need of mentally, spiritually and physically healthy, as well as competitive human resources in a small area. For this reason, human resources, human resource management, and capital allocation to human resources are already well developed in foreign countries. In recent years, the question of what human resources are and how appropriate it is to invest in human resources has become popular.

What are human resources?

The concept of human resources emerged at the end of the twentieth century, when large companies, as mentioned above, began to feel the need for knowledgeable and flexible personnel. As a result, they began to think about preparing cards, directing them correctly and using the labor force effectively. Large investments have been made to improve the skills of staff. At the same time, the demands placed on workers have increased. As technology advances, people have become controllers and regulators of technological processes. From then on, people were required to have a new worldview, a new idea and a new way of thinking.

Human resource is less than the direct human factor. Human resources include both those who are employed in the economy and those who are currently unemployed but able to work. Unlike other resources, human resources not only produce material goods, but also consume them. The material and spiritual needs of human beings vary according to age, gender, race, health, and other social aspects.

In a market economy, human resources are of great importance in terms of economic development, increasing the volume of production in the national economy, but in order to effectively organize labor resources, we must accept the human factor as a resource and pay attention to it.

What is human capital?

Human capital consists of the knowledge, skills, and competencies that emerge as a result of investment, and it

reflects an individual's mental, physical, and psychological state and abilities.

Human resource management, on the other hand, is about improving the efficiency of human resources without violating human rights by focusing on the proper use of human resources and the right direction.

MAIN PART:

The sole purpose of investing in human resources is to increase human capacity. Human potential is measured first by his knowledge and skills, and then by emotions and the degree to which they can be controlled. We believe that a person's knowledge helps him to develop, to control his emotions, to understand defeat or failure at the right time and to draw the necessary conclusions from it, not to lose vigilance from unexpected success, to always be serious about his work. We need to look at all this, that is, at the level and level of qualified cards, not only as a technique that specializes in investing in them and doing a job, but also as a person with material and spiritual needs, with little social status in life. In our country, most, little money is allocated to encourage employees who perform their duties well. This is not always the case. The reason is that, as we have pointed out above, man is a being with material and spiritual needs. Maybe you, an employee who is trying to provide financial incentives, want to go on a trip with his family, but he does not have enough time. Or, you need a discounted rent to rest in a sanatorium. Therefore, we believe that when motivating human resources, it is important to know the employee's personal views on the incentive. Another advantage of human capital is that it is not limited to a particular generation. For example, the knowledge given to women about child care decides the fate of a child who is expected to be born in that family at some point.

The bulk of investment in human resources should be spent on improving the quality of education. The history of Ghana proves the importance of capital invested in education. The main reason I cite this country as an example is that from 1990 to 2000, it dramatically raised key indicators by doubling the country's education spending. As a result, from 1999 to 2012, the literacy rate reached 64% and the poverty rate in the country was reduced from 61% to 13% (1).

Typically, when the government seeks economic growth, it seeks to build physical capital, i.e., hotels, new parks, and similar infrastructure. In most cases, however, little attention is paid to investing in human capital, which serves to improve the literacy and health of the population, improve experience and lifestyle. However, the effectiveness of one of the preschool programs developed in Michigan in 2010 has been proven to return in the form of a profit of \$ 7 to \$ 12 per dollar (2).

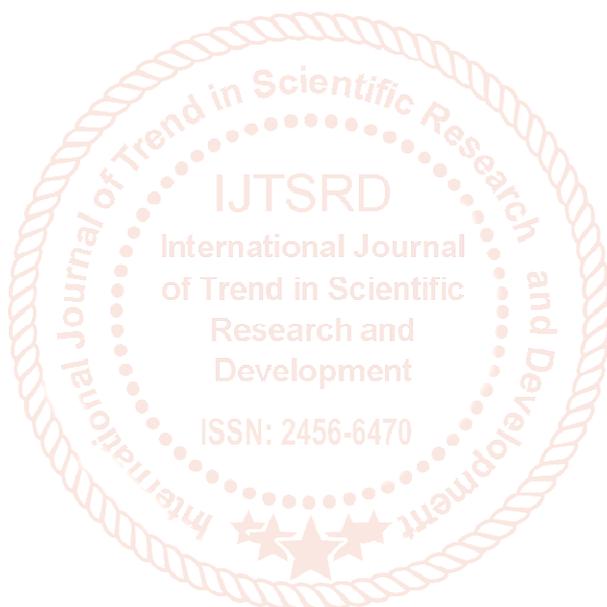
FINAL PART:

In conclusion, we can say that human capital should not be understood only as material capital, and we should abandon the notion that capital is provided only by the state. That is, our proposal is to form a project of human capital in Uzbekistan, the operation of which should be controlled by the state. The essence of the project, the importance of investing in people, its return in the form of profits after a while, we need to instill in families through neighborhoods and sectors. As a result, the state provides capital to a large number of people in the country without spending extra money. The development of human capital can significantly stabilize not only the economy, but also people's worldviews and opinions, society and the social situation within that society. Unless states can invest effectively in human resources, the incidence of poverty in that country will increase dramatically. Citizens' inability to access high-cost services can lead to inequality in

society, and this stratification can have a small effect on the security situation.

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A Forming a Motivation for Independent Reading in a Foreign Language

Hikmatova M. N

Associate Professor, Candidate of Philological Sciences, Head of ESP for Humanitarian Subjects, Bukhara State University, Bukhara, Uzbekistan

The independent work of students of all forms and types of educational activity. The purpose of independent work: expanding the scientific outlook, mastering methods of theoretical research, development of students independence of thinking. Student and graduate of a higher educational institution should not only acquire knowledge on the subject of the program, master the skills and abilities of using this knowledge, methods of research work, but also be able to independently acquire new scientific knowledge.

Many students independently read additional literature in a foreign language? The survey we conducted showed that, in general, the chairmen read books for additional readings, magazine and newspaper articles. But all of these students noted that they read sporadically, from time to time. Only a few read systematically and purposefully.

One of the main reasons for this is lack of motivation. Most of the students relate to reading as learning classroom task. For most of them, reading in a foreign language has lost its main meaning: obtaining information, broadening horizons, raising the cultural level. Interest in reading falls and students in their free time from classes are interested in telegram information from internet other reason is closely related to the first and consists in the fact that when reading a foreign language text, students are faced with difficulties they do not know the meaning of many words, they often have to communicate with the dictionary that they enjoy reading tiresome boring. In addition, many students, especially weak and partly average students tend to understand the meaning of every word, not being able to separate the main word from the secondary, which has no semantic meaning load.

There are other difficulties associated with finding literature to read. Students note it's difficult: to find interesting reading materials, pick them out in the mass of literature in foreign language parents great difficulty for students.

There is, however, another side to the problem. While reading in a foreign language to the first, second year does not cause positive emotions in the majority of students, nevertheless, they realize the importance of this type of speech activity and would like to learn how to read well in foreign language. Here now the students argue this desire: "I want to read fiction in a foreign language". I would like to read newspapers and magazines in a foreign language in order to better know what is happening abroad I am interested in pedagogy (modern psychology, etc.)," It'll be useful".

Undoubtedly, the certain reading material is provided by a book for reading in a foreign language. Including in the

Modle and Hemis platforms, including teaching materials on the subject of a foreign language. But it will not solve all the problems. First, the initiative in reading a book comes from the teacher, reading acquires mandatory. This element of coercion negatively affects students' attitudes towards reading.

Secondly, students note that not all texts are interesting to them. It is natural, so as it is practically impossible to compose a book to read that would suit everyone's taste. It is difficult for students to navigate the book, to choose the text they are interested in. An important factor there are also musical difficulties that make it difficult to understand, the reading process does not bring feeling of satisfaction to teach students to read independently in a foreign language. We see two directions to solve this problem.

To form the motivation of the given type of speech activity, to instill an interest in reading, to teach students to overcome language difficulties in reading, to extract information from the text.

The formed motivation for reading in a foreign language is closely related to the activity itself. At the heart of motivation for reading lies in the students' awareness of usefulness and necessity, and thing of satisfaction, which the process of reading itself or obtaining the purpose of reading. If the student gets satisfaction from the reading, the reading process is successful, its turn will increase the motivation for reading, since there is a tendency to switch all motivational attitudes towards the most successful activities. Motivation for reading has an impact on the activities of students. Feedback also exists. In the process of personality formation, there is another mechanism change in motivation under the influence of gradual or a rapid change in the sphere and conditions activities. An important factor here is the activities that first goes beyond existing needs, interests and then forms new needs, interests and thereby changes the motivation. In other words, at first student may not have a certain need, stable interest in reading in a foreign language, but he reads due to some circumstances. Then in the process of reading more stable motives appear that are adequate in relation to this activity: interest in reading process, the need for reading, the desire to obtain information. This process allows the shift motive on purpose. Thus the more actively the student is involved in reading in a foreign language, the more he needs to read. In this case it is very important that the student reads looking for the interesting materials available in language, by reading which students could fulfill their need for reading and getting the necessary information. Skillfully selected and well-processed interesting texts will contribute to the

development of students' interest in the type of speech activity represented in a certain system, they can be included in a book of reading according to interest.

These texts should correspond to the age interests of students, reflect interdisciplinary communication. It is advisable to equip them an apparatus that helps students to navigate themselves in texts from a point of semantic side of what is being read, as well as a commentary that partially removes language difficulties and making it easier to understand when reading on your own.

The age characteristics of students are widely covered in the methodological literature. It is noted that senior students give more preference to literature that everyone reads. The book becomes for them a means of knowing life, people. The survey showed how the interests of the students were distributed: scientific and fiction literature, adventure and military topics; books that tell about the life of peers, about education; works on the theme of love, animal life, sports, etc. The students, as a rule, gives preference to one or another subject of the university cycle, reads additional literature on subjects. Reading texts should be selected so that each student could find in books for reading, materials of interest. It would be to combine the texts into thematic sections.

For the student to be able to navigate the section, it is advisable to give a summary at the beginning of each text. The resume form can be different:

- In a few sentences the main content of the text will be shortly summarized.
- In an abbreviated version of the beginning of the story in the native language will be given.
- With the help of a few sentences, the situation is described, the reader will be taken up to date.
- One or two sentences from the text reflecting the main idea of the story, or the most important episode.
- The main idea of the text will be given in a few sentences.

Text can be compiled. It is desirable that they include the element of fun. Reading and doing assignments should certainly bring students a sense of satisfaction.

Assignment for text will help students to better comprehend the reading highlight the main thing in the content, understand the main idea, will stimulate mental activity.

Tasks can be given at the beginning of the text, in the middle or at the end.

The second task is important – teaching students to overcome language difficulties in self-reading in English.

It is no secret that we almost do not teach the techniques for reading to ourselves, introductory reading, to which we often use our native language to extract the necessary information. During introductory reading full accurate understanding is required. The level of understanding may vary (from 70 to 100%, including all basic information). It is necessary to teach students to highlight “semantic terms” in the texts, words and group of words that include:

- Main content;
- To classify information as important or secondary;
- To understand the general logical outline of the presentation;

- To establish semantic relationships between parts of the text;
- To combine isolated facts into a semantic whole;
- To develop the skills of probabilistic forecasting, etc.

Equally important is the task of teaching students viewing reading in a foreign language, so that they can navigate the flow of foreign language literature, choose those articles, books that correspond to their interests.

It seems to us that the task of teaching various types of reading in a foreign language should be solved in unity with teaching types of reading in their native language and can become the subject of a separate research.

Great help can be provided by the apparatus for removing lexical and grammatical difficulties.

In existing books for reading, the word, regardless of its repetition, is emphasized in the text and is given with translation after the text once, when it is first encountered. But hardly a student remember this word for the first time and, having met through several pages, will recognize and remember the meaning. After all of sequences with the word could pass more than one week. Naturally, the student will refer to the dictionary.

Thus, the student cannot negative new words in terms of their repeatability. In this text or section and, accordingly, cannot determine which words should be memorized as they will often be found on subsequent reading.

In addition, in existing reading book, all new words are represented in the same way. In the text there are words whose meaning cannot be guessed and words, the meaning of which is determined by analogy with the words of the native language or through analyses word-forming elements.

The unfamiliar word (and derivatives from it), which is often found in a given text or section. We suggest adding it to the glossary, with translation and transcription before the text. A word that only means once. We also recommend putting it in the it the glossary.

Each word (and all its derivatives) of the first group should be analyzed from the point of view its repeatability in this text (in a thematic section). We consider it inappropriate to take into account the repetition of vocabulary in all books for reading, as students will select only separate sections for self-reading.

We do not recommend adding the words of the second group (the meaning of which is easy to add) to the list new words and comment. Words, the meaning of which will be defined with some difficulty, it is advisable to give with translation and transcription at the end of the text into the glossary.

When presenting a new vocabulary at the beginning and end of the text, it is necessary to include its repetition (by the number in brackets) within the text and the entire section. Students' will be able to play more attention most often occurring word.

When creating an apparatus that makes it easier to understand the content while reading independently into account the fact that not all words and sentences in the text carry an equal informative load, not understanding the meaning of several sentences, and this, however, does

not interfere with understanding the content as a whole, retrieving the necessary information. Sometimes the misinterpretation of just one word or one phrase can lead to the fact that further reading becomes meaningless, when self-reading there is no one correct these mistakes, it would be advisable to highlight in the text (possibly in italics) semantic terms containing basic information. When reading, students concentrate their attention.

This is especially helpful for medium and weak learner, for whom independent reading in foreign language presents difficulty.

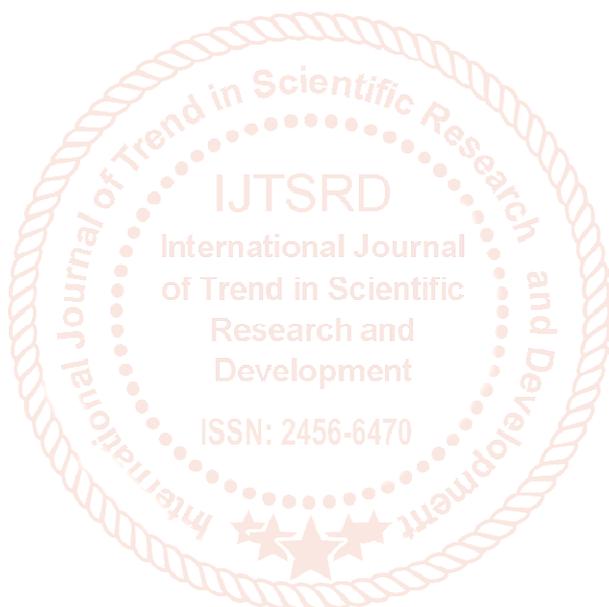
Conclusion

So, we looked at several aspects of independent work and we hope that such a system of texts, from which the student can choose the section of interest to him an

apparatus to facilitate understanding of reading will help to some extent solve the problem of reading independently in a foreign language.

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The Importance of Visual Aids in Learning and Teaching

Sharapova Gulshan Sharafovna, Mirxodjayeva Mahliyo Islomovna

Teacher of ESP for Humanitarian Subject, Foreign Languages Faculty,
Bukhara State University, Bukhara, Uzbekistan

ABSTRACT

This article attempts to study the importance of visual aids in learning and teaching. It introduces the methods and skills of visual learning and teaching to become students active visual communicators.

KEYWORDS: *visual, pictograms, hieroglyphs, ideograms, communication, observing, looking closely, analyzing images, visual learning*

INTRODUCTION

Visual aids are tools that help to make an issue or lesson clearer or easier to understand and know (pictures, models, charts, maps, videos, slides, real objects etc.). There are many visual aids available these days. We may classify these aids as follows, visual aids are which use sense of vision are called Visual aids. For example :- models, actual objects, charts, pictures, maps, flannel board, flash cards, bulletin board, chalkboard, slides, overhead projector etc. Out of these black board and chalk are the commonest ones. The challenges of classroom instruction increases when prescribed a course to the class while course books (textbooks) are constituted with too many interactive expertise activities. Most significantly, it has convert a common phenomenon to integrate textbooks with audio visual aids as additional or supplementary resource for classroom course learning activities. Visual aids are important in education system. Visual aids are those devices which are used in classrooms to encourage students learning process and make it easier and interesting. Visual aids are the best tool for making teaching effective and the best dissemination of knowledge.

The Benefits of Visual Learning and Teaching

Introducing a consistent visual component to the curriculum can:

- help students better engage with the materials
- increase retention by 29-42%
- develop higher-order thinking skills
- hone fundamental abilities that enable students to see and conceptualize visuals clearly
- enhance tactile hand-eye-mind connections that improve the ability to recall facts and retain learning
- serve the unique needs of learners who process information primarily through visuals, as well as increase learning for all students
- provide new opportunities to some students with learning differences and challenge students who are gifted or twice exceptional
- be an integral part of best-practice intervention methods with individuals on the autism spectrum

Defining Visual Terms

To fully understand visual learning and teaching, we need to discuss visual literacy, visual language, and visual communication.

Visual literacy has been defined many ways. The Visual Triad Model describes visual literacy as the ability to do three things:

Decode – to understand and translate communications made with visual imagery

Imagine – to create, interpret, and manipulate mental models of imagery

Encode – external images that we create

In addition, visual literacy includes the ability to be an informed critic of visual information, able to ethically judge accuracy, validity, and worth. For example, when visually literate students encounter graphs and charts in their text, they often have the ability to read and analyze the visual and verbal message, comprehend meaning, question irrelevant or misleading data, and create a visual/verbal response to it.

Visual language is a form of communication that isn't aural, written, or gestural. By excluding the spoken word and signed words, visual language relies on marks, forms, design, color, and shapes to convey messages. Pictograms, hieroglyphs, and ideograms are simple forms of visual language. Signs and symbols for trains, planes, buses, restrooms, restaurants, and more are readily understood visual communications that don't rely on language to comprehend. Basic depicting and doodling are simple forms of visual language; visual language in the classroom can expand to more advanced graphic forms, including: mind maps, one pagers, presentations, picture books, and more. Depicting refers to a broader range of ways to show or to illustrate that includes detailed sketches, illustrations, designs, diagrams, photography, digital content, videos, and more. Doodling and depicting will take center stage throughout this book as important tools on the path to visual literacy. Visual Learning and Teaching presents skills and activities to build upon students' innate abilities to doodle and depict.

Visual communication is something we take part in everyday, both actively and inactively. We actively rely on visual communication to perform day-to-day tasks (for example, driving to work, we follow directions on road signs). But sometimes, we are unaware of our participation in the visual conversation because we receive messages via visual communication constantly: images in advertising, photos in magazines, icons within emails, or colors in the background of product packaging. Visual Learning and Teaching introduces skills to help you and your students become active visual communicators.

It's important to note that visual literacy is not new. As infants, we take in a tremendous amount of information visually and quickly begin learning through the visual mode. For young children, visuals are an important part of how they interact with the rest of the world. Invite a child to share—"Please tell me about your picture"—and a whole story will unfold. In fact, until we become proficient at written and spoken language, most of us rely on depictions to communicate our ideas and wants.

Over time, however, our visual skills – observing, looking closely, analyzing images, imagining, doodling, and otherwise depicting – can sometimes diminish as our focus turns to other forms of communication (verbal and written). But, as noted, the demands of the new century and the rise of technology suggest we need to integrate opportunities to learn, teach, and interact visually within education contexts. This book will help educators re-energize and build upon these innate abilities in both themselves and their students.

Visual Learners and Visual Learning

When educators introduce any new technique of teaching and learning, the goal is to help students better understand the material in an assigned curriculum. Visual teaching and learning are unique methods in that they can simultaneously address the needs of an underserved learner population (those who excel at processing information visually) as well as potentially assist all students increase their learning.

Learners with Auditory-Sequential Strengths:

- Think mostly in words
- Have auditory strengths
- Are step-by-step learner
- Attend well to details
- Follow oral directions well
- Do well at arithmetic
- Learn phonics easily
- Can sound out spelling words
- Learn well from instructions
- Are comfortable with one right answer
- Tend to be academically oriented
- Can memorize math facts quickly
- Have good auditory short-term memory
- Are well organized

Learners with Visual-Spatial Strengths:

- Think mostly in pictures
- Have visual strengths
- Are a whole-part learner
- See the big picture
- Decode visual depictions well
- Prefer geometry
- Learn whole words easily
- Can spell well by visualizing
- Arrive at correct solutions intuitively

- Like problems with many possible answers
- Often, are creatively, technologically, or mechanically talented
- Can tackle higher level math successfully often before mastering basic facts
- Have good long-term visual memory
- Create unique methods of organization Needs to “see” materials

Conclusion

To conclude, using visuals aids as a teaching method stimulates thinking and improves learning environment in a classroom. Effective use of visual aids substitutes monotonous learning environments. Students develop and increase personal understanding of the areas of learning when they experience a successful and pleasant learning in the classroom. Students find visual aids sessions useful and relevant when it has some direct relation to the course content.

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Methods of Artistic Translation of Comparisons (On the Example of the Story of E. Hemingway "Old Man and the Sea")

Sayitova Komila Khasanboevna

Bukhara Engineering-Technological Institute, Bukhara, Uzbekistan

ABSTRACT

In this article, a comparison is shown as an expressive agent of artistic speech on the example of the story of E. Hemingway "Old Man and the Sea". In the process of research, all comparisons found were divided into different groups depending on the subject, structure, the degree of complexity. The author cites the differences in figurative and logical comparisons. Under the sample comparison is a comparison of two items, which has a common feature for them, in order to more brighter one of them, while a logical comparison is a comparison of two objects belonging to one class. Considered main ways to transfer formal comparisons. It is concluded that the translation of the comparisons found in the text is close to the original.

KEYWORDS: *figurative comparison; stylistic agent; object comparison; comparative design; thematic group; structural type*

Russian and foreign writers reserve a large creative heritage that attracts

Caution as literary critic and linguists. Researchers analyze the language funds of these writers, which is of great importance for disclosing expressive opportunities at a certain time. One of many ways to achieve expressiveness in artistic speech is a comparison, which still has no definition literature and literary design.

According to linguists, the translator should strive to maintain the image of the original translated, using expression as one of the most complex functions of the transformation theory from English into Russian. This causes the relevance of this study. One of the outstanding writers of the twentieth century is E. M. Hemingway, whose works are saturated with means of expressiveness. His story "Old man and the sea" [11], published in 1952, especially rich in the presence of various stylistic funds, among which comparisons are given a special role. From the text of the story of English and Russian variants, 70 comparative structures were found by the solid sample. The purpose of the study is to compare the artistic English text of the story with the same translation by E. Golysheva and B. Isakova [9] in order to identify ways to transfer comparative designs into Russian. To achieve the goal, the following tasks were delivered:

1. To study the theoretical aspects of the issue: determination of comparison, its types and structure (according to some researchers), differences in figurative and logical comparisons.
2. To identify all comparative revs (shaped and logical) from the original text.
3. Classify all comparisons found in the story, according to thematic groups.

4. Determine and characterize structural formulas and types of author comparisons in the story "Old Man and the Sea".
5. Analyze the ways to transfer comparisons into Russian performed by E. Golysheva and B. Isakov.
6. Track, whether the strength of stylistic expressiveness is not lost when translating comparisons from English into Russian.

Previously, attempts have already been made to analyze comparative designs in the texts of English-speaking artistic works, for example, described figurative comparisons in the texts of Romans S. Maem [8]. The typology of comparisons in the novel T. Dromezer "Sister Kerry" [4]. This study is designed to expand the ideas about comparing as a bright expressive agent in the artwork from the point of view of its structure, themes, types of comparisons, the degree of complexity and methods of translation. This information may be useful in teaching a foreign language, as it can be analyzed by comparative turns in other foreign language artistic texts.

In this work, we adhere to the point of view that the comparison is a way to create imagery and It is for the paths, being an important fine-expressive agent language. When compared, two phenomena, items, people and their features on the basis of the sign, the most expressing plan, the position, the author's globility, are compared. When comparing, two phenomena, objects, people and their features are compared according to the feature that most expresses the intention, position, the author's attitude. In English, comparison is used in the form of words such as: *such as (также как, такой же как), as if (как будто), like (как, похожий), seem (казаться)* and etc.

Comparison in meaning is close to a metaphor, but, unlike comparison, a metaphor does not characterize two different objects, but creates a single image. A metaphor is a hidden comparison that contains an unnamed comparison of an object with any other on the basis of a common characteristic. Comparative conjunctions are not used in the metaphor. Comparison can be expanded from a metaphor, and vice versa. In the story "The Old Man and the Sea", a comparative turn in the sentence "*He came like a pig to the trough*". / «Она подошла, словно свинья, к своему ко-рыту» can be transformed into a metaphor "*A pig came to the trough*". / «Свинья подошла к своему корыту».

According to Yu. Stepanov, "comparisons can be individual and generally accepted, stable. In any text, generally accepted comparisons are based on objective information, on the basis of which two specific objects, two persons, natural phenomena, etc. can be compared." [5,161]. Some of these comparisons are international, for example: "*brave as a lion (смелый, как лев), stubborn as a mule*".

(упрямый, как осел) and etc. Individual comparisons create a unique look to the item: *"I wandered lonely as a cloud". / «Я одиноко брёл словно облако».*

A.I. Efimov distinguishes in the structure of comparison "the subject of comparison (what is being compared), the object of comparison (what is being compared with), the basis of comparison" [1,224]. N.D. Arutyunova operates with other names: "...the object is what is compared, the image is what the attribute is compared with, on the basis of which the comparison of the first two is made" [7, 204]. There are figurative (simile) and logical (comparison) comparisons. In a logical comparison, all properties of two objects are taken into account, but one is highlighted and compared. For figurative comparisons, an element of fiction, fantasy is characteristic. It is well known that the basis of any stylistic effect lies in unpredictability, because the recipient of information in reality acquires something completely different from what he initially tuned in [3]. To successfully implement a logical (non-descriptive) comparison it is necessary to compare homogeneous concepts that reflect "homogeneous objects and phenomena of objective reality" [2,568]. And in figurative comparative units, concepts that are far from each other are most often compared. However, it is not always possible to distinguish a figurative comparison from an ordinary logical comparison. In the expression *"Oh, John could do this forty times better than I". / «Джон смог это сделать в 40 раз лучше, чем я»* an exaggeration is evident, which makes the comparison figurative, despite the fact that John and the speaker belong to a class of people.

Since the object of the study is E. Hemingway's story "The Old Man and the Sea", now it is necessary to dwell on it in detail. In the center of the plot is the old fisherman Santiago, who, after 84 days of an unsuccessful catch, does not lose heart, believing that on the 85th day he will be lucky and he will catch a big fish. You just need to move away from the coast. And he was right: in the end he caught a big fish - marlin. Several days of fighting with fish and sharks exhausted the old man. Unfortunately, from Santiago's biggest catch, only the head and sword of a marlin were left. To achieve the goal, all comparisons by the author were classified into thematic groups, structural types, and also highlighted comparisons according to the degree of complexity. The following thematic groups of comparisons related to the image of the main character - the old fisherman Santiago:

1. Sea (48): *"His sword was as long as a baseball bat and tapered like a rapier". / «Вместо носа у нее был меч, длинный, как бейсбольная клюшка, и острый на конце, как рапира».*
2. Appearance (3): *"...they were the same color as the sea". / «...глаза были цветом похожи на море».*
3. Character (15): *"Keep your head clear and know how to suffer like a man". / «Приведи свои мысли в порядок и постарайся переносить страдания, как человек».*
4. Nature (4): *"The clouds over the land now rose like mountains...". / «Облака над землей возвышались теперь, как горная гряда ...».*

The structures of the author's comparisons in the story "The Old Man and the Sea" are very diverse. Knowledge structural type of comparisons, as the study shows, greatly facilitates the process of their translation. Several formulas

of figurative comparisons characteristic of the English language, proposed by M.D. Kuznets, who divides comparisons by parts of speech that are used in their structure [6]:

1) (as) + adj. / нар. + a s + noun.: *"They were not the ordinary pyramid-shaped teeth of most sharks. They were nearly as long as the fingers of the old man...". / «Они были не похожи на обычные пирамидальные зубы большинства акул. Длинною они не уступали пальцам старика...».* The word "long" is already given in a figurative comparison. It is attached to another component of the construction - the comparison object (the fingers) using the union as. The semantic analysis of this phrase suggests that the teeth of the shark, with which the fearless old man had to fight once again, were huge, the same length as his fingers;

2) linking verb + like + (adj.) + noun : *"His shirt had been patched so many times that it was like the sail". A figurative comparison means that the main character was poor, as can be judged by his clothes: его латаная-перелатаная рубашка сопоставляется с парусом, который тоже был весь в заплатках из мешковины;*

3) verb + like + (adj.) + noun: Sentences containing a figurative comparison of this type characterize the action expressed by the verb. The person who performs the action becomes the subject of comparison, and what the hero is compared with becomes an object: *"They played like young cats ...".* In this example, we are talking about Santiago's dreams of distant lands, in which lion cubs, coming out to the seashore and frolicking in the gloomy haze, are compared to kittens. He dreamed of neither women, nor great events, nor fights, nor big fish, namely lion cubs, perhaps because their image gave the old man pleasure and at the same time caused him nostalgia for a long-gone youth;

4) in negative form: *"He is not a scavenger nor just a moving appetite as some sharks are. He is beautiful and noble and knows nor fear of anything".* This comparison shows that the dentuso shark differs from other sharks in that it does not just devour carrion and not just an insatiable womb like them, but it is a beautiful and noble animal that does not know what fear is. Santiago, of course, is sorry that he had to kill her, but he defended his life, because everyone is killing someone or something in one way or another;

5) with a comparative adjective: *"He... watched the lines that went straight down into the dark of the water. He kept them straighter than anyone did ...". / «Он... смотрел в глубь моря, куда уходили его лески. У него они всегда уходили в воду прямее, чем у других рыбаков...».* Obviously, in this way the author wanted to emphasize the ability of the fisherman Santiago to do everything in the right way, especially if the case related to fishing;

6) by means of allied adverbs as though, as if, introducing a relative comparison. The type of comparison with such a structure usually represents a construction in which not individual objects are compared, but the situations or states of the characters: *"When the fish had been hit it was as though he himself were hit".* We see that in this example, after the union adverb as though (as if, as if), the subjunctive mood is used, as indicated by the form were hit. In this example, the anxiety state of the old man is

clearly traced at the moment when the shark rushed to the fish. It seemed to him that she rushed at him. Each time the old man entered into a fight with sharks, protecting his rather tortured prey - a huge marlin, trying to take it to the shore.

In the text of the story, basically all comparisons are figurative, but examples of some logical comparisons were also recorded: *"Maybe he was as poor as we are and would understand"*. In this sentence, the old man argues that perhaps he and Father DiMaggio belonged to the same class - the poor. This comparison is used to logically compare two objects and does not carry any figurative characteristics: the old man Santiago and father DiMaggio are united by one property - poverty. According to grammatical and lexical-semantic features, all comparative constructions in the story are divided into two groups: simple and complex. The following example can be referred to as simple ones: "... as a bubble...". A complex comparison is a whole sentence: *"...as something that gave or withheld great favours"*.

The words that are the object (associate) of comparison in the text of this work refer mainly to the noun: *"to suffer like a man"*, *"tapered like a rapier"*, *"as old as erosions"*, less often - to the personal pronoun: *"Never have I seen a greater... thing than you, brother"*. When working on the comparison of English comparisons of their translation by E. Golysheva and B. Izakov, the following translation methods were identified:

1. Syntactic assimilation (literal translation): *"... like a male and he pulls like a male..."*. / *«...как самец и он тянет как самец...»*.
2. Grammatical substitution, a common occurrence of which is part of speech substitution: *"... As it keeps me alive"*. The adjective alive has been replaced by the Russian verb *"умереть"* in translation. Literally the comparison would be framed like this: *"она (рыбная ловля)... держит меня живым"*. But the translators felt that literal translation would complicate the reader's perception, and therefore chose a grammatical substitution method. But the translators felt that literal translation would complicate the reader's perception, and therefore chose a grammatical substitution method.
3. Adding is a process that requires the dissemination of some contracted language from the point of view of the TL (target language) in the original language turnover: *"... like the backing of mirrors"*. / *"...которой покрывают оборотную сторону зеркала"*.
4. Omission is the removal of certain elements of the source text due to their redundancy from the point of the TL: *"... as long as the one room of the shack"* / *«...такой же длины, как хижина»*.
5. Reception of semantic development: *"... it looked like the flag of permanent defeat"*. / *«...он (нарус) напоминал знамя наголову разбитого полка»*.
6. Permutation is a change in the arrangement (order) of linguistic elements in the translation text in comparison with the original text: *"They were nearly as long as the fingers of the old man"*. / *"Длиною они не уступали пальцам старика"*.

7. Dividing a sentence - consists in transforming a simple or complex sentence of the source language into two or more independent sentences in the target language: *"... only the tops of the blue hills that showed white as though they were snow-capped and the clouds that looked like high snow mountains above them"*. / *"...вдали вырисовывались лишь вершушки голубых холмов, которые отсюда казались белыми, словно были одеты снегом. Облака над ними тоже были похожи на высокие снежные горы"*.
8. Preservation of the comparison in the Russian translation, despite its absence in the original text. For example, in the English sentence *"The old man ... lifted the burnished gold fish with its purple spots over the stem"*. / *«Старик... втащил в лодку жаркую, как золото, рыбу с фиолетовыми разводами»*, there is no comparison, while in the Russian translation it appears: *"золотая рыба"(gold fish) turns into "рыбу, как золото"*.
9. Lack of comparative conjunctions in Russian translation. For example, the sentence *"Each line, as thick around as a big pencil"* should sound like this: *«Каждая леса такая же толстая, как большой карандаш»*, but the translators changed the structure of the sentence, omitting the conjunctions when translating *«такой же, как»* (as... as): *«Каждая леса толщиной с большой карандаш»*.

The study led to the conclusion that basically everything, with the exception of a few examples, is comparable in the story are figurative, while retaining the power of their stylistic expressiveness. The most common structures of figurative comparisons in the story "The Old Man and the Sea" are the structures: verb + like + (adj.) + Noun. and (as) + adj. / bed. + as + n. Comparisons are mostly nouns. The most popular thematic group of comparisons is the "Sea" group, which includes figurative and some logical comparisons concerning the catch of fish, the thoughts of the old man while fishing and the attitude to reality. Throughout the story, the images of the sea, sky and wind undergo changes, their emotional background changes. These images show that time goes by for a very long time. If at the beginning of the story the time "is not constrained by narrow frames, presenting the life of Cuban fishermen and the old man's past, then at the moment of a fight with a fish it narrows to a gorge of clouds" [10, 29].

Consideration of comparisons within the framework of the above classifications reveals the essence of the stylistic device of comparison in the story "The Old Man and the Sea", being also an effective stylistic means of characterizing the main character - the fisherman Santiago, assessing his behavior, role and emotional state. Among the common methods of translation, syntactic assimilation was recorded, grammatical substitution and semantic development. A feature of the translation of figurative comparisons in the story is its closeness to the original text. In a number of cases, comparisons are not transmitted directly, but for the convenience of perception by the reader are presented by more understandable language means. In some cases translators prefer to omit comparative conjunctions or to introduce comparisons in the absence of a comparative phrase in the English text. When translating figurative comparisons, the possibilities

of the Russian language turn out to be richer than that of the English language.

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Changes in the Anthropometric Parameters of Right-Handers and Left-Handers in Children of the I-II Period of Childhood

Rustamova Nigina Bakhshilloevna

Assistant at the Department of Anatomy Bukhara State Medical Institute, Bukhara, Uzbekistan

ABSTRACT

The problem of squirrels still remains a mystery. We know that most chaplains are great talents, but among them there are also those with low intellectual potential. Our views are reflected in the following sources.

KEYWORDS: *genetics, stratified approach, inter hemispheric asymmetry*

At all times of the development of mankind, left-handed people aroused special interest and some wary attitude of others, aroused surprise and curiosity. Genetically and historically, this determines the attitude towards left-handedness (and left-handedness is most often perceived as left-handedness) not as an individual variant of the norm, but as an anomaly, a developmental disorder [2].

Today, the problem in pedagogy and physical education that does not have an unambiguous approach is the left-handedness of children. Some researchers consider left-handedness as a deviation, considering that all left-handed people have impairments, thereby developing methods of retraining children from left hand to right, others, on the contrary, regard this phenomenon as a genius and see this as an advantage. An unambiguous approach has not been developed.

In our opinion, this problem requires an unambiguous solution, since various options for teaching and retraining left-handers can negatively affect both their physical and psychological development. The question of a differentiated approach to teaching (taking into account by the teacher the individual characteristics of a student or a group of students in the learning process) - the basis of modern pedagogy [1], arises sharply.

According to O.V. Andreeva (2006), a negative attitude towards left-handedness has a long and long history, and the events, actions and relationships associated with the right and the left in different cultures, separated by both space and time, are very similar. As a rule, in different cultures, positive qualities were correlated with the right, negative - with the left. Perhaps this is one of the manifestations of the attitude towards the right - the left as opposites in different cultures.

Many researchers emphasize that among left-handed children there are children with high rates of motor actions testing, but there are also very awkward and uncoordinated ones, with certain difficulties in motor actions fulfillment and the formation of abilities and skills [7, 10]. This, apparently, is associated with congenital left-handedness. Left-handedness is not only the predominant use of the left hand when performing motor actions, but also a certain reflection of interhemispheric asymmetry, as well as the distribution of various functions (motor, visual,

sensory, etc.) between the right and left hemispheres of the brain that differs from right-handed ones [1.9].

We come across such views on left-handedness and with such an attitude very often. Probably, the decisive factor is ignorance, misunderstanding of the biological mechanisms of left-handedness, and most importantly, rejection of the diversity of individual differences in children, the diversity of their abilities, inclinations, differences in reactions under the action of the same factors, the inability and unwillingness to accept these individual characteristics as a given, which is not needed and you cannot alter, change at will [2].

The number of left-handed people in the world has a positive trend: if in 1928 3.3% of left-handed women and 4.7% of left-handed men were identified, in 1973 - 8.8% of left-handed women and 10.4% of left-handed men, then in 1978 - 1988 the number of left-handed women reached 12.4%, and left-handed men 13.9%. An increase in the number of left-handed children is also observed in schools of the city of Ishim in 1998, 5.2% of left-handed children enrolled, in 1999 - 6.1%, in 2000 - 5.5%, in 2001 - 7.5% , in 2002 - 7.9%, in 2003 - 8.3%, in 2004 - 8.6% [12].

There is evidence of a large percentage of left-handed people among mentally retarded children, among children with learning difficulties in writing and reading, but in many cases left-handedness itself is a consequence of pathology in brain development, as well as mental retardation and learning difficulties, and not at all the cause of these disorders ...

Goodman, Joshua found that evidence that left-handers were overrepresented at the high end of the cognitive spectrum was weak due to methodological and sampling problems in the studies conducted. Goodman also found that left-handers were overrepresented at the lower end of the cognitive spectrum, with mentally retarded people being twice as likely to be left-handed as the general population, and generally lower cognitive and non-cognitive abilities among left-handers. Moreover, Ntolka and Papadatou-Pastou found in a systematic review and meta-analysis that right-handers have higher IQ scores, but this difference is not significant (about 1.5 points). [21]

According to O.V. Andreeva (2006), left-handedness and reduced intellectual abilities may have one reason - developmental pathology, and a healthy left-handed person may have brilliant abilities. And there is also a lot of such data.

The left hemisphere controls the movements of the right side of the body. Here are the most important centers for speech, language, mathematical ability and logical thinking. It is the left hemisphere that dominates in right-handers, giving the right hand more precision and

dexterity of movement. The right hemisphere is responsible for the left side and is the focus of visual perception, musical aptitude, and abstract thinking. So, with regard to the educational process, it is necessary to take into account that the right hemisphere is responsible for the sensory perception of the world and provides imaginative thinking, while the left hemisphere is responsible for logic, speech and abstract thinking [1,8].

Due to the specifics of the functions performed by the leading left-handed children by the right hemisphere of the brain, scientists note that they often have disorders or deficiencies in the development of visual-spatial perception, visual memory and visual-motor coordination, which results in difficulties in distinguishing, memorizing and writing complex configurations of letters of numbers, drawing of geometric figures, as well as mirror writing, pronounced handwriting disorders, tremors, etc. [16].

The level of development of fine motor skills in left-handed children with developmental pathology and in left-handed children with forced left-handedness turns out to be insufficient for mastering writing [3,12].

Left-handedness is a reflection of the hereditary and mature system of brain functioning. That is why retraining a left-handed person means seriously changing his biology, which means risking his physical and psycho-emotional health.

Left-handedness has generally been associated with an increase in the incidence of various serious terminal and mental illness, as well as earlier death.

Weight loss at birth and complications at birth are positively correlated with left-sidedness. [19]

The special organization of the nervous system, the distribution of labor between the cerebral hemispheres constitute a whole complex of human psychological qualities. It is he who distinguishes left-handers from right-handers. The difference is not only in what hands these children write, eat, work with, but also in the peculiarities of visual perception of information. It has been established that the visual system of perception is especially characteristic of left-handed children [10, 20].

In younger schoolchildren, the most common manifestation of such a deviation in health is asthenic neurosis. It is accompanied by decreased performance and activity, increased fatigue, rapid exhaustion. The peak of activity is observed only in the first two lessons, then in children there is a decrease in perseverance and motor disinhibition. After classes, children feel tired, lethargic, lose interest in receiving new information [1,5].

Due to the contradictory nature of left-handed people in their psycho-emotional sphere (the need for communication - shyness, the desire for leadership - comfort, the need for high appreciation, praise - low self-regulation of behavior, etc.), many of them experience difficulties in communication and mutual relations. with classmates [12].

Homework for left-handed junior schoolchildren is most often delayed, accompanied by repeated unsuccessful actions, shouting, crying, distraction, outbursts of discontent, hysteria, refusal to work, which ultimately lead to an unsatisfactory result [9,10].

All this creates the basis for the development of fears of failure, censure of adults and teachers. Moreover, the desire to overcome these fears of left-handers does not develop in themselves, regarding this as the norm. It is believed that this condition is short-lived and should pass by itself by the end of the first year of schooling, and here it is important, first of all, for parents and the teacher to control so that the child does not undergo new emotional stress. In the opposite development of events, "new" fears appear: fear of the dark, fear of being alone in a room, and even fear of death [1,20].

Yet concern for the health and development of left-handed children is not without foundation. Among left-handed people, there is a significant proportion of children born as a result of pregnancy and childbirth, proceeding with various complications, a high proportion of children with disorders in the development of the central nervous system, with a predisposition to neuroses, and decreased body resistance. Some researchers believe that a left-handed child may be characterized by asynchronous development of some mental functions, high emotionality, some lag in the development of psychomotor functions and spatial perception [2].

Refusal of retraining, true attention and respect for left-handed children will reduce the negative impact of dextrastress on health and personality formation, and reduce the risk of physical and mental health disorders. The fact that left-handers are more susceptible to certain diseases is true. But the propensity to get sick and the disease are different things, and therefore it is often possible to prevent illness, knowing the peculiarities of the mental makeup of left-handers [3].

The idea that in the process of physical education and sports training it is unacceptable to retrain children with congenital left-handedness to the right side is more and more weighty. By forcing a left-hander to work in a lesson or training with his right hand, we are trying to change not only the nature of the preference for the working side of the body and the leading hand, but also at the same time alter his innate preferences, his biological nature. Along with this, a negative influence is also reflected in the retraining of "left-footed" children, which leads to impaired motor functions, to a change in the process of physical growth and development. This leads to the conclusion that imposed uncharacteristic (forced or retrained) motor asymmetry, regardless of the part of the human body, has a negative effect [1].

Although physiologists have explained the phenomenon of left-handedness, there is still no sufficiently fully developed methodology for teaching left-handed first-graders to write skills, the methodology for the formation of general working skills and communication skills has not been sufficiently developed. The lack of targeted pedagogical assistance in overcoming the difficulties that arise when left-handed people enter a new collective against the background of their conflicting emotional and psychological characteristics provokes outsiderism in them [12].

Lefties are united by increased irritability, fatigue, and emotional vulnerability. Of course, a vulnerable person is more sensitive to any offense, and sometimes something that would leave another completely indifferent can offend him for a long time, and the offense, in turn, provokes a

stressful situation. But this is redeemed by a more subtle perception of the world, the ability to see in it that which is inaccessible to others [2].

The analysis of the available literature showed that the anthropometric parameters of this or that area of the body parts were not studied before the end, separately and in the complex of children - "left-handed". There is also no data on the morphometric parameters of the body parts of left-handed children in terms of age and taking into account sexual demorphism. All this requires a deep study of this problem and analysis of the data obtained in the future.

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Interactive Ways of Teaching Language Skills

Xaydarova Nigina Ganiyevna

Teacher of ESP for Humanitarian Subjects, Foreign Language Faculty,
Bukhara State University, Bukhara, Uzbekistan

ABSTRACT

This work is aimed at developing all the skills of students in teaching foreign languages through interactive methods. Thus, the research topic is called "Interactive Methods of Teaching Language Skills". The study discusses the importance of perfectly organizing all skills in foreign language teaching. Modern methods and interactive methods will be carefully studied and applied. It is also important to increase the effectiveness of foreign language learning using modern methods, away from traditional teaching methods, and to use it as an effective teaching tool in the formation of language learning skills. The aim of the research is to provide foreign language teachers with a brief overview of the interactive methods used at different stages of language skills development, especially the various tools aimed at developing students' cognitive skills.

KEYWORDS: *Interactive Methods, Language Skills, effectiveness, methodological approach, innovative methods, techniques, performance, cognitive skills*

The teaching process is mainly based on two activities. They are imparting and receiving knowledge. In the first case, the teacher sends the information and the students receive it. Innovative methods are also involved in this process, and their goal is to evaluate the performance of teachers and students using new teaching methods and techniques, including the use of new teaching aids. It is known that the methodological approach to teaching foreign languages can be divided into three groups. They are passive methods, active methods as well as interactive methods. If we are talking here primarily about passive methods, it should be noted that in passive methods, the teacher is at the center of learning. He plays an active role, but the students are passive. Control can be done through questions, individual and control work, tests, etc., which can be useful if used by an experienced teacher.

Secondly, students are also active in Active Methods. Their role and activity in the process of interaction are equal. Students can ask questions; express their opinions with the teacher. Last but not least, it is the first interactive method or modernized form of approach active methods. Most teachers usually understand or envision cooperative action throughout the lesson. But here the focus should also be on internal actions. Learners need to have an internal motivation that motivates them to take an active part in active work or class. In an interactive way, the teacher's role is to focus students' activities on the lesson goal, which includes interactive exercises and tasks. Below are some types of interactive methods: Mental Attack. This is a technique for creating new ideas on a topic.

These methods encourage students to be creative in problem solving and express their ideas freely. Typically,

different options for solving the problem are listed here. In a mental attack, the quantity of words is important, but the quality is not. The teacher should listen to all the words and not criticize them. Instead, it inspires students to give as many options as possible to solve the problem. The lack of criticism creates a favorable environment for students to express their opinions freely, and this certainly encourages them. At the end of the brainstorming, all the expressed words are written down and then analyzed. This type of interactive method requires you to study the study material on the topic before starting the discussion. Once students have learned the lexico-grammatical material on the topic, they can begin the discussion. This method helps students to express their ideas consistently and logically with the rationale for their ideas. Here, students work in small groups, which improve their performance, as each member of the group can express their ideas and participate in the discussion.

Forms of group work are as follows:

- A. the topic is selected (selected);
- B. students must have studied the chosen problem;
- C. groups are formed;
- D. the teacher gives instructions and announces the time;
- E. monitors the activity of students and, if necessary, helps and encourages them;
- F. At the end of the discussion, one representative from each group will make a presentation.

Cluster

The next innovative method is a cluster. Today, this is one of the most widely used methods in teaching foreign languages. It can be used at all stages of teaching English to young and older students. When presenting new words, the teacher writes a new word on the board. And then the students say the words that can be used in conjunction with that word. For example: The teacher then gives the task of making phrases with the word "book": my book, my good book, my interesting book, my favorite book, and so on. This method engages all students in active forms of work and motivation. It can be used to improve monologue speech habits and skills.

Role play

Role-playing is also one of the types of activities used in teaching innovative techniques. They were made to increase the effectiveness of teaching. Role-playing games engage students in active activities that have a positive impact on their internal activities. This creates a favorable environment for cooperative work. Such an atmosphere creates their motivation, personal potential for inner activity, and helps to shape practical skills and habits. Skills such as creativity, coping with difficult situations, ingenuity, self-management are formed and improved in role-playing. Role-playing has not only educational but also social purposes, as some life situations are created for

teaching here. The teacher should follow these guidelines when using the role-playing method in foreign language teaching:

- Creating a friendly atmosphere among the students participating in the play;
- Students should feel free and this will help them to perform their roles perfectly;
- creation of favorable conditions and use of positive aspects in the learning process;
- Taking into account the personal characteristics of students.

Multimedia learning

This is another innovative method. It is a combination of different media as text, audio and video materials, through which the teacher provides information to the students. In the process of problem-based learning as a teacher of information technology and an innovative teaching strategy, the teacher encourages students to active knowledge through real-life problems. Advantages of using multimedia education: has a positive effect on the formation of speech habits and skills. An effective conclusion revises the important elements of the lesson and links them to the goal. Reviewing and concluding ideas reinforces students' knowledge and improves retention of what has been learned. New ideas should not be included in the conclusion, as they may confuse readers at this time.

Traditional lesson planning finds more topics that students find useful. This means that students need to learn the grammar and vocabulary that teachers need to know, a lesson around activities that all students feel comfortable with and can relate to. It is important to make plans, skills and competencies. Thus, planning and design is not about what it teaches, but why it is taught, this approach uses individual skills and competencies to teach students materials that should meet their goals and objectives, separates, room, or perhaps more advanced tasks such as analyzing the film or discussing their views on country politics. The language taught in this approach revolves around the task itself, not the other way around. For this method to work, teachers need to understand their students' needs and expectations in order to design lessons that will help their students succeed. Grammar, vocabulary, and language skills are just tools that allow students to achieve end results.

Project-based approach

Like the task-based approach, the project-based approach is designed to meet the real needs of students by adapting the language to the skills and competencies they really need, both personally and professionally. This approach begins with setting an important goal for the individual or group of students. For example, if you are teaching a business English lesson, you need to consider why students in the classroom should start the lesson and plan accordingly. They had to prepare monthly accurate reports in English for several departments in their offices. Thus, we divided a single sample report into parts and analyzed each segment. Each student prepared the units as if they were real. In addition to filling in all the vocabulary and grammar needed to complete each section of the lesson, I discussed the challenges my students faced. Their final draft was a completed report that they could submit to the employer for approval, and the criteria for creating our report were based on their company manual. It was a lot of

work, but we enjoyed it. This project can range from an oral presentation to a wide range of products such as classroom games. In any case, the project should consist of individual tasks that lead to goals in student assessment.

Lexical Syllabus

While the previous two approaches focused on the skills and competencies that students need to develop, this approach focuses on what language students should actually create. In particular, real words that students need to understand in order to complete specific tasks.

This approach is based on the language that students need to have for their needs. Professional students need very specific dictionaries for their fields. For example, "benefit" is an important term for business students, just as "scalpel" is the same for medical students. In addition, any other language taught outside of this target language should be effective and aimed at ensuring students' communication in their field.

Topics such as movies and hobbies, workplaces can take second place in issues such as booking a hotel or describing a work experience. However, there are common skills in all areas, such as saying your name or providing your personal information. Because this approach focuses on content, assignments and homework should be student-centered. So, the assessment should be based on what the students actually achieved. Examples of these assessments include taking the time to write an application for a job or an interview.

This approach requires teachers to understand what students really need, focus on it, and then broaden students' worldviews as their communication skills develop. The good news is that there is very little research on this topic. Activities can range from customizing images and descriptions to working with dialogues. Describing their favorite seasons or even guessing what they can do in summer or winter can be a progressive twist.

Using Smartphones in the Classroom

Since almost everyone has an Internet connection or a data plan, banning smartphones can become a missed opportunity to further improve the learning experience. Smartphones can provide important tools such as dictionary, translator, and grammar apps. Just like computers, students need to understand that phones are used as a learning tool, not for play or personal use.

A good example of how smartphones improve learning in the classroom is a hunter-gatherer exercise. Here, students have to go through websites to find the information they need to fill out a worksheet. Students can also use their devices to access free, online exercises that reinforce the language and / or skills seen in the lesson.

The main problem here is to be creative when using smartphones. Students can record themselves in practice, which helps them get feedback on specific tasks and activities. This allows you to create surveys that students can easily answer using their phones. It can be used as an evaluation tool or as part of an activity portfolio. For example, students could even develop questionnaire questions, complete them, analyze the results, and then create a presentation of those results. Personally, I think one of the other ways to fit smartphones and tablets is without paper.

Bringing it All Together While traditional approaches provide the basis for effective language teaching, it is important to understand that these methods do not always meet the needs of students. In fact, the communicative approach is still widely promoted as the latest and greatest approach, which already needs to change on its own. Next time you are preparing for a new group of students or want to change the way you teach current students, consider the following:

- A task-based approach focuses on the skills and competencies that students actually need.
- The project-based approach is based on a task-based approach using specialized interventions.
- The lexical program provides students with the content they need right outside the door.

Combine this with the effective use of technology in the classroom and you will have a winning formula that no teacher will ignore.

“Classroom,” the word reminds us, in which a teacher reads a lecture in front of a class of 30-40 students with a specific level of gravity in their voice. This is a common teaching method when we were in school twenty years ago. However, things have changed over the years and while this is one of the most effective ways to teach English to young students, it is no longer considered the same. This is probably due to various reasons:

- The current generation gets acquainted with the world through social networks
- Their knowledge base is filled with information available on the Internet
- Today, students are more impatient and teaching methods need to be adapted to their dynamic thinking process in order to attract their attention.

Language teaching, like other topics, has undergone many changes. He switched from the usual methods to role-playing games, interactive games, short visuals, and so on, for example, tutor lectures with a board only to support repetition and grammar tables and spelling.

In general, everything you teach should be appropriate to the student environment, as students are the focal point of the teaching and learning process.

Planning and designing English teaching lessons

According to V.B Yeats, “Education is not about filling a bucket, but about lighting a fire,” 21st century educators have created unique ways to make learning more fun and easier to understand. There are difficulties in language teaching. Often, this is a foreign language that the student cannot choose from around them, and you need to teach it patiently and systematically so that students can read, write, and speak the language with confidence and without difficulty.

English is a world language, and English teachers have changed their teaching methods over the years to suit the current scenario. In this article, I will discuss some of the most popular and effective ways to teach English that meet the needs of modern students. This method of teaching English is a classical method that has been used since the 16th century.

This approach is often fabricated to teach Latin that people do not learn and do not speak. The method of teaching English is aimed at translating Latin texts into the mother tongue in accordance with the grammatical rules and

phrases of the Latin language and then mastering it. Rote learning is the most widely used method in vocabulary learning.

Later, this method was used to study other languages that were considered second languages. So this also applies to English. This approach is devoid of the fact that it is not a very good way to teach proper communication in English. Although this modern method has been widely criticized in modern times, it is still used by many institutions, especially by those who want to study English scientifically.

Natural Method –

This method, also known as the direct method of teaching English, seems to be a response to the Grammatical Translation Technique. In this process, the teacher, who aims to teach English as a second language, asks the student to meditate in English so that they can communicate in English.

The technique aims to establish a connection between thought and expression. He asked the teacher to strictly forbid the student from using his mother tongue. The learner must express himself in correct English, using the right accent and grammatical skills.

This method of teaching English is used in modern times and is useful in teaching communication in English. As the student thinks and speaks in English in real-life situations, they learn the language clearly and there is no reading or translation here. This may take some time, but what is learned will have a long-lasting effect on our memory.

Audio Lingual –

This method of teaching English was originally called the “army method” because it emerged during World War II when soldiers needed to learn the language of their opponents. It’s kind of a straightforward style in some ways. This approach is based on thinking in language and expressing ideas in the same way. And in the process, learning happens.

The teaching process is based on Skinner’s theory of behaviorism and his experimental experience in operational conditioning. Accordingly, positive reinforcement helps in learning new things. In this approach, the student should learn the structure and everyday use of language rather than emphasizing word comprehension. Patterns of simple discussions are taught and students repeat it, followed by a test. This process is done until the student answers correctly.

In summary, the process of the audio-linguistic method is characterized by conventional drilling, which is used in everyday communication and ignores grammatical rules, the words taught are contextual, and audiovisual aids are used in the technique. It focuses on pronunciation, and finally, any correct answer is immediately positively amplified. The method of teaching English is still in use today and is suitable for learning to communicate properly in English or any other second language. Nevertheless, extensive re-learning and memorization led to a lack of regular learning of English, which created a barrier to different communication.

Humanistic Approach –

During the 1970s, the course of teaching and learning changed radically, in which the innate potential and skills

acquired by the student became the focal point of the educational process. Based on this idea, several teaching methods have been developed and combined under the name of humanistic approach.

Here are some ways to teach English based on a humanistic approach:

Suggestopedia-

This method of teaching English is based on the fact that the mind has great potential and memorizes information on suggestions. This method uses certain principles of memory to teach English as a second language. Students are introduced to new information in their original language (English in our case) and it is read aloud with classical music in the background. This session is known as concert reading.

The idea of propidopedia is to provide the mind with a conducive environment for learning and storing this information. This method is useful if the student is shy or scared. Proponents of this approach include Georgi Lozanov, who has become an accelerated learning movement.

Silent Way-

This method of teaching English, also known as the natural approach, is based on the idea that human beings learn how to speak their mother tongue. Caleb Gattegno invented this method of teaching the language. According to him, the teacher should be as silent as possible, but students should be encouraged to speak the language. The silent method uses elements such as colored tables and colored kitchen sticks and more. Some principles based on this method are:

Learning occurs when a student learns to discover new things about a foreign language and has a creative approach instead of repeating what has been taught.

Education is stimulated by the physical things around it.

It is based on solving problems

This method of teaching English is very suitable for beginners or English learners.

Total Physical Response-

This method involves playing the language rather than speaking. This can be by imitating or just responding to audiovisual signals. Games like "Simon says ..." or charades are classic examples of this teaching style. This method is an interesting way to learn a language and is therefore very useful.

Comprehensive Content and Language Learning (CLIL)

This method applies to schools where most of the important subjects are taught in English. This is common in modern classrooms. The focus is on content and the lessons are structured according to the student's needs and desires.

CLIL is effective in teaching students to use English as a means of cultural expression in life.

Teaching communicative languages -

This broad term is an accepted standard of English language teaching in modern times. It ignores grammatical fluency. Instead, he emphasizes conveying the meaning of the message; in other words, it focuses on how well a person (not a native speaker) can speak English.

Different features of this method:

The interaction in English results is a correct understanding of the language.

Students will be taught English comprehension strategies.

Student experiences focus on organizing the content of lessons.

Real text in English is used for teaching

Principle eclecticism: This refers to the diversity of teaching depending on the ability of the learner. Different methods are combined according to the student's request.

Each unique method has its strengths and weaknesses. It may therefore not be appropriate for a particular learner, so the teacher uses a combination of techniques to make the language comprehensible in this approach.

Interactive technologies can be characterized by the exchange and exchange of views on and against a controversial issue. Any discussion-based lesson will be effective if the participants have a basic knowledge of the subject and the teacher has planned the main steps and key points in advance. In the planning phase, the teacher selects and shapes the problem, planning ways to stimulate and control the activities of the participants. He should prepare the necessary equipment to record the students' ideas. When the discussion begins, the teacher acts as a facilitator. It is very important to be able to take different views on a particular problem, have your own opinion, draw conclusions and evaluate achievements. You can use a variety of ways to introduce the topic to the audience: describe the problematic situation, ask problematic questions, show a video, play a role in the situation, provide a few ideas on the issue.

At the end of the discussion, it should include a variety of views that will change the decision. One of the most effective types of discussions is the "roundtable" style. 10-15 students sit around a table and discuss a specific problem. The host has a leadership role; it could be a student or a teacher. The purpose of the activity is not to find a final solution, but to discuss the problem, gather as much information as possible, understand the importance of solving the problem, find ways to achieve the goals. When students sit in a roundtable discussion, they make eye contact with all members of the discussion, everyone feels the same and important. It stimulates conversation, increases the number of words, and encourages the use of nonverbal communication tools (imitation, gestures). The "round table" technique can be combined with role-playing or business games. A project method is a set of research, data processing, and other activities conducted by students independently or in small groups to solve important problems in a practical or theoretical way. Project-based teaching involves a different philosophy on the principle of building the learning process through targeted activities in accordance with the personal interests and goals of students. As can be seen, the project approach opens up opportunities for students to express themselves, define their skills, and define future careers. In other words, the student has the opportunity to test himself in different areas, to reveal something sincere and interesting, and to focus on his own desires, strengths, and abilities. And, most importantly, all his activities are aimed at shaping his thinking based on his personal experience. He shares responsibility for his own development for the

level of readiness for future self-employment. The project method always finds a solution to some problem. The solution to the problem, on the one hand, involves the integration of different methods and means of education, and the International Letter of the Social Sciences and Humanities. 71 55 on the other hand - the need to combine knowledge and skills in different fields of science, engineering, technology and creativity.

The main objectives of project-based learning are:

- to create conditions for students to independently and independently acquire the missing knowledge from various sources;
- to study the use of the acquired knowledge in solving practical and cognitive problems;
- acquire communication skills by working in different groups;
- develop their research skills (problem identification, data collection, observations, experiments, analysis, hypotheses, generalization);
- development of systematic thinking. Foreign methodological literature includes the following stages of the project: - identification of the project topic, problem, goals;
- discussion of the project structure, planning;
- presentation of language material;
- data collection;
- group analysis and discussion of data with the teacher;
- preparation of the presentation;
- demonstration of project results;
- project evaluation.

The final stage includes not only mastering linguistic materials and monitoring the development of speech and communicative competence, but also the content of the project, the topic, the final result, the overall assessment of the project with the participation of individual students, organization of project work, etc. Project-based teaching mainly involves the use of a wide range of research techniques, taking into account a variety of factors and conditions that are important to the student on the one hand, and important for the complex development of the problem on the other, resolve and implement results.

Project-based teaching has been widely used in many countries around the world, as it allows students to seamlessly integrate their knowledge around a solution to

a problem in different areas, while at the same time allowing that knowledge to be put into practice, creating new ideas. As mentioned earlier, there are some issues at the center of the project. To solve it, students need not only knowledge of the language, but also a sufficient amount of subject knowledge necessary to deal with the problem. In addition, students must have certain intellectual, creative, communicative skills. They are able to work with information, the ability to work with text (highlight the main idea, search for the necessary information from a text in a foreign language), analyze data, generalize, draw conclusions, etc., work with different things includes the ability. The formation of these skills involves teaching different types of speech activities.

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Characteristics of Anatomical Parameters of Rat Testes in Normal Conditions and Under Irradiation in the Age Aspect

Teshayev Shukhrat Jumayevich¹, Baymuradov Ravshan Radjabovich²

¹Professor, Doctor of Medical Sciences, ²Assistant,

^{1,2}Anatomy Department of the Bukhara State Medical Institute, Bukhara, Uzbekistan

ABSTRACT

The aim is to study the anatomical parameters of the testes of rats in normal conditions and under irradiation in postnatal ontogenesis.

Materials and methods. The study used 124 white outbred rats in newborns, 3, 6, 9, 12 months of age. The animals were divided into 2 groups: control and experimental. The rats of the experimental group were irradiated for 20 days with a total dose of 4 Gy of ionizing radiation.

Results. The morphometry of the testes showed that their weight, length, and thickness in postnatal ontogeny vary unevenly. Comparison of the rate of increase in body weight and length with the weight and volume of the testes shows that with an increase in their volume, body weight increases more than length.

Conclusions. It was found that in the experimental group, the parameters of physical development lag behind intact animals. The lag is more pronounced in the 6-month period.

KEYWORDS: irradiation, anatomical parameters, testes, morphometry

The urgency of the problem

Exposure to ionizing radiation (IR) is becoming increasingly common in medicine for the diagnosis of diseases and the treatment of cancer. In addition to patients undergoing treatment, infrared radiation also poses a great danger to healthcare professionals. Most medical examinations require X-rays to diagnose the disease and then treat them. But even in cases with cancer patients, treatment may also require radiation therapy, which is already radiation for the patient [3]. Although all living things are at risk of injury in response to ionizing radiation, the testes of mammals are much more sensitive to them [6].

The testes are key organs involved in maintaining male fertility through testosterone synthesis and male gamete production [7]. In addition, spermatogenesis in the testes occurs due to the differentiation of germ cells at different stages of development. The toxic effects of IR interfere with normal spermatogenesis, affecting the proliferation and differentiation of spermatogenic cells, which ultimately leads to cellular mutagenesis or apoptosis and leads to a decrease in the number and impaired production of spermatozoa [1,4,8].

Radiation sources are divided into natural and artificial sources. Natural sources include gamma rays from the decay products of uranium, decay products of gaseous radon in the atmosphere, natural radionuclides and cosmic

rays from space. Sources of man-made radiation include radionuclides found in food and drink, X-rays used in medical diagnostic procedures, and gamma rays generated as by-products in the nuclear industry and products generated during nuclear tests in the atmosphere.

Radiation exposure has early and late effects on the exposed organism [5]. It is fraught with the occurrence of local changes - radiation burns, necrosis, cataracts and general phenomena - acute and chronic radiation sickness, as well as long-term consequences - malignant neoplasms, hemoblastosis, hereditary pathology, reproductive disorders, functions of the neuro-endocrine, immune and other systems, decreased adaptive capacity, premature aging, decreased average life expectancy. Although many studies have been carried out to study the effect of radiation on the reproductive organs, there is not enough information on the changes in the structures of these organs in the age aspect in postnatal ontogenesis. [2,8].

The aim of the study

Was to study the anatomical parameters of the testes of rats in normal conditions and under irradiation in postnatal ontogenesis.

Materials and methods

An experimental study was carried out on material taken from the testes of 124 white nonlinear rats from the moment of birth to 12 months of age, which were kept in a vivarium under a 12-hour light regime, with a standard diet and free access to water. At the beginning of the experiment, all sexually mature rats were in quarantine for a week, and after excluding somatic or infectious diseases, they were transferred to the usual vivarium regimen. The animals were divided into 2 groups (n = 124): I group - control (intact) (n = 69); II - group - rats that received irradiation for 20 days from 71 days of age at a dose of 0.2 Gy (the total dose was 4.0 Gy) (n = 55).

In the experimental group, irradiation of rats began at 71 days of age and lasted for 20 days in a fractional daily dose of 0.2 Gy (the total dose was 4.0 Gy) up to 90 days of age using the apparatus DTGT "AGAT R1" (plant "Baltiys" Narva, Estonia, 1991 release, operation since 1994, recharge 2007, capacity 25.006 cGy / min.).

The animals were slaughtered at the appropriate time in the morning on an empty stomach by means of instant decapitation under ether anesthesia. After opening the pelvis cavity, the testes were removed and their mass, length, width, volume and tissue density were examined. The weight of each of the testes was measured on an electric balance, and the length and width were measured with a millimeter tape. The volume of testes according to the formula:

$$V = 0.523 \times n \times c^2,$$

where: n, c - respectively, the length and thickness of the testes 0.523 - constant coefficient.

The research materials were statistically processed using the methods of parametric and nonparametric analysis. The accumulation, correction, systematization of the initial information and the visualization of the results were carried out in Microsoft Office Excel 2010 spreadsheets. Statistical analysis was carried out using the IBM SPSS Statistics v.23 program (developed by IBM Corporation).

Research results and their discussion

In newborn rat pups, body weight ranges from 4.58 g to 5.86 g, on average 5.0 ± 0.0928 g. Body length (frontal-tail

size) from 3.83 to 4.82 cm, on average 4.4 ± 0.0742 cm. The testes are located mainly in the abdominal cavity and in the inguinal-scrotal canal and have a rounded-oval shape. The weight of the testes ranges from 0.015 to 0.027 g, on average - 0.02 ± 0.0007 g. The length of the testes varies from 0.27 to 0.39 cm, on average 0.34 ± 0.078 cm, and its thickness ranges from 0, 17 to 0.26 cm, on average - 0.21 ± 0.0070 cm. The volume of testes is from 0.008 to 0.013 cm³, on average - 0.01 ± 0.0004 cm³.

The parameters of physical development and anatomical indicators of the testes of the rats of the control group in terms of age are given in table № 1.

Table № 1 The parameters of physical development and anatomical indicators of the testes of the rats of the control group

Age Day	Body mass, g	Body length, cm	Mass of testes, g	Length of testes, cm	Thickness of testes, cm	Volume of testes, cm ³
Newborns	5,0±0,0928	4,4±0,0742	0,02±0,0007	0,34±0,0078	0,21±0,0070	0,01±0,0004
90	106,8±1,229	14,8±0,189	0,78±0,017	1,42±0,035	0,91±0,025	0,76±0,013
180	218,3±1,021	17,6±0,280	1,20±0,023	2,18±0,020	1,36±0,006	2,57±0,015
270	255,7±1,541	19,8±0,374	1,26±0,032	2,29±0,013	1,43±0,023*	2,95±0,010
360	283,8±1,596	21,1±0,273*	1,32±0,015	2,40±0,018	1,50±0,024*	3,32±0,021

Note: * P < 0.05; - reliability of differences in relation to the previous observation period

In 90-day-old rats that received irradiation, body weight ranges from 91.1 to 106.82 g, an average of 101.1 ± 0.954 g. The absolute increase is 96.1 g, the growth rate is 1922%.

The body length of rats ranges from 11.93 to 16.44 cm, on average 14.0 ± 0.273 cm, the absolute increase in body length is 9.6 cm, and the growth rate is 218.2%.

The testes are oval, located in the scrotum, sometimes rising into the inguinal-scrotal canal. The mass of testes in rats is 0.58-0.85 g (on average - 0.72 ± 0.015 g), the increase is 0.7 g (the growth rate is 3500%). The length of the testes is 1.09-1.57 cm (on average 1.34 ± 0.027 cm), an absolute increase of 1.0 cm (the growth rate is 294.1%). The thickness of the testes is 0.7 - 1.1 cm (on average - 0.84 ± 0.026 cm). The absolute growth was 0.63 cm, and the growth rate was 300.0%. The volume of the testes averages 0.62 ± 0.010 cm³. The absolute growth was 0.61 cm³, the growth rate was equal to 6100%. Against the background of a sharp increase in volume, the density of the testes tissue decreases.

In rats of 180 days of age, body weight ranges from 165.02 to 191.74 g, on average 179.1 ± 2.473 g, the absolute increase was 78.0 g. Body weight increases 1.8 times compared to the previous age (increase 77.2%). Body length 14.01-16.43 cm (average - 15.0 ± 0.221 cm). The growth was 1.0 cm, the growth rate was 7.1%. The mass of testes is in the range from 0.89 to 1.00 g, on average - 0.95 ± 0.009 g. The absolute increase was 0.23 g, the growth rate was 31.9%. The weight of the testes increased by 1.3 times compared with this indicator. The length of the testes ranges from 1.67 to 1.85 cm, on average 1.77 ± 0.016 cm, the absolute increase is 0.43 cm, the growth rate is 32.1%. The thickness, or transverse size of the testes varied from 1.05 to 1.16 cm, on average - 1.11 ± 0.010 cm, the absolute increase was 0.27 cm, and the growth rate was 32.1%. The average indicator of the volume of the testes separately is 1.43 ± 0.031 cm³. The absolute

increase in the volume of the testes was 0.81 cm³. The volume of the testes increased by 2.3 times.

In 270-day-old male rats who received irradiation, body weight ranged from 212.56 to 227.05 g, on average - 219.8 ± 1.067 g, the absolute increase is 40.7 g, and the growth rate is 22.7%. The body length of rats ranges from 16.26 to 18.28 cm, on average 17.4 ± 0.198 cm. The absolute increase in body length at this age is 2.4 cm, the growth rate is 16.0%.

Testes of 270 - day old rats of this group have an oval shape, the weight of testes is from 0.96 to 1.15 g, on average - 1.06 ± 0.017 g, the absolute growth of testes in this group is 0.11 g, the growth rate is 11.6%. The length of the testes is 1.85-2.04 cm (on average - 1.96 ± 0.018 cm), the growth is 0.19 cm (the growth rate is 10.7%). The thickness of the testes is 1.19-1.29 cm (on average, 1.23 ± 0.009 cm). The absolute increase is 0.12 cm, the growth rate is 10.8%. The volume of the testes is 1.94 ± 0.030 cm³, the growth rate is 0.51 cm³ (the growth rate is 35.7%).

The body weight of male rats of 360 days of age ranged from 247.55 to 273.73 g, on average - 261.1 ± 2.161 g. The absolute increase in body weight in this group was 41.3 g, and the growth rate was 18.8%. The body length of the rats varied from 18.39 to 20.99 cm, on average 19.5 ± 0.225 cm, the absolute increase was 2.1 cm, and the growth rate was 12.1%.

In male rats of this group, the weight of testes individually ranges from 1.03 to 1.31 g, on average 1.20 ± 0.023 g, the absolute increase was 0.14 g, and the growth rate is 13.2%. The length of the testes is from 2.14 to 2.26 cm, on average - 2.19 ± 0.011 cm, where the absolute increase is 0.23 cm, the growth rate is 11.7%. The thickness of the testes (transverse size) of the rats of this group ranged from 1.33 to 1.41 cm, on average - 1.37 ± 0.007 cm, the absolute increase was 0.14 cm, and the growth rate was 11.4%. The volume of testes is on average 2.69 ± 0.025

cm³, the absolute increase is 0.75 cm³, the growth rate is 38.7%.

In the control group, up to mature (360 days) age, body weight increases 56.7 times, and body length increases 4.8 times. The highest rate of weight gain is observed at 90 - (2036%) and 180 days (104.4%) age, the smallest - at 360 (11.0%) and 270 (17.1%) days of age. A high rate of increase in body length was also noted at 90 (236.4%) and 180 (18.9%) days of age, the smallest - at 360 (6.6%) and 270 (12.5%) days of development. In newborn rats, the weight of the testes is on average 0.02 ± 0.0007 . Until adulthood (360 days of age), this indicator increases 66 times (1.32 ± 0.015). The length and thickness of the testes increase by 7.06 and 7.14 times, respectively, and the volume by 332 times. Until puberty, the lumen of the convoluted seminiferous tubules is closed and filled with spermatogenic epithelium and trophic intercellular substance. At puberty, the lumen of the convoluted seminiferous tubules opens for the advancement of sperm, so the density of the testis tissue decreases. Comparison of the rate of increase in the body weight of rats and the weight of the testes, up to sexual maturity, shows that in animals of the control group, the weight of the testes increases almost 1.16 times (66 times) faster than body weight (56.7 times)

In rats of the experimental group up to 360 days old (mature), body weight increases 52.2 times (261.1 ± 2.161), and body length 4.43 times (19.5 ± 0.225 cm). The highest rate of weight gain is observed at 90 (1922%) and 180 days (77.2%) ages, the lowest - at 360 (18.8%) and 270 days (22.7%) ages. The highest rate of increase in body length was also noted at 90 - (218.2%) and 270 days (16.0%) age, the smallest - at 180 (7.1%) and 360 (12.1%) days of development. In the experiment with irradiation up to 360 days of development, the weight of the testes increases 60 times (1.20 ± 0.023 g), the length - 6.4 times, the width - 6.5 times, and the volume of the testes - 269 times.

Conclusions

In the control group, up to mature age (360 days), body weight increases 56.8 times, and body length 4.8 times. In the experimental group, the parameters of physical development lag behind intact animals. The lag is more pronounced in the 6-month period. The morphometry of the testes showed that their weight, length, and thickness in postnatal ontogeny vary unevenly. Comparison of the rate of increase in body weight and length with the weight and volume of the testes shows that with an increase in their volume, body weight increases more than length. The weight of the testes increases 1.16 times faster than the

body weight, and a high rate of growth of the testes is noted at 90 days of age. In the experiment, all anatomical parameters of the testes lag behind the control values.

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Artistic-Aesthetic Functions of Options of Folk Proverbs

D. S. Turdalieva PhD

Independent Researcher of Fergana State University, Fergana, Uzbekistan

Annotation

This article analyzes the phenomenon of artistic aesthetic functions of the folklore version and the problem of proverb option, as well as grammatical lexical syntactic changes in the transformation of folklore proverbs. It is also clear that the choice of texts is based on the use of the non-speech option and the use of the author's use of the artistic work, as well as the value of the literary work, not on how much the use of the phrase is used.

The changes that have taken place in transition from period to period, from execution to execution are reflected in variants of folk verbal creativity. In many versions, multiple copies of folklore works make its variance. Variant is a multitude of texts that can be individually contested in a particular work, which can live independently of the living and oral tradition. The time, the spread, and the living conditions of every folklore work are very complex. It is related to socio-economic environment, audiences, listeners, and creativity and executive skills. The diversity defines the distribution, popularity and publicity of the people's creativity. It provides a wealth of material for discovering the causes of transformation in the oral folklore, and the discovery of the underlying legal processes in it.

The folklore, which is a feature of language, philosophy and artistic creativity, is a compact but genuine genre of folklore (1.512s) it is based on the experience and observation of the popular people for many centuries in socio-economic, political and cultural life. Because it is a genuine genre that is deep and meaningful, it is a form of folklore. The proverb is different from other genres of oral folklore. For example, if poems, fairy tales, myths, narrations, and anecdotes reflect the realities of a story, then the article represents the conclusions of the people about this reality. Each of us has the power to demonstrate the beauty of our speech, the splendor of our speech, the logic of our minds and our thinking, which is a mirror of the centuries-old life experiences and the way of life of our people. They contain the meaning of every word, the stability of the phrase, the stability of the word. However, their meanings are constantly expanded, depending on the application. Therefore, every word in the text should be given special attention. (1.3B) T. Mirzaev commented on the question, "How is the article variant going to be realized?" The change in the location of the article, even in terms of words and expression, also creates meaning. For example, if the word goes about the extravagant woman, the word *Limcha* is used in the form of shrine, the evil woman, and if the word is spoken of by an immoral religious representative, it is used as a shadow of the evil woman, *Limchamulla*. In such cases, the meaning of the meaning is typically the second one. « (1.5B) as can be seen, any article similar to that of a given shape is a variant of an article. Interpretation of articles may be due to its non-speaking option and the artistic use of the author's

speech. In the article, which contains the appearance of the text, all the language levels - phonetics, lexicon, syntax - transformation may take place. These changes will not affect the content of the article. Depending on which part of the article changes, it can be grouped into lexical transformation (a), grammatical transformation (b), structural transformation (c). (3.12-13)

Lexical transformation is the most common form, and there are several aspects of it. For example, one word in the article may be replaced by another: *Broad width*. (2.209B) In the second proverb, the common word in the preceding article was shared equally. If so many, *mountains*. (1.512) These proverbs are different from one another. Such a change does not lead to a radical change, so they are alternatives. Synonyms of the text are frequently encountered, and synonymize does not bring much spiritual change. For this reason, such proverbs reside in a variant / invariant position. Z. Valeriy writes: "Because synonyms refer to an event by different names, there is not semantic equivalence, but semantic affinity. The transformation and the original text can be described as semantic in nature if text transformation creates an invisible transformation of the work "(3.12-13) *The Anger of God - God's Wrath!* (1.512b) *The epic of Kuntugmish The Khan's Anger - God's Wrath* (4.36b). Replacement of *khan* and people's words in the article has not affected the meaning. The *wrath of God* is the result of anger in one article and the result of the hate of the *Khans*. Thus, the replacement of words in the article version can have a significant impact on the meaning or not. This article is based on the purpose and the circumstances of the applicant. Grammar transformation is often the case in the text of the article. It does not change the word itself but changes its grammatical form. For example: *If you do not get seven,*

This is a well-known example of hope for the exit *Jong*. (5.142)

Structural transformation is less lexical and grammatical than transformation; its appearance is called syntactic transformation. The syntactical construction of the article will change: *the mouth is a sieve, not a word*, and an elusive manuscript. This kind of transformation can be traced in the author's and heroic speeches and poetic works, depending on the author's intentions. The use of prose in poetic works has its own unique ways. S. Normamatov said that *Avloniy* has done three different things in his works:

1. Changes that are not applied without changes.
2. Articles that have their contents changed and saved in shape.

Sufrank is your friend and gossip,

Your friend can do it if you can.

Anyone who does good will get what he wants,
If the fools are going to come and die a killer every day ...

In this poetic verse, a trustworthy friend of yours is used to change the form of a stub to a friend of yours. In the next paragraph, we can see that if you walk well then the form of the article is changed.

3. Modified articles both in shape and in content.

If the burden of the hooves is heavy,

Everyone is great if it is great.

It should be noted that the value of a work of art is determined not by the use of the so-called "ringtone" but with the proper application of it. M. Kholbekova, Z.To'ychieva show that in the works of H.Olimzhon, folk articles are preserved and their appearance is changed with the demand of weight. (6.154-155b) For example:

He threw the day at night,

The end of the scarlet came right into the fire.

This is an article in the Uzbek language:

Who first touches the fist, is really cowardly.

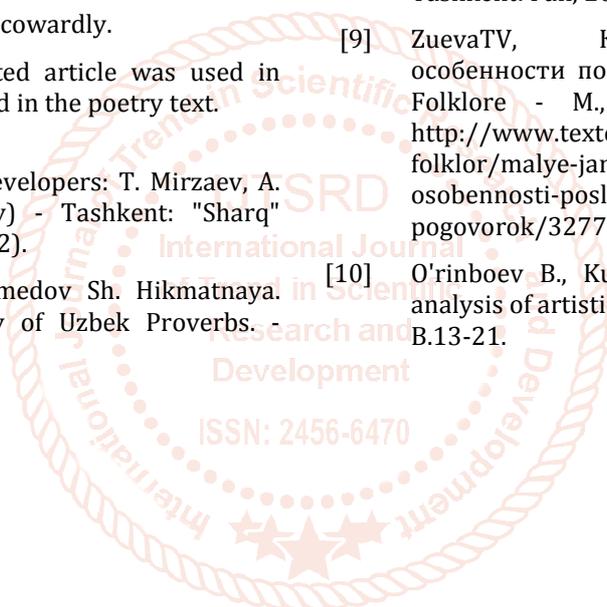
As we can see, the finger-sculpted article was used in syntactic form, and it was absorbed in the poetry text.

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Theoretical Basis of the Design Scheme, Technological Process and Parameters of Base Level Disc Software

Qo'chqorov Jurat Jalilovich, Ibodov Islom Nizomiy Ugli,
Savriddinov Abrorjon Anvar Ugli, Ibodullayev Olim Omon Ugli

Bukhara Branch of the Tashkent Institute of Irrigation and
Agricultural Mechanization Engineers, Bukhara, Uzbekistan

ABSTRACT

In this article, the development of disk softeners for the base leveling and substantiation of their parameters. Analytical expressions describing the process of interaction of the working part with the soil, as well as the theoretical analysis of the diameter of the working body, the radius of curvature are described.

KEYWORDS: *Bucket, disk, soil, resource-saving, technology, softening, bullet, area, device, scheme, aggregate speed, machining, diameter, radius of curvature, grinding quality, roughness*

Targeted research is being carried out around the world to develop resource-saving technologies for land leveling and new models of equipment for sowing seeds of agricultural crops, to develop the scientific and technical basis for improving existing machines to ensure resource efficiency.

In the agricultural production of the country, special attention is paid to reducing labor and energy consumption, saving resources, growing agricultural crops on the basis of advanced technologies and the development and application of high-efficiency agricultural machinery.

The Action Strategy for the further development of the Republic of Uzbekistan for 2017-2021 includes, in particular, "further modernization of irrigated lands for modernization and accelerated development of agriculture, development of a network of land reclamation and irrigation facilities, intensive approaches to agricultural production, first of all. Introduction of modern water-saving agro-technologies, wide use of high-yielding agricultural machinery". One of the important tasks in the implementation of these tasks is to improve the reclamation of irrigated lands and increase the productivity of crops, technical and technological modernization of leveling machines, substantiation of their parameters that ensure high quality and productivity and energy efficiency.

Based on the research, a base leveler equipped with disc softeners was developed. The developed disc softeners consist of the following parts: longitudinal beam 1, right 2 and left 3 axes attached to it at an angle γ and spherical disc softeners 4 mounted on them, the scheme of which is shown in Figure 1.

The spherical discs on the right and left axes are mounted so that they push (turn) the tillage plows in the direction of the longitudinal beam. This ensures that all discs, except the first one on the right axis, work in open cutting

conditions, if the blades they process are deformed in the direction of the open edge (zone softened by the previous working body).

As a result, firstly, the traction resistance of the discs is reduced, and secondly, it is possible to increase the transverse distance between the discs by 1.3-1.5 times without compromising the quality of work, which leads to a decrease in energy and material volume of the developed device.

The device is equipped with pressure springs to adjust the depth of immersion of the working bodies in the ground (Fig. 2). In order to ensure that the working bodies replicate the unevenness of the field surface, the device is connected to the frame of the leveler by means of traction, ie hinged. With hydraulic cylinders, the device is moved from the operating position to the transport mode and from the transport position to the operating position. During operation, the working bodies on the right axis of the device push the workpieces to the left and those on the left axis to the right.

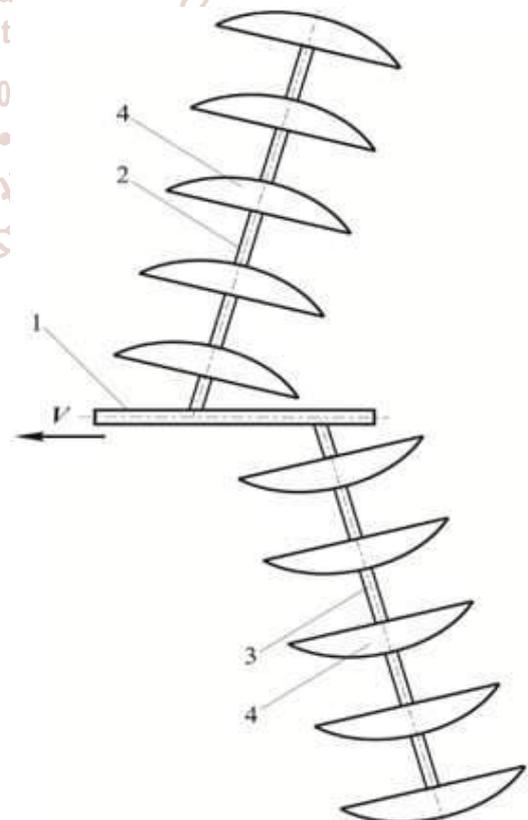


Figure 1. The design scheme of the device is 1 longitudinal beam; 2,3 right and left axes, respectively; Softeners in the form of 4-spherical

discs.

We study the process of interaction of disk softeners with soil and on this basis produce analytical expressions that allow them to be identified. The base leveler equipped with disk softeners provides a quality leveling of irrigated crop areas, forming a complex of existing tillage machines used in pre-planting tillage.

The working body, located first on the right axis of the device in the direction of movement, operates under closed cutting conditions, i.e. it acts on the solid soil and cuts the ABC slab, which has the appearance of a groove, from it to the field surface (Fig. 2, a).

The surface area C_1 of the cross-section of the slab cut by the working body from the solid soil can be determined by the following expression.

$$S_1 = \left[R^2 \arccos \frac{R-h}{R} - (R-h) \sqrt{R^2 - (R-h)^2} \right] \sin \alpha, \tag{1}$$

where $R = 0,5D$ - radius of the working body, m;

D - diameter of the working body, m;

h - processing depth, m;

(1) According to the expression, graphs of variation of the surface of the cross-section of the slab cut by the working body in relation to its direction of movement and the depth of machining were constructed (Fig. 3).

It can be seen from these graphs that at all three machining depths, as the mounting angles relative to the direction of movement of the working bodies increase, so does the surface area of the cross-section of the slab cut by them. Because with this increase in angle, the width of coverage in the direction of movement of the working bodies also increases.

All working bodies, except for the first working body in the direction of movement on the right axis of the device, work in open cutting conditions, if they affect the blades with side and softened zone formed by the previous working body, and each working body cuts $A_1B_1C_1$ and $B_1C_1A_2B_2$ leads to the open edge formed by the anterior working body (Fig. 2, b).

The surface area of the cross section $A_1B_1C_1$ can be determined by the expression C_2 (2.1), and the surface area of the cross section $B_1C_1A_2B_2$ can be determined by the following expression.

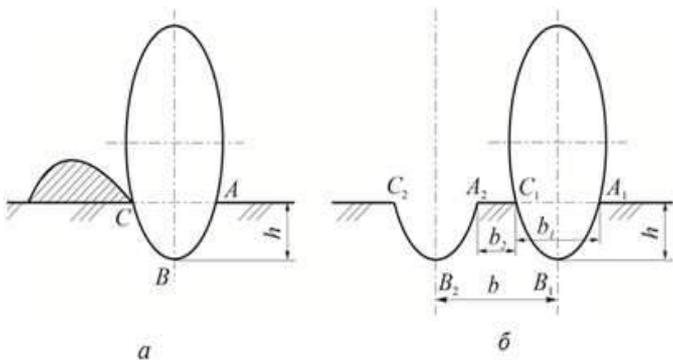


Figure 2 Schemes of interaction of device working bodies with soil

$$S_3 = hb - \left[R^2 \arccos \frac{R-h}{R} - (R-h) \sqrt{R^2 - (R-h)^2} \right] \sin \alpha, \tag{2}$$

where b is the transverse distance between the working bodies, m;

As can be seen from expressions (1) and (2), the size and shape of the earthen plows processed by the working bodies of the device depend on their location, diameter, mounting angle relative to the direction of movement, working depth and transverse distance between them.

During the movement of the device, the working bodies lift, grind and throw the cut soil shovels along the working surfaces due to the movement of the unit forward and rotating around its axes..

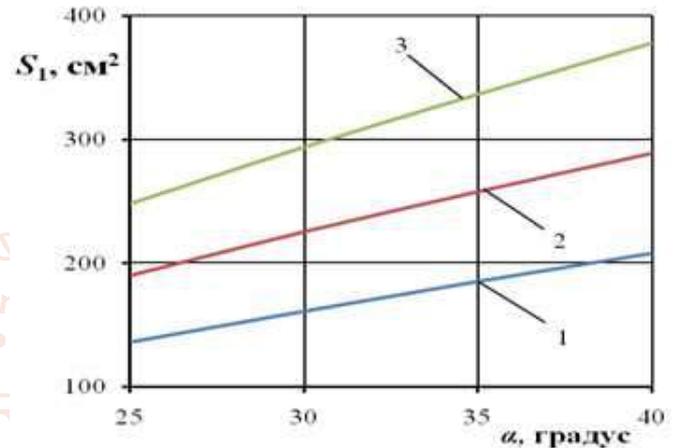


Figure 3. Graph of change of the surface (S_1) of the cross-section of the slab cut by the working body depending on the angle of installation (α) and the depth of processing (h) relative to its direction of movement 1- $h = 8$ cm, 2- $h = 10$ cm, 3- $h = 12$ cm

We determine the diameter of the workpieces for a given value of machining depth using the scheme shown in Figure 4. From it we get the following

$$D > 2h + d + 2\sqrt{h(D-h)} \operatorname{tg} \gamma, \tag{3}$$

where d is the diameter of the bushing to be installed between the discs, m;

γ - the angle of rise of the soil on the surface of the working body degree.

We give expression (2.3) as follows

$$D^2 - 2D[2h(1 + \operatorname{tg}^2 \gamma) + d] > -[(2h + d)^2 + 4h^2 \operatorname{tg}^2 \gamma]. \tag{4}$$

Solving this inequality with respect to D by methods known from the literature, we obtain the following result

$$D > [2h(1 + \operatorname{tg}^2 \gamma) + d] + \sqrt{[2h(1 + \operatorname{tg}^2 \gamma) + d]^2 - [(2h + d)^2 + 4h^2 \operatorname{tg}^2 \gamma]}. \tag{5}$$

It can be seen from this expression that the diameter of the working body varies depending on the working depth, the diameter of the bushing installed between the discs and the angle of rise of the working body of the soil along the working surface.

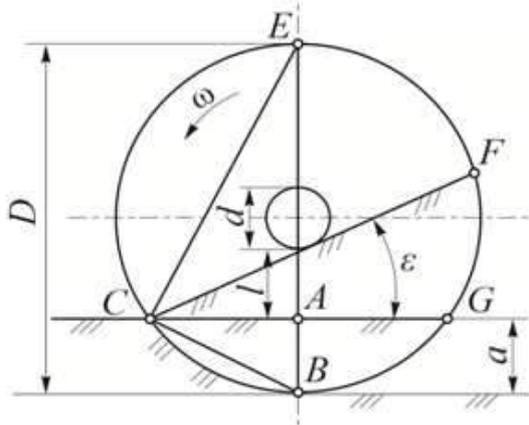


Figure 4. Scheme for determining the diameter of the working body.

The radius of curvature of the working body is determined by the following expression

$$R \geq \frac{D}{2 \sin \varphi_s} \quad (6)$$

Or considering (5)

$$R \geq \frac{1}{2 \sin \varphi_s} \left\{ [2h(1 + tg^2 \gamma) + d]^2 + \sqrt{[2h(1 + tg^2 \gamma) + d]^2 - [(2h + d)^2 + 4h^2 tg^2 \gamma]} \right\}, \quad (7)$$

Where φ_s - the arc formed in the equatorial section of the working body central angle, degrees.

Analysis of the obtained mathematical models and analytical connections shows that the agrotechnical (soil compaction quality, heights of surface irregularities during leveling) and energy (drag resistance) performance of a device equipped with a disc softener mounted on a base leveler depends on the diameter of its discs and the curvature of the disc surface. Showed that it depends on other parameters. Based on theoretical research, it can be said that the application of this working body in the current leveling of lands gives good results, increasing productivity due to the improvement of soil composition. This, in turn, will lead to a higher level of agricultural development.

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Using Cauchy Inequality to Find Function Extremums

G. A. Akhmedova, O. Yu. Makhmudova

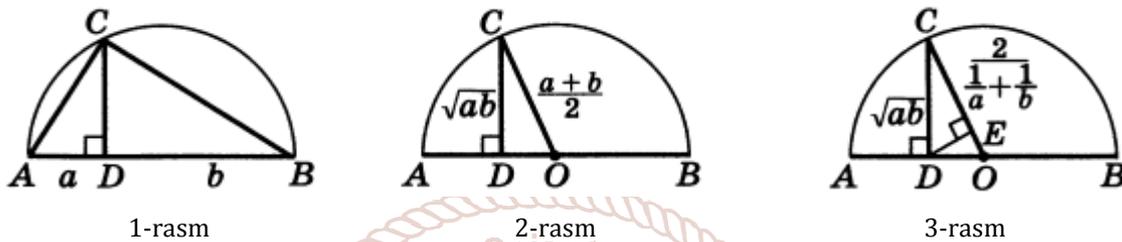
Kokand State Pedagogical Institute, Kokand, Uzbekistan

ABSTRACT

The article explains the relationships between the mean values using triangles. Here are some ways to determine the extreme values of some functions using the Cauchy inequality, which represents the relationship between arithmetic mean and geometric mean.

KEYWORDS: function extremums, averages, Cauchy inequality

Consider sections with lengths a and b . Their average arithmetic is $\frac{a+b}{2}$, their average geometry is \sqrt{ab} , and their average harmonic is $\frac{2}{\frac{1}{a} + \frac{1}{b}}$. We can compare these values in the following ways (Figure 1).



From the similarity of triangles ADC and CDB $\frac{AD}{CD} = \frac{CD}{BD} \Rightarrow CD = \sqrt{ab}$

It can be seen from Figure 2 that it is $\frac{a+b}{2} \geq \sqrt{ab}$. (The arithmetic mean of a and b is equal to the mean geometry at $a = b$.) From the similarity of triangles CDE and COD $\frac{CE}{CD} = \frac{CD}{CO} \Rightarrow CE = \frac{ab}{\frac{a+b}{2}}$ or $E = \frac{2}{\frac{1}{a} + \frac{1}{b}}$; $CE < CD$ because $\frac{2}{\frac{1}{a} + \frac{1}{b}} \leq \sqrt{ab}$ (fig. 3).

The three mean values are equal to $a = b$.

Now let's talk about the average values application in solving problems to find the largest values of the function.

1-example. At what value of x does the $f(x) = x(1-x)$ ($0 < x < 1$) function take the largest value?

Solution: According to $\frac{a+b}{2} \geq \sqrt{ab}$ inequalities

$$x(1-x) \leq \left(\frac{x+1-x}{2}\right)^2 = \frac{1}{4}$$

$$x(1-x) = \frac{1}{4} \Leftrightarrow x = \frac{1}{2}$$

Answer: $\max f(x) = f\left(\frac{1}{2}\right) = \frac{1}{4}$

2-example. At what value of x does the function $g(x) = x(x-1)$ ($0 < x < 1$) take the smallest value?

Solution. If $c < d$ then $-c > -d$.

$$x(x-1) = -x(1-x) \geq -\left(\frac{x+1-x}{2}\right)^2 = -\frac{1}{4}$$

$$x(x-1) = -\frac{1}{4} \Leftrightarrow x = \frac{1}{2}$$

Answer: $\min g(x) = g\left(\frac{1}{2}\right) = -\frac{1}{4}$

3-example. At what value of x does the function $h(x) = 4x + \frac{9}{x}$, $x > 0$ take the smallest value?

Solution. According to $a + b \geq 2\sqrt{ab}$

$$4x + \frac{9}{x} \geq 2\sqrt{\frac{9}{x} \cdot 4x} = 12$$

$$4x + \frac{9}{x} = 12 \Leftrightarrow x = \frac{3}{2}$$

Answer: $\min h(x) = h\left(\frac{3}{2}\right) = 12$

4-example. At what value of x does $t(x) = \frac{2}{4x + \frac{9}{x}}$, the function $x > 0$ take the largest value?

Solution: $\frac{2}{4x + \frac{9}{x}} \leq \sqrt{\frac{1}{4x} \cdot \frac{x}{9}} = \frac{1}{6}$

$$\frac{2}{4x + \frac{9}{x}} = \frac{1}{6} \Leftrightarrow x = \frac{3}{2}$$

Answer: $\max t(x) = t\left(\frac{3}{2}\right) = \frac{1}{6}$

5-example. At what values of $y(x) = \frac{x^2 + 4x + 53}{x + 2}$, the function $x > -2$ takes the smallest value.

Solution: According to $a + b \geq 2\sqrt{ab}$

$$\frac{x^2 + 4x + 53}{x + 2} = x + 2 + \frac{49}{x + 2} \geq 2\sqrt{(x + 2) \cdot \frac{49}{x + 2}} = 14$$

$$\frac{x^2 + 4x + 53}{x + 2} = 14 \Leftrightarrow x = 5$$

Answer: $\min y(x) = y(5) = 14$

6-example. Prove that a rectangle with equal sides has a square with the smallest perimeter.

Let one side of the rectangle be the one length, then the other side of the given surface $S = a^2 (a > 0)$ is $\frac{a^2}{x}$.

Proof: Let one side of the rectangle be the one length, then the other side of the given surface $S = a^2 (a > 0)$ is $\frac{a^2}{x}$.

This is the rectangle perimeter

$$P(x) = 2\left(x + \frac{a^2}{x}\right)$$

It's clear,

$$2\left(x + \frac{a^2}{x}\right) \geq 2 \cdot 2\sqrt{x \cdot \frac{a^2}{x}} = 4a.$$

$$2\left(x + \frac{a^2}{x}\right) = 4a \Leftrightarrow x^2 - 2ax + a^2 = 0 \Leftrightarrow x = a$$

$$\min P(x) = 4a$$

if $\frac{x^2}{x} = a$ $x = a$. In that case, the rectangles with equal sides have the smallest perimeter.

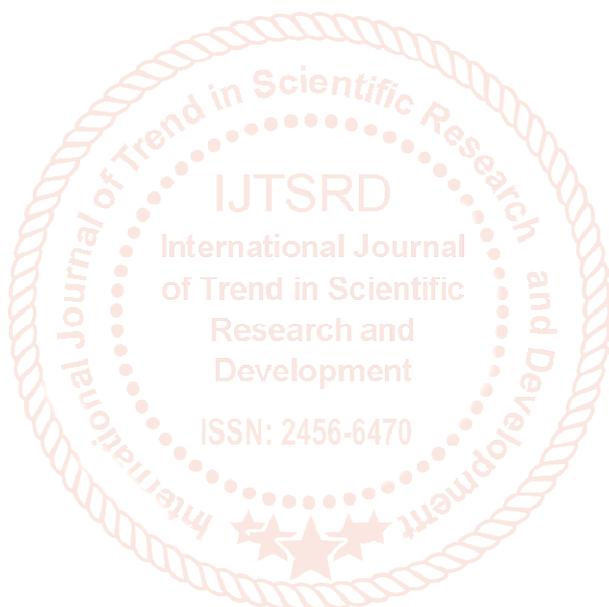
7-example. If $A = \frac{x^2 + 3}{\sqrt{x^2 + 2}}$, $B = 2$, then $A > B$.

$$\text{Proof. } A = \frac{x^2 + 3}{\sqrt{x^2 + 2}} = \sqrt{x^2 + 2} + \frac{1}{\sqrt{x^2 + 2}} > 2.$$

So $A > B$. Proved.

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Purpose and Content of Distance Learning

M. Botirov, Sh. Ziyaev

Kokand State Pedagogical Institute, Kokand, Uzbekistan

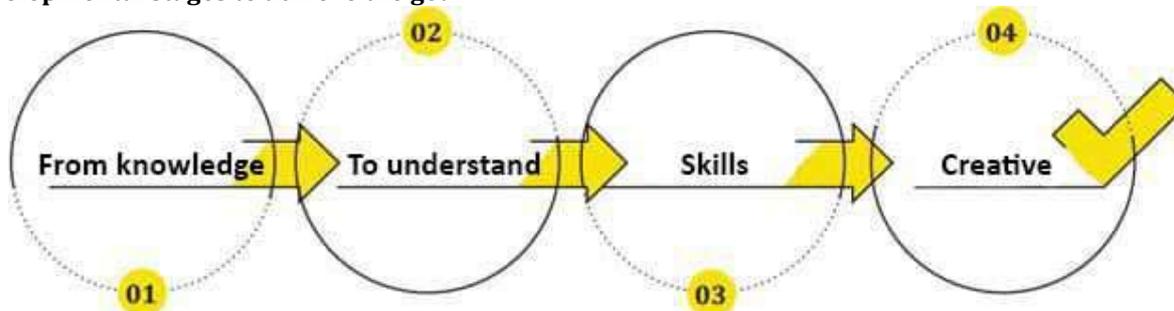
ABSTRACT

The article deals with strengthening the learning motivation of learners, to develop the skills and abilities of independent learning.

KEYWORDS: Distance learning, cognition, motivation, textbook, independent learning, supervision, assessment.

The general priorities of distance learning are to stimulate students' intellectual and cognitive activities, increase their learning motivation, and develop their independent learning abilities and skills.

Four developmental stages to achieve the goal



To achieve this goal, the essence of the 4 stages of development is as follows:

- knowledge of the study of concepts, theories and ideas as a result of the acquisition of relevant information,
- to apply certain theories to the solution of standard learning tasks and to understand them as the restoration of the acquired educational content,
- skills that allow you to apply the knowledge gained to solve non-standard problems in changing conditions,
- creativity as the ability to understand and theoretically interpret the essence of events, to independently express and solve non-standard problem situations, to see contradictions.

In the distance mode, this requirement is mandatory if the goal component of the learning process, i.e. the need to set a goal at any stage of education, is considered. The learner must understand the purpose of a particular lesson, accept it, and explain and explain the learning material. For each learning session, the goal should not only be shaped by the tutor, but the goal should be clear to the learner, accept it, and implemented throughout the collaborative work. This means that the tutor must set a goal and predict the outcome to be achieved by the learner at the end of the session. If in traditional education this may not be the case and is of little importance, the goal component is of great importance for the organization of distance learning. Failure to understand the purpose of the task being performed leads to a negative attitude on the part of the learner, which can lead to non-performance of the task or poor quality development (copying, blind copying, compilation, striving for assessment rather than comprehension).

The basis for creating a model of distance learning is also the goal of developing the basic qualities of a specialist in students. These include, above all, critical and creative thinking, communicative, creative and reflexive abilities. These goals include the motivation to learn, self-development and the formation of a conscious desire for independent learning. Achieving these goals requires learners to go through the following four stages of development.

The purpose of training is also considered in the system of formation of knowledge, skills and abilities in accordance with the state educational standards in the relevant areas. The goal itself has a hierarchical structure. In particular, the purpose of the subject is one of the purposes of training, and the purpose of studying the subject is an element of the purpose of the subject. The purpose of training (education) is the acquisition of knowledge at the initial and required level of the organization of the learning process. Such a general pedagogical understanding of the purpose of education suggests that distance learning should not lead to radically new things to set educational goals in general.

It is advisable to use general principles and recommendations when choosing the content of distance learning, but it should take into account the additional restrictions on the subject of education, which is far away, has a separate schedule of life activities and no physiological access to traditional education.

In addition, it should be borne in mind that distance learning cannot be carried out in all specialties.

Reading content can be viewed as a pedagogical model of social order. In addition, the learning process, methods of its implementation and organizational forms are, as a rule, determined by its content. Additional constraints on the object of education (subject) should be taken into account when developing the content of training using distance learning technologies. For example, he may be far away or may have a special schedule in his life, or he may have a physiological inability to study on the basis of traditional forms of education.

In distance learning, the content of training courses has a block-modular sequence structure. This allows to transfer education to a subjective basis, individualize and stratify the work with students, determine the amount of individual assistance, change the form of communication of the student with the tutor.

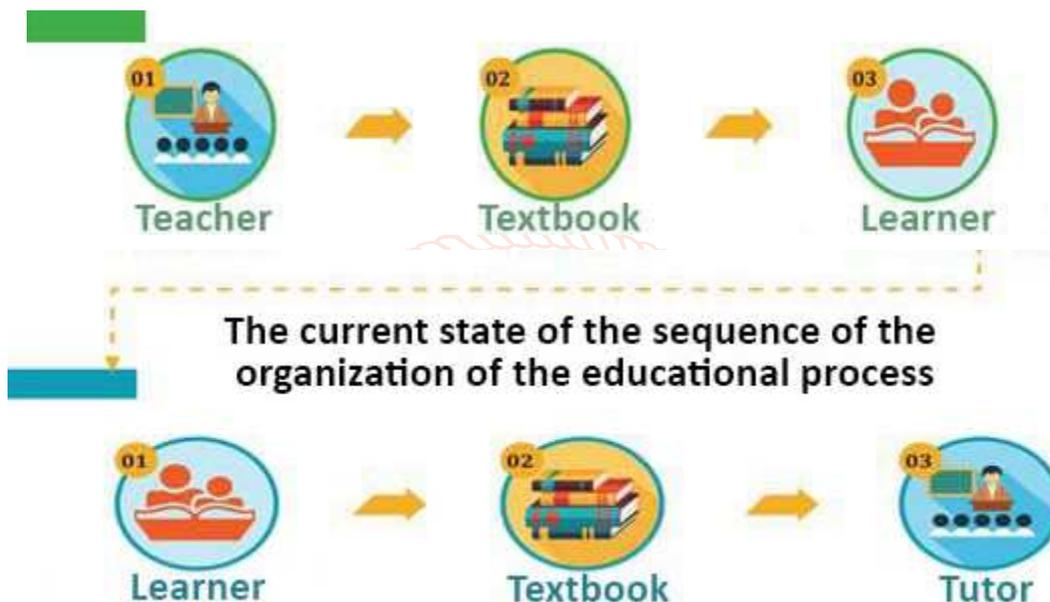
It is becoming increasingly popular to divide the material under study into logically complete parts: one question - one clear answer. Such an approach requires the author (tutor) to competently develop the theoretical material and divide it into semantically complete parts.

When thinking about the content of the courses, the theorists of the distance form of education point out that

the basic scheme of the whole educational process has changed. Traditional education can be conditionally represented by the formula "teacher - textbook - student". As the importance of individual creative learning activities of learners in distance learning increases, so does the role of the textbook. Thanks to the opportunities provided by hypertext technologies, learners gain the necessary knowledge and acquire useful skills in the process of working with electronic material.

Thus, a new scheme of the educational process "learner - textbook (teaching materials, information-educational environment) - tutor" is formed.

The old state of the sequence of organization of the educational process



Here, the role of the intermediate part, i.e. the textbook, is crucial in many respects due to the redistribution of some of the tutor functions in favor of the learning environment, which remains a key component. There is no doubt that there is no reason to think about replacing a tutor with a computer, because in distance learning the learner's work must, of course, be supported through constant contact with the tutor and other learners.

In general, on the basis of the above-mentioned didactic system, the following didactic model was formed in general.

The structure of the didactic model of distance learning includes goal-setting and content-setting, conceptual, content, technological, evaluation-control components.

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Constructive and Optimal Solutions for the Formation of a Stable Ecological Situation in the Aral Sea Region of Uzbekistan

Jumaniyaz Ramatov¹, Rozigul Umarova²

¹Professor, Doctor of Philosophy, ²Associate Professor,
^{1,2}Tashkent State Transport University, Tashkent, Uzbekistan

ABSTRACT

In this article, the formation of an ecological worldview in the world is not only a deterrent to global problems, but also means for environmental security, the solution of which takes place with the participation of human consciousness, reflection, intellect, intellectual potential and whole values and its ontological, epistemological, philosophical aspects within the Aral Sea region are analyzed.

KEYWORDS: Ecological worldview, spiritual values, ecological perception, imagination, notion and thinking

INTRODUCTION

Today, the Aral Sea region has environmental, socio-economic and demographic complex problems of international and global nature. Therefore, "prevention of environmental problems that harm the environment, public health and gene pool" [1] has become an important strategic task in Uzbekistan. This requires a scientific and theoretical study of the methods, means and ways of improving the institutional system, constructive and rational organization of environmental policy.

This claimed comprehensive scientific analysis of the problem at the national, regional and global levels. Nature protection is complex in essence and includes socio-economic, spiritual and political tasks. Among these tasks, ensuring the balance of natural water distribution, saving and maintaining purity has become an extremely important issue. Finding a solution has been moved to the center of the tasks that need to be solved in science, technology, economics, culture and ethics. And the seemingly innumerable wealth of the earth — only one-tenth of the total amount of water — can meet the needs of technology and man.

Method

Research methods: Historical-logical, objectivity, induction, deduction, analysis-synthesis, comparison and generalization, complex-systematic approach, comparative analysis and other philosophical methods of knowledge were used.

Results and discussion

Indeed, in recent times, the escalation geography of the environmental situation is constantly expanding, attracting more and more attention of the world community. In our country, the development of state organizations, public institutions, special environmental movements responsible for the formation and development of the ecological worldview is considered a priority of state policy.

The issues of improving the ecological situation in the country and the formation of a scientific and pedagogical complex of the individual ecological worldview put on the agenda. "Such problems cannot be solved only by administrative means; it can be achieved by cultivating in the hearts of the younger generation a love for Mother Nature, a sense of belonging to it." President of the Republic of Uzbekistan Shavkat Mirziyoyev at the 72 nd session of the UN General Assembly in 2017 expressed such views on the rational use of water resources in Central Asia, the active integration of international efforts to address the consequences of the Aral Sea tragedy. [2]

When a map showing the real state of the Aral Sea today was shown by our President, we think that this situation has not left anyone indifferent to the future of our planet. Also, in 2020, at the 75th session of the UN General Assembly, he said, "The catastrophic consequences of the drying up of the Aral Sea, the Aral Sea region has become the center of an environmental tragedy. To improve the current situation, we are doing a lot of work here to create two million hectares of new plantations and forests, to form a layer of soil. At the initiative of our country, the United Nations Multilateral Trust Fund for Human Security has been established for the Aral Sea region. We hope that this fund will serve as a base platform for the international community to provide practical assistance to the population living in a difficult ecological zone.

We propose to adopt a special resolution of the United Nations General Assembly declaring the Aral Sea region as a zone of environmental innovation and technology. It would be expedient to celebrate the date of approval of this important document as the International Day for the Protection and Restoration of Ecosystems." [3] They proposed the adoption of a special resolution of the United Nations General Assembly on the declaration of the Aral Sea region as a zone of environmental innovation and technology. They suggested that the date of approval of this important document should be celebrated as the International Day for the Protection and Restoration of Ecological Systems. It is known that in 1967 the XXII session of the UN General Assembly for the first time put on the agenda the convening of the International Conference on Environmental Protection. An international conference was held in Stockholm, Sweden, on June 5-16, 1972, declaring June 5 the International Day for Nature Conservation.

All of the above mentioned facts show that the issue of ecology is a topical issue on a global scale. Indeed, the Aral Sea is an important link that defines the nature of Central Asia. Just as Lake Baikal, which has become a major environmental problem today, is important for Siberia, the

Aral Sea is no less important for Central Asia, Kazakhstan, and the Volga region.

The drying up of the Aral Sea is influenced by a number of factors: The first is the expansion of irrigated agriculture on the banks of rivers flowing into the Aral Sea. Although in the early 1960s the irrigated area in the oases was 3.5 million hectares (1.6 million hectares in the Amudarya oasis and 1.9 million hectares in the Syrdarya oasis), the water reserves of the Aral Sea have not decreased compared to the 1930s. Over the past 20 years, the irrigated area has reached 2.4 million hectares in the Amudarya oasis and 2.6 million hectares in the Syrdarya oasis. Thus, the intensive expansion of irrigated areas was the beginning of an environmental tragedy for both the Aral Sea and the region.

Especially in the post-Amudarya years, the increase in water intake from Turkmenistan by 7 km through the Karakum Canal further complicated the fate of the Aral Sea. As a result, the Aral Sea lost 24% of its water in the 60s and 70s and 54% in the 70s and 80s. The flora of 600,000 hectares of land in the delta of the Amu Darya flowing into the Aral Sea has been completed. The main reason for this is the influx of salt from the dried-up areas of the Aral Sea.

The second reason is to save water from the Amudarya and Syrdarya rivers. not to use and to collect the waters of these rivers into artificial reservoirs. According to experts, the Amudarya and Syrdarya rivers flow an average of 120 billion m³ a year. With this water, 12 million hectares of land can be irrigated and farmed. Now 5 million hectares of land are irrigated. In addition, water from other water bodies, groundwater, is used for irrigation. Excess water from irrigation is collected in dozens of reservoirs. In particular, the Tukhtagul reservoir on the Naryn River can collect 19.5 km, the Chordara on the Syrdarya - 5.2, the Qairoqqum - 3.4, the Tuyamoyin on the Amudarya - 7.8 km.

It should be noted that as a result of the construction of artificial reservoirs in our country, 2,600 villages and 165 cities were flooded. The total area of the reservoirs is equal to the territory of France. [4] Currently, water conservation is not sufficiently controlled. There is a need to develop and implement a perfect, rigorous system of accounting and control. Fertilizer, machinery, fuel, labor resources should be allocated on the basis of a detailed plan, just as water is allocated on the basis of norms for each hectare or centner of field. It is necessary to set a strict limit on the amount of water supplied to farms with a differential approach to irrigated areas.

It is advisable to deduct the value of water used or wasted from the total income or to develop an additional incentive system for farming with less water than the norm. Consequently, the widespread introduction of family and brigade contracting on farms creates the organizational conditions for water-efficient use of water, i.e., the overtime work that the contract team receives at the end of the year, withholding a certain amount of money for overspending and wasting water, or using less water.

Knowing that there would be an additional material interest in saving it, and if this was strengthened in the contract between the farm and the contractor, the use of water would have been viewed from a different

perspective, of course. Wastewater from overuse in agriculture is causing serious environmental problems. In particular, it falls into freshwater basins and pollutes them, increasing the level of mineralization of groundwater, salting of soils and their conversion into swamps. The situation is particularly dire in the lower reaches of the rivers. [4]

The government of Uzbekistan is working to eliminate the consequences of the Aral Sea tragedy and ensure biodiversity around the region. In particular, saxaul fields are being built in the dry part of the Aral Sea. It is also trying to attract more investment to the region, drawing the attention of major international organizations to the Aral Sea problem. Even 50 years ago, the Aral Sea averaged 1,082 cubic km. There was a volume of water, and the area was 68 thousand sq. km. It is also 55-58 cubic km to the Aral Sea annually water was pouring. 2/3 of it flowed from the Amudarya and 1 part from the Syrdarya. The situation on the island was moderate, the salt content of the water was 11-12 g per liter. This means that the most moderate conditions for development were created in the Aral Sea region. So what are we in for now? Now the area has decreased by 10 times and the volume of water by 15 times. The level of the island dropped to 29 meters. More than 20 species of fish that could live in the Aral Sea alone have become extinct. For comparison, in the 60s of last century, up to 35 thousand tons of fish were caught per year. Today, more than 100 million tons of sand, dust and salt are extracted from the dried bottom of the Aral Sea every year, hundreds of thousands of kilometers. Such migrating salt and sand particles have been found in countries such as Norway, Japan, the Pamirs, the Alay, the Tien Shan, and the Arctic. [4] The first task before us now is to ensure the sustainable protection of the health of the population in the Aral Sea region, which is the first priority in the face of environmental tragedies. 5 million hectares that have dried up in the last 20 years. only 400 thousand hectares of land. saxophones were planted on the ground. So far, the focus on this issue has changed radically. For example, from December 2018 to April this year, 650 thousand hectares saxaul seeds were sown on the ground, 1 million one hundred thousand hectares. The branches were removed and the saxaul fields was ready for planting. Saxaul is such a plant that if you plant it in seven rows, it will be big enough to hold 90 percent sand in 5-7 years, and it will have the ability to reproduce on its own. This is the first feature of the saxaul. Its second feature is that the ecosystem in the area where the saxaul grows is moderate. Third, biodiversity will increase in those areas. [5]

Also, the joint program "Strengthening the living capacity of the population affected by the Aral Sea tragedy through the establishment of the Multilateral Fund for Human Security for the Aral Sea Region" funded by the UN Human Security Trust Fund and implemented by UN agencies [7] over three years in three model districts contributes the improving environmental safety.

Based on the experience of initiatives in Karakalpakstan in 2012-2016, the Council of Ministers of Karakalpakstan recommended that Moynak, Takhtakor and Shumanay districts, which are located in the areas of greatest environmental risk and have a population of more than 123,000, be designated as model areas for the new Joint Program. The implementation of the above-mentioned

projects may, albeit partially, solve the environmental problems associated with the drying up of the Aral Sea.

Conclusion

As part of the initiative to address the consequences of the tragedy caused by the drying up of the Aral Sea, today, as a result of efforts in this direction, the Trust Fund was established under the auspices of the United Nations. Funds are being mobilized with the support of the leading countries and international organizations.

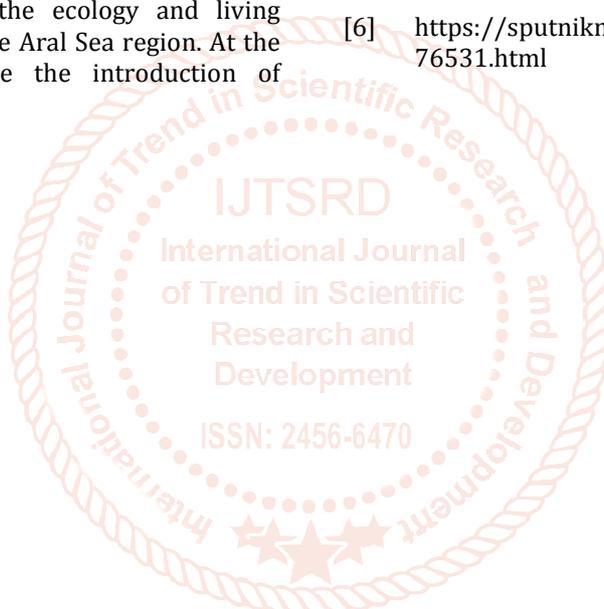
As a result of these measures, the living standards of the people of the Aral Sea region are improving. In this regard, Uzbekistan is mobilizing all opportunities and resources to settle this environmental tragedy. In particular, a number of projects have been implemented in the Aral Sea region over the past few years. In the arid zone of the sea, work is underway to create new plantations and forests with a total area of two million hectares, to form the soil layer.

The state program for the development of the Aral Sea region for 2018-2021 has been adopted. First of all, it will be possible to attract investments and strengthen international cooperation in the implementation of joint measures aimed at improving the ecology and living conditions of the population of the Aral Sea region. At the same time, it will be possible the introduction of

environmentally friendly technologies, the complex application of the "green economy" principles. In addition, mitigation of the effects of climate change for the Aral Sea region, the use of energy and water-saving technologies and the development of ecotourism will be provided.

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The Formation of Sociolinguistics as a Science and a Place in Linguistics

Rayhona Numonovna Nuritdinova

Teacher at the Department of Uzbek Language and Literature, Fergana State University, Fergana, Uzbekistan

ABSTRACT

The article examines the emergence of the science of sociolinguistics, role in the area of linguistics. About the researchers who contributed to the development of science and their scientific activities.

KEYWORDS: *sociolinguistics, social conditions, external factors, language, parole, blingvism, multilingualism*

Sociolinguistics is a branch of linguistics that studies language in relation to social conditions. The term "social condition" refers to the influence of external and internal factors on the language. Research methods should take into account a sociological approach. In other words, these factors play an important role in the development of the language. An external factor is a collection of people, society, social stratification of society - age, status, culture and level of education, living conditions, etc. External factors directly lead to changes in internal factors. These obligatory changes in the internal factor gave rise to the field of the sociological application of language. The peculiarity of this science is that it is a scientific analysis of certain common features, contradictions and differences between the "street" language and the literary language, subject to the rules.

The imbalance between language and its perception has existed since time immemorial. At the same time, the difference in language expression from a social point of view has long attracted the attention of many language experts. In the field of linguistics, Gonzalo de Correas, professor at the University of Salamanca, Spain, gave the first scientific information on this matter at the beginning of the 17th century. We can observe these differences in the speech of the population, distinguished gentlemen and officials, historians, scientists, elderly people, women and men and even small children"[1].

The term "sociolinguistics" was first used in 1952 by the American sociologist Herman Kerry. In fact, research in this area takes into account its roots in the early 19th century, and the foundations go back to European and Russian linguistics. The most important ideas of modern sociolinguistics in Russia in the first half of the 20th century were I.A. Baudouin de Courtenay, E.D. Polivanov, L. Yakubinsky, V.M. Zhirmunsky, B. M. Selishchev, V. V. Vinogradov, G. Vinokur; In France, F. Bruno, A. Mee, P. Lafargue; In Switzerland S. Bally and A. Sesche; Dj. Vandrislar Belgium, B. Havranek in Czechoslovakia. We see this in the research of Matesius and others.

The famous Russian linguist of Polish origin I.A. Baudouin de Courtenay was "one of the first to introduce the study of language as a living human language" [2]. He emphasized the need for language learning in close connection with the human factor, which is the creator. As

a result, the human factor came to the fore and a social approach to language emerged.

We see in the studies of many scientists of world linguistics that the sociological aspect of language is the main condition. Although the German scientist Schleicher viewed language as an organism, he did not deny that language is a social phenomenon [3]. The term "organism" means "function of the organism" and explained it as follows: "language is ... a means arising from the activity of organs" [4].

Thus, the Russian scientist moves away from the erroneous idea of language as a living organism and approaches that it is a social phenomenon. Since language is a product of human speech, it arises, develops and gradually improves as a result of human activity. I.A. Baudouin de Courtenay conducts deep research among people in order to study the language, analyzes the phonetic structure of the language. He independently develops a method of scientific full reflection of the language - a transcription system. V. Assessing the work of I.A. Baudouin de Courtenay, Sherba states: "... he was one of the first to study phonetics with deep understanding" [5].

Thus, I.A. Baudouin de Courtenay achieves his goal by focusing not only on the internal "original" side of the language, but also on the "external factors" influencing it. From all of the above, it follows that external factors affecting the language are social and psychological in nature.

As a result of the holistic development of society, views such as naturalism, erroneous in linguistics, disappeared, and the scientific study of language as a social phenomenon began to be observed in countries such as Russia, France and the Czech Republic. The linguistic institutions of these countries began to study language as a social phenomenon along with generative linguistics. Ferdinand de Saussure's views can be a prime example of this. He distinguishes between language (*langue*), speech (*parole*) and speech (*langage*). He considers speech activity to be multidisciplinary and connects it with several disciplines: physics, physiology, psychology. Evaluating speech as an individual phenomenon, language is a social and collective expression of speech abilities, a set of necessary conditions, a manifestation of a specific personality - that is knowledge, experience, age, sex of a person ... [7].

Ferdinand de Saussure's distinction between language and speech is one of the great steps towards the emergence of sociolinguistics.

The American descriptive school has been instrumental in bringing theoretical ideas to life. The uniqueness of

American life has led to differences in speech. The migration of people of different nationalities from all over the world and their interaction with each other and with the native Indians led to significant changes in the structure of the language. American scientists William Labov and Naom Homsy, who studied these changes, found theoretical and practical implications. completeness in the field.

One of the founders of modern sociolinguistics, American researcher William Labov, evaluates science as a field that studies "language in a social context." If we pay attention to this definition, we will see that sociologists pay attention to the language itself, to its internal structure and to the extent to which people who make up a particular society use this language. It takes into account all the factors influencing the language - from the specific characteristics of the speaker (age, gender, level of education and culture, type of profession, etc.) to the characteristics of a specific speech process.

William Labov, speaking at a scientific conference at the University of Pennsylvania on January 23, 1997, described science as follows. "Sociolinguistics is a branch of science that studies the methods currently used in America, is based on numbering (statistics), taking into account phonetic, morphological and lexical changes of words" [8]. It should be noted that, unlike generative linguistics, sociolinguistics studies the characteristics of the ideal mother tongue, which expresses correct sentences in a particular language, comparing it with the practical language of a society that violates the norms of speech, makes mistakes and confuses others. language elements.

Thus, the sociological approach to language has the following characteristics: -determines the degree of speaker use; - takes the internal structure of the language; - does not conduct special studies of the structural structure of the language, which is the object of generative

linguistics; - studies external factors affecting the language; - classifies speech manifestations caused by external factors; - studies the problems of bilingualism, blinguisim and multilingualism; - studies the origin and development of slang, slang in the language; This branch of linguistics is the latest field that is closely related to the development of society and is embodied in the form of a developing science. The role of sociolinguistics in the system of sciences is also unique, since it combines changes in language into a single object of study and determines its development and decline.

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Theoretical Aspects of Using of Multimedia Technologies in Teaching Foreign Languages

Dilorom Mardanovna Shamsiyeva¹, Dilfuza Norpulatovna Shakhnazarova²

¹The Dean of the Faculty “Foreign Languages” Navoispi, Uzbekistan

²The Russian Teacher, Navoispi, Uzbekistan

ABSTRACT

This article is intended to entirely describe the role of multimedia technology in modern education system, to show the importance of multimedia in teaching Russian, besides, in this article the main features and methods of developing multimedia projects will be mentioned.

KEYWORDS: *multimedia technology, distance learning, multimedia computer, multimedia textbook, multimedia game, hypertext, electronic dictionary, interactive board, online mode, information resource*

Modern system of education actively uses information technology and telecommunication computers. Especially, there is a dynamic development of distance learning system, which can promote further factors – provide educational institutions with high end computer technologies and development of cooperative Internet network.

The development of cutting edge technologies has brought new, unique chance of leading courses, introduction of distance forms of learning. First of all, it allow the users to choose time and place for learning, secondly, it opens up the opportunity to gain knowledge for people who are disabled to take traditional education because of some reasons, thirdly, using information technology, fourthly, to reduce the cost of education. On the other hand, distance learning can strengthen the opportunities of individual learning.

As a rule, electronic books are widely used in distance form of learning. The advantages of these books tend to be that they are mobile, secondly accessibility of networks with development of computer networks, thirdly, adequacy of level improvements of modern science. On the other hand, the creation of electronic books may also trigger some solutions and problems, such as constant updating of information materials. They can also consist of large number of exercises and examples, to illustrate in detail different types of information in loudspeaker. Apart from that, with the help of electronic books can be implemented control over knowledge – computer testing.

Multimedia computer – it is not only integrated data medium, it is the tool that can fully and adequately represent model “face to face”. Besides, only in computers can be implemented information – reference system on the basis of hypermedia reference, it is also considered as one of the main parts of independent learning. Usually, multimedia books may represent the group of learners, that are controlling, modeling and other programs which are placed in magnetic carrier, in which represented the main scientific content of disciplines. Multimedia text-

book is often supplement common on, specifically effective in cases when it: Provides practical instantaneous feedback; Can help to find needed information(including context search), the search which is complicated in usual textbooks; Considerably can save the time in repeated appeal to hypertext explanations; Along with short text it shows, tells, design and etc. (exactly in this place bring the opportunities and advantages of multimedia technology) allows to work fast, but in pace which is suitable for exact individual, to check knowledge by specific parts. Hypertext and hypermedia tools Hypertext – is the way of non-linear supplying of text materials, with the help of this can be seen some selected words, which have linkage to specific text fragments. In this way, users not only will turn over the pages of textbooks, but also can deviate from line description by some kinds of references, which means that the user can control over the information ex-change process. In the system of hyper media pictures can be used as fragments, whereas data consist of text, graphics, video fragments, sound. Nowadays, there are various types of hypertext formats available (HTML, DHTML, PHP and etc.) [15; c 42-46]

Electronic dictionaries – it is the lexical information that systematized in specific way (data base of dictionary), which is saved in computers memory, but it is also considered as the program for processing of information and presentation on the screen.

Electronic dictionaries connect some functions of interesting information searching demonstration of language regularities and gives the opportunity to master school materials with the help of some exercises.

On-line electronic dictionaries can be found in <http://www.chat.ru/~français language/diction.htm>. Such as, Multilex (electronic French-Russian and Russian-French dictionary, consist of more than 2500.000 words in Russian and French parts), Prompt (it is used for translation of applications from Russian into French and from French into Russian), Webster Dictionnaire (considered as one of the best dictionaries nowadays), Une vu – Diction-naire (electronic system of computer searching simultaneously in 112 dictionaries various subjects and directions), Lingvo (French – Russian and Russian – French dictionary, consist of 7000 words). In recent years, the usage of multimedia technology is being field effectively in all areas of teaching foreign language and during the lessons of participants from different group. Moreover, diversity of technologies in teaching allows to make the lessons more interesting and intriguing. This kind of approach can motivate learners in learning process, simplifies assimilating of foreign languages. For example, when working with hypertext

learners not only turn over the page of textbook, but also can affect from line description by some references which means they themselves can control the process of information exchange.

Interactive board: The usage of projection technologies in combination of audio tools gives the chance of attract students in the lessons when explaining new resources theses, tables, videos and reference materials, when analyzing texts - schemes and the information of electronic dictionaries. It gives the opportunity to carry out visual aids, availability and systemic description of materials.

In context of the above truly revolutionary invention is considered to be interactive SMART Board. By using this kind of board, teacher can combine proved methods and the style of working with common board with the set of interactive and multimedia opportunities.

Electronic board SMART allows: Active commenting upon materials: highlighting, definition, adding extra information by means of electronic markers with the possibility of changing color and thickness of lines. Full - fledged translation in terms of text translation and separated sentences with stated connection and interrelations between words; With means of virtual keyboards any kinds of text tasks in any applications and its demonstration in the mode of real time. Not only familiarity with test tasks in browsing mode, but also demonstrative testing of separated books or groups of students for all classroom, In schools computer classes absent or they are not available for teacher use for the moment; Saving of results in various separated file in the form of pictures or in HTML and PDF-formats.

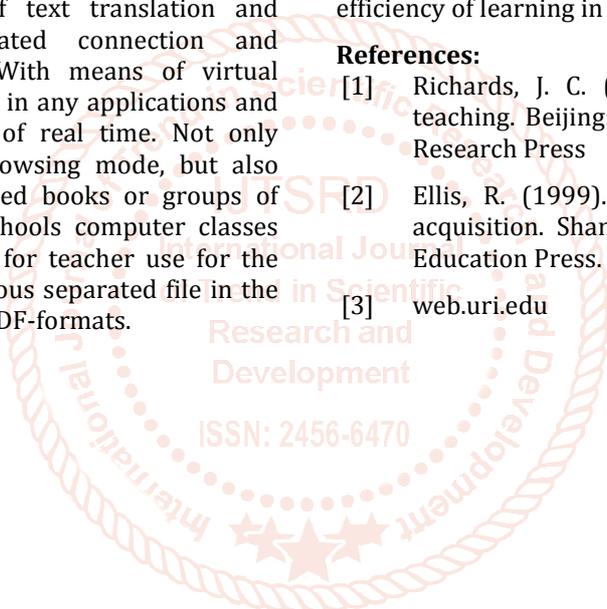
It should be signified that interactive board has positively impact on teaching foreign languages, as it is considered to be overt illustration of untraditional approach of teaching foreign languages. Teachers of a foreign language who have sufficient experience with an interactive whiteboard have identified for themselves its undoubted advantages:

- working with the board allows you to fully implement the principle of clarity;
- bright and attractive materials of the collection raise aesthetic taste in children;
- interactive board capabilities allow you to remove difficulties in the process of monologic utterance;
- The ability to cut and erase objects from the screen, copy and paste them, cancel or return actions gives students more confidence: they know that they can always go back a step, change or correct something.

Concisely, Interactive whiteboard features allowance for students to understand that video and game programs are successfully used for learning, contributing to the development of creative activity, fascination with the subject, and creating the best conditions for mastering listening and speaking skills, which ultimately ensures the efficiency of learning in foreign language lessons .

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To Develop Professional Training of Professional Education Specialists by Ensuring Continuity

Valiyeva Feruza Rashidovna PhD

Institute for Retraining and Advanced Training of Preschool Education Personnel and Manager, Uzbekistan

ABSTRACT

This article substantiates the relevance and necessity of the theoretical foundations of ensuring continuity and continuity in the process of training specialists, provides an analysis of scientific research, theoretical foundations, problems of their improvement; reveals the essence of the concepts of belonging and continuity on the basis of scientific analysis.

KEYWORDS: *continuing education, competitive personnel, didactic synthesis, educational cluster*

According to the new version of the Law of the Republic of Uzbekistan "On Education", one of the main principles of the state policy in the field of education is the basis of the system of continuing education, the priority direction of socio-economic development of the republic, meeting the economic, social, scientific, technical and cultural needs of the individual, society and the state, creating the necessary conditions for the formation and training of highly qualified competitive personnel, ensuring the consistency of educational programs at different levels in accordance with state educational standards and pre-school, general secondary, vocational education, higher education, postgraduate education, training and retraining, as well as extracurricular activities.

It is known that the system of continuing education in the country, as one of the most important social institutions for the modernization of social spheres and sectors of the economy, performs educational, pedagogical, economic, social and cultural functions. For their successful implementation, it is planned to create pedagogical conditions for the development of students' creative and independent thinking, professionalism and high spirituality. However, since each stage of social development requires the emergence of new requirements and needs, the methodology of continuing education also needs to be improved in a coordinated manner. They are focused on the analysis of the problems of the holistic development of the student's personality in general secondary and vocational education:

non-compliance of the knowledge and skills formed in the system of continuing professional education with the requirements for the level of social, scientific and technological development of the society;

- the discrepancy between the knowledge and skills acquired by students in the educational process and the structure of professional skills and competencies required to work as a specialist;
- inconsistency in ensuring the relationship, consistency and prospects of all components of the pedagogical system, including the purpose, content, methods, means, organizational forms of training and

education in the formation of the student's personality;

- The narrowness of the software and methodological support for speeding up students' activities based on the formation of skills for independent.

Based on these problems, didactic conditions are created to ensure the interconnectedness, relevance and purposefulness of the components of the professional and pedagogical system at all stages of the educational process for the development of a fully mature creative personality in the system of continuing professional education, the development of continuous professional training of future specialists. The stages associated with it represent the consistent development of future specialists as subjects of education in ensuring the continuity of professional education. In the national model of education, this idea is recognized as the main subject and object of the training system, the consumer of services in the field of education.

In this study, the continuity of learning in the educational process is considered as a system that includes a number of structural components that correspond to practical learning (in content, form, methods and tools). At the same time, integration in the process of practical training is carried out in the form of three types of components:

- in the context of training
- in the methods, forms and didactic methods of teaching
- in training manuals.

It should also be noted that the structural components of the continuity principle are interrelated with some other general didactic principles (consistency and structure in training, popularity), which are common to all educational institutions and characteristic of vocational education institutions (professional orientation, educational and work motivation).

In the system of continuing professional education, the continuity of the training content remains relevant to improve the effectiveness of the development of multi-level educational programs. The membership-based learning process provides quality training for professionals.

Continuing professional education is aimed at the holistic development of a person throughout life, expanding opportunities for appropriate employment and social adaptation in a rapidly changing world, while in traditional education, a person is considered as a program element of the education system.

Continuing education is formed through the independent acquisition of knowledge, skills, abilities and competencies, their search and discovery, independent teaching methods.

Based on scientific analysis, it can be concluded that membership is an interconnected system between all the stages that arise on the basis of each stage of the learning process and constitute its internal conditions.

The principle of "continuity" in education can be considered in several different forms: by type of education, stages, disciplines and topics. It should be noted that continuous learning is an integrated learning system that is based on a logical sequence and consists of stages that develop from simple to complex and complement each other.

The next level of integration of the content of education is the level of didactic synthesis. This level of integration of academic disciplines is based on one of them. At the same time, each of the interacting objects retains its status and conceptual basis. The level of didactic synthesis implies not only the integration of subjects, but also the

procedural synthesis established by it, which implies, first of all, the integration of forms of educational activity in general education and professional science. The study of interrelated educational material through integrated didactic synthesis in the learning process, that is, the assimilation of certain professional material occurs in the process of its study in the general educational process.

One of the mechanisms for the development of vocational education is a cluster approach based on interaction, cooperation, and dialogue between stakeholders, i.e. educational institutions, employers, government agencies, and public organizations. One of the forms of cooperation is the creation of educational clusters in the regions. The need to address the cluster approach is determined by the advantages of the cluster, which is an organizational form of combining the efforts of stakeholders to improve the effectiveness of the regional system of vocational education (figure -1).

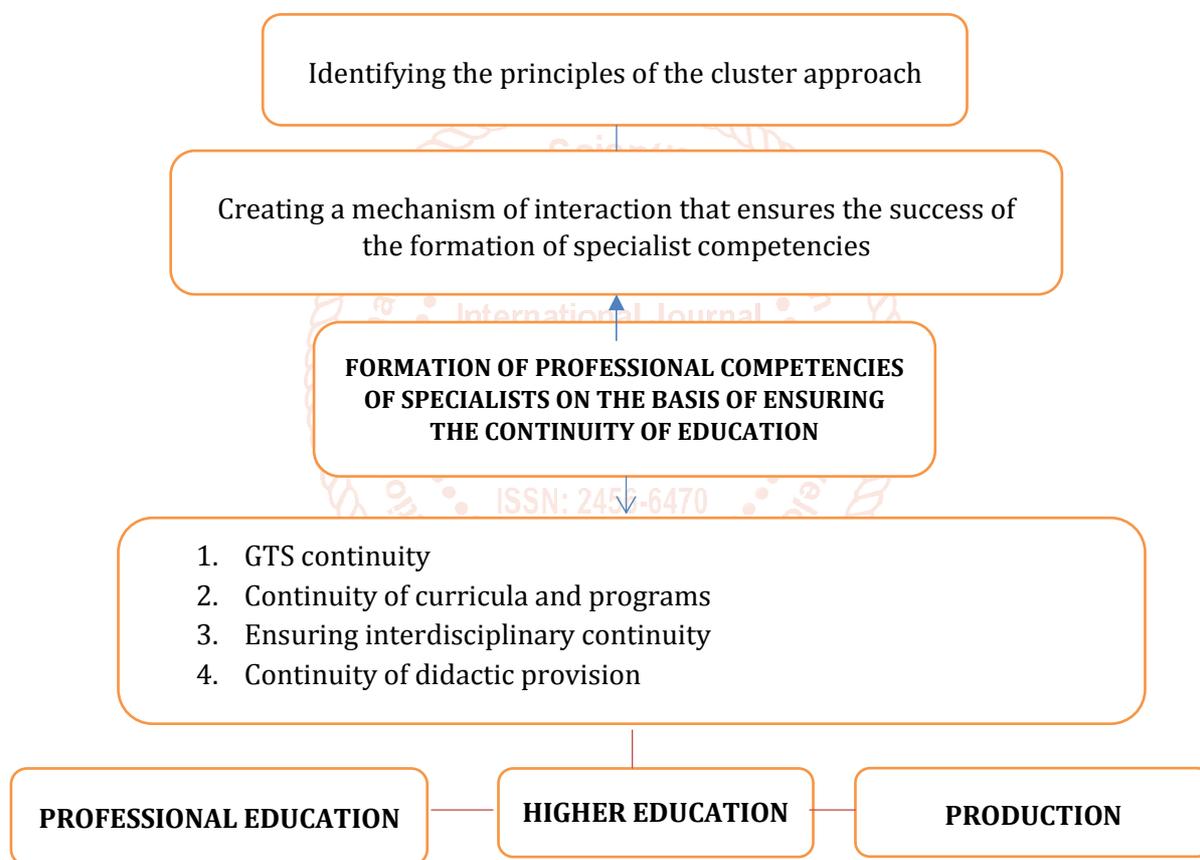


Figure 1. Cluster approach in the formation of specialist competencies in the system of continuing education

An educational cluster is, on the one hand, a set of interconnected professional educational institutions that combine industry characteristics and partnership with industrial enterprises; secondly, it is a means of learning, mutual exchange of experience and self-determination, located in an innovative, mainly horizontally connected science-technology-business chain.

The cluster approach in vocational education is to coordinate the needs of production and training programs. Production associations form orders for the training of highly qualified specialists in vocational education institutions.

There are three organizational and pedagogical conditions for multi-level professional training of future specialists in the system of continuing professional education:

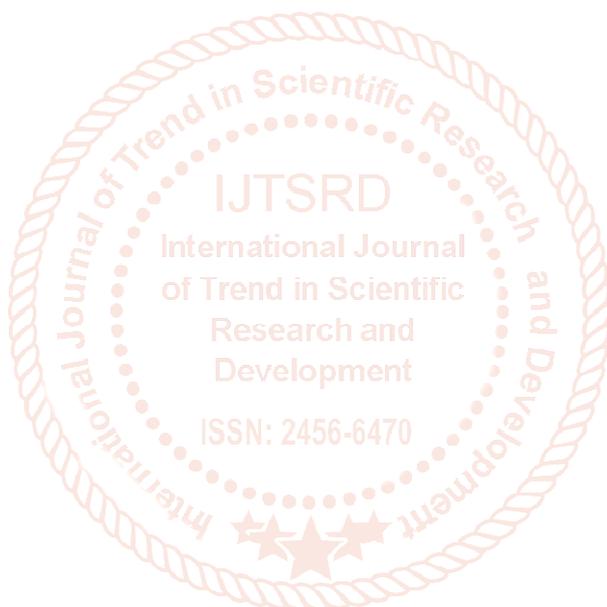
organizational and managerial (acceleration of training), psychological and pedagogical (implementation of the pedagogical principles of cultural studies), practical and methodological (control of educational and methodological work and control of the results of educational and production activities) blocks.

We can conclude that the cluster approach to vocational education is the formation of orders by production associations for the training of highly qualified specialists

in vocational educational institutions by determining that the needs of production and training programs are coordinated, and all levels of vocational education are interconnected and interactive.

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Analysis of a Korean Household Fairy Tale

Madinabonu Yusufjonova

Trainee Researcher of Namangan State University, Namangan, Uzbekistan

ABSTRACT

The richest idea about life and aspirations, about the joys and sorrows of the Korean people, about their way of life and traditions are given by everyday tales. The literature of every nation is rooted in oral folk art and at all stages of its development, literature maintains a connection with folklore. Tales broadens the mind, awaken interest in the life and work of people.

KEYWORDS: *fairy tales, tales, fables, once upon a time, labor, yangban, chongmin, hero, slave, magic*

The heroes of everyday fairy tales are, as a rule, ordinary people. They achieve success not with the help of sages or heavenly fairies, but thanks to hard work, intelligence, ingenuity, dexterity. Most often these are peasants or farm laborers - mosymkun or commoners - chongmin. The tales of this cycle sparkle with humor, they ridicule such human vices as stupidity, greed and envy. The plot is usually built on a disagreement between the hero and his ill-wishers. A poor man who is downtrodden and oppressed in life is completely transformed in a fairy tale and emerges victorious in a kind of duel.

The hero of many everyday tales is the Yangban nobleman. But it is necessary to emphasize the originality of the Korean yangban. If in European fairy tales the "poorest" landowner had land, an estate, a servant, then the yangban in old Korea was often naked like a falcon. Many representatives of the Yanban estate vegetated in want and even beggarly. The Yangbans often fed off their wealthy relatives while living in their home. Chasing the yangban was not allowed by strict kinship laws. In Korea, such impoverished yangbans were called mungeks, or hangers-on. In a number of tales, the arrogance and arrogance of the Mungek-Yanban are caustically ridiculed.

In old Korea, scholarship inaccessible to the common people was highly revered. A person who learned a thousand or two hieroglyphs and read several Confucian books was considered an educated scientist. The Confucian scientist in Korean fairy tales is a peculiar figure. Confucian teaching, which came from China, was elevated in Korea to the rank of state ethical and religious norm. Knowledge of Confucian dogmas was necessary to pass exams and enter an official position. All the education of such "scientists" was reduced to the canonical books memorized by heart in the ancient Chinese language. Usually these "scientists" were poorly versed in the simplest life questions. It is not for nothing that the people said about them: "A Confucian scientist, but he cannot draw up a receipt for the payment of tax on a bull." The Koreans have put together many tales about such would-be scientists, where their ignorance and complete ignorance of real life is ridiculed ("Sly farm laborer Tolsve").

A curious feature of Korean groom tales is that the hero wants to marry not a young girl, but a young widow. Confucian morality preached the wife's reckless loyalty to the memory of her deceased husband. Even the bride was not supposed to marry another if the groom chosen by her parents died. And now the fairytale hero, contrary to Confucian prohibitions, takes care of the widow. This probably expressed a kind of protest against the disenfranchised position of women in old Korea.

Among Koreans, tales about the relationship between the poor and the rich, about cunning and dexterous people, about a smart guy, about fools, fools, about monks, about an unhappy lot, about happiness, and so on are widespread and love. Heroes of everyday fairy tales achieve victory with the help of dexterity, cunning and trickery. Opponents turn out to be slow-witted and narrow-minded and easily fall for their tricks.

Sometimes the heroes of fairy tales are dodgers, often thieves and robbers. Such was the hero of the fairy tale "The Sly Farm Laborer Tolsve". "The Sly Farmer Tolsve" is a Korean folk tale from the "Tales of the Nations of the World" series. A classic everyday fairy tale in which the hero acts in a familiar environment. The hero himself is from the lower classes. He has to rely on his quick wit, resourcefulness, and his assistants are not magic objects, but the stupidity and greed of the owner. The fairy tale mentions twice a meal, which has an important meaning in Korea (due to the peculiarities of traditions: when they meet, they often ask each other out of politeness "did you eat well"), which is why the key plot turns occur: during the first eating, when the rich man goes to take exams, he took the farm laborer Tolsrsi with him to serve him on the way, but because of the heat, the rich man ordered his farm laborer to go to the nearest tavern to buy kuksa (noodles in cold broth). In such heat, and Tolsva wanted to eat and cool down, and he decided to teach the rich man a lesson, put his finger in the bowl with the kuksu and told the enraged owner that the fly had fallen there, then the rich man himself went for the kuksu and ordered Tolsva to stay looking after the donkey and be on the alert, if robbers will come and stab him in the eyes. So here too, the cunning Tolsve taught the owner a lesson, gave the donkey to the peasants working in the field in the sun, and was left with stumps of cloth. When the rich man returned, he stood with his eyes closed and explained to the owner that he closed his eyes, fearing the robbers. Then the rich man got furious and wrote something on the back of Tolsva and ordered him to return to the village, but the smart farm laborer guessed that the rich man had something in mind and asked one person to read the hieroglyphs, and there it was written, to punish this farm laborer as soon as he returned. ... Tolsve asked this man to rewrite the letter, they wrote that upon his arrival they would marry him to the daughter of a rich man and give him land. The farm laborer returned to the village and

married the rich man's daughter. The rich man returned five months later and learned about Tolsva's deception and immediately ordered to throw him in a sack into the sea. When the servants carried him out to sea, they got hungry on the way and went into the tavern, leaving the sack under the tree. Tolsve got out of the bag with the help of those peasants whom he helped, and they stuffed a wild boar into the bag. The servants, without suspecting anything, threw a sack with a wild boar into the sea, and Tolsve returned back to the village two months later and deceived the rich man, that the sea inhabitants saved him at sea, that the sea king Dragon calls his master to his kingdom and prepared expensive gifts for him, and in return I asked only to take the millstone with me. So the rich man was deceived by a simple farm laborer Tolsve and was punished for his greed by jumping into the sea with heavy millstones, and Tolsve himself returned to the village and lived there happily with his wife.

Of course, the heroes of such tales are not the spokesmen for the popular ideals of a fighter against social injustice. But dodgers and thieves usually deceive only the rich, thereby, as it were, against the exploiters of the people. They are very brave, resourceful, do not reckon with the shy norms of the old way of life. With the courage and independence of their character and actions, they are liked by oppressed and downtrodden people. The plots of such tales are quite entertaining, full of adventure, which explains their popularity.

The composition and depiction of the heroes of fairy tales on social themes is based on contrast, the opposition of positive heroes to negative ones. Negative characters, patriarchal rich men, merchants, educated people are depicted in a satirical manner. They die because of their greed, stupidity and ignorance. Many everyday tales are of a pronounced satirical character, in which the people conquer their enemies with laughter and sarcasm. The Korean folk tale-parable "Poisonous persimmon" has a similar content.

"Once upon a time, there were two monks in the same monastery - an old and a young one. The old monk was very stingy and greedy: he hid dried persimmon in the closet and never gave it to the young man. He didn't even allow to try, but he ate and ate - always alone. And each time he would say: "Don't you ever try to eat what I have in my closet! You will die right away!" ... Once the nun, left alone, ate all the dried persimmon, smashed the old monk's favorite ink and went to bed. Returning the old monk asks: "What happened, why are you lying?" ... "The young monk answers in a barely audible voice: - Teacher! I have committed a mortal sin: I accidentally smashed your favorite ink painting. Let, I think, fate will punish me: so I ate everything that was in your closet ... Fierce anger twisted the face of the old miser, but what can you do?" [6, p.209]

Just as widespread are fairy tales, anecdotes, small comic stories about human shortcomings and vices: stupidity, avarice, cunning, etc. Making fun of stupidity, a fairy tale affirms the human mind, condemning avarice, encourages generosity and hospitality. For example, there are many fairy tales-anecdotes about fools, and an example for this is the Korean folk tale "About a fool":

"Once a man went to the market. He got hungry and bought a rice cake. But the poor fellow was so hungry that

one cake seemed to him not enough. What I ate, what I didn't eat - everything is one. ... Then he decided to buy some more boiled potatoes. But he was not satisfied with this either. And then with the rest of the money he bought es - a candy made from rice and sugar. He ate and suddenly felt that he was finally full. He hit himself on the forehead with annoyance and said: - What am I slow-witted! I ought to buy it right away, but I bought a cake or potatoes. This is how the fool warmed up, not realizing that he was full not because he ate, but because before that he had eaten both a cake and potatoes." [6, p.212]

This tale, most likely, looks like a fable, but there is still a sense of humor when the title of the tale is justified in the same fool. Most of the everyday jokes are small in size, without any detailed descriptions. They often contain dialogues. Anecdotes are distinguished by irony and humor.

Likewise, we cannot but single out an everyday fairy tale, which is purely instructive in nature and describes family relationships. This is the tale "Three Brothers". This tale is about greed, which gives rise to cruelty and about paying for one's deeds with "the same coin".

"There were three brothers in the world, and they wanted to dig up ginseng to become rich. Happiness smiled at them, and they dug a root at a cost of one hundred thousand cash. Then the two brothers said: "Let's kill our third brother and take his share. And so they did. And then each of them, who survived, began to think how he could kill his other brother. So they approached the village. - Go, - said one brother to the other, - buy some suli (vodka), and I will wait for you. When my brother went to the village, bought some suli and walked with her to the brother who was waiting for him, he said: "If I kill my brother now, all the promises and the whole root will remain for me. He did just that: he shot his brother, but drank the suli. But Promise was poisoned because the murdered man wanted to poison his brother with it. And all three of them died, and the expensive ginseng root rotted away. Since then, Koreans are not looking for any root or money, but are looking for more brothers." [6, p.217]

As you can see, in many everyday tales and anecdotes, a critical approach to reality is strongly developed - criticism of the conservative orders of patriarchal life. The images of the oppressors of the people are shown in satirical terms. The fairy tales express the moods and dreams of workers about a better life, about the establishment of justice on earth.

At the same time, the tales reveal the limitations of the peasant worldview, the dream of an intercessor for the poor and disadvantaged.

Conclusion

Fairy tale is one of the most interesting genres of Korean oral art. The struggle between good and evil, love for the native land, belief in the triumph of justice, a bright future - all this is reflected in Korean fairy tales.

Korean everyday tales are characterized by a detailed, realistic description of society, the clothes of the heroes, and the customs of the country. In fairy tales, the people exposed landlord parasites, vicious monks, stupid and predatory officials. People's ingenuity, observation and wit are expressed in numerous proverbs and sayings.

Household tales are short. There is usually one episode in the center of the plot, the action develops quickly, there are no repetitions of episodes, the events in them can be defined as ridiculous, funny and strange. Comic is widely developed in these tales, which is determined by their satirical, humorous, ironic character. Also, there are no horrors in them, they are funny, witty, everything is focused on the action and features of the narrative that reveal the images of the heroes.

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The Development of the Educational Activity of the Manager as a Factor and Result of Improving His Skills

Kh. Kh. Khakimjonova

Senior Lecturer, Institute of Pedagogical Innovations, Retraining and Continuing Education of Leading and Pedagogical Personnel of Vocational Education, Uzbekistan

ABSTRACT

This article deals with the problems of developing the educational activity of the head of professional educational institutions as a factor and result of improving his qualifications. The level structure of the educational activity of the head in the process of improving his qualifications is developed.

KEYWORDS: Educational activity, subject, subjectivity, components, Adaptive, Presentational, Integrative

The activity of the head of professional educational institutions, unfolding in the process of improving his qualifications, can be characterized by the concept of "educational activity", which is expressed in the ability of the head to independently create and implement their own educational program of professional development. In other words, educational activity is considered as a characteristic of the subject in the activity of training while improving their skills. The problem of a person as a subject of social activity, which is based on individual experience, has long been widely developed in the psychological and pedagogical literature. Various phenomena of subjectivity, components of subjective experience, basic needs of the individual, various characteristics of subjectivity, principles of organization of educational systems that develop subjectivity are analyzed.

In this connection, let us turn to the concept of subjectivity. B. G. Ananyev wrote: "... a person is primarily a subject of the main social activities -work, communication and cognition, through which both the interiorization of external actions and the exteriorization of the inner life of a person is carried out» [1].

The basis of the subject's activity is individual experience. According to V. N. Myasishchev, the subjective experience reflects: the biography of a person, various influences, the results of everyday life and real relationships with the surrounding world, which makes the process of cognition a personally significant comprehension of this world. Experience is carried out in the form of accumulation of knowledge, skills, skills and relationships, but the personality is formed not by knowledge, skills and skills, but by relationships[2].

Osnitsky A. K. identifies the following components of subjective experience: 1) value experience (associated with the formation of interests, moral norms and preferences, ideals and beliefs); 2) experience of reflection (accumulation by correlating a person's knowledge about their capabilities and possible transformations in the subject world and himself with the requirements of the activity and the tasks solved in this case); 3) experience of

habitual activation (involving preliminary preparation, rapid adaptation to changing working conditions, calculation for certain efforts and a certain level of success); 4) operational experience (including general labor, professional knowledge and skills, as well as self-regulation skills); 5) experience of cooperation (formed when interacting with other participants in joint activities) [3].

Let us turn, first of all, to the concept of the activity of the subject: among the characteristics of subjectivity, it occupies a special place, combining the categories of motive, attitude and action.

According to A.V. Petrovsky, activity, as an active state of the subject, is determined from within, from the side of his attitude to the world, and is realized outside - in the processes of behavior. The internal basis of activity is the motives, goals and the fund of individual skills, the external-activity: a holistic motivated and targeted act of behavior. Activity acts as a transformation of the relationship between the needs of the subject and the possibilities of their satisfaction [28, p. 259-264].

The activity of the individual depends both on the subject of the activity and on the conditions in which this activity unfolds [5]. A person is always a subject of the historical and social process as a whole, a subject of concrete activity, in particular, a source of knowledge and transformation of objective reality. At the same time, the activity itself acts as a form of human activity that allows him to improve the surrounding world and himself.

We believe that the activity of the listener can be considered in two different, but interrelated aspects: activity in a specific learning situation and activity as a quality of personality, with the former participating in the formation of the latter. The term "creative activity" is understood as the activity of the student in creative activity, and not as the level of his activity in general. Gradually, the structure of the need-motivational sphere becomes more complex, the level of independence and consciousness increases, activity begins to be realized in activity and, thanks to practice, becomes a habitual form of behavior. Cognitive activity is manifested in the direction and stability of cognitive interests, the desire for effective mastery of knowledge and methods of activity, in the mobilization of volitional efforts to achieve educational and cognitive goals. Being a condition of cognition, cognitive activity is not an innate trait - it is formed in the process of activity itself and at the same time affects the quality of this activity.

Therefore, the concept of educational activity, in which the reflexive aspect dominates more than in cognitive activity,

is preferable. On the other hand, the use of the acquired knowledge in the specific conditions of educational institutions for the improvement of pedagogical activity is connected with creative activity. Thus, educational activity fills the gap between cognitive and creative activity, combining the categories of cognition and creativity in the activity of the teacher's teaching.

Studying the educational activity of a manager in the context of his professional development activities, we consider educational activity as "a professionally significant quality of a manager's personality, which is expressed in his ability to independently build and implement his own educational program in the process of professional development".

We also identified a number of indicators that allow us to judge the change in the level of educational activity of the head in the learning process, which were used in our

study: the content of an individual educational request to the educational program, the features of the content of the educational program, the direction of educational activity, the involvement of the head in the educational process and independence in creating an educational program.

First of all, let's consider the content of an individual educational request. Adaptive educational activity of a teacher forms an information and methodological request most often for new information in the normative field of professional development content. The presentational educational activity of the teacher presents the educational program with a demonstration and methodological request for new types of activities or new technologies and leads to the unification of teachers in homogeneous groups on similar problems. At the integration stage, a request is formed to develop problems and projects with other people, and heterogeneous groups are created.

Table 1 The level structure of the educational activity of the head in the process of improving his skills

Indicators of educational activity levels	Levels of educational activity		
	Adaptive	Presentational	Integrative
Content of the individual educational process	informational and methodological (most often for new information in the normative field of contents)	demonstration and methodological (for new types of activities, integration into homogeneous groups on similar problems)	the request to develop problems and projects with other people, the emergence of goethe-rogen groups
Features of the content of the educational program	selection of content from the proposals of the organizers of the professional development program	horizontal connections are expanded, and a choice is made from what is proposed by colleagues	managers themselves determine the order of work, create their own " educational route»
Orientation of educational activity	to satisfy an information request	the opportunity to present and evaluate their experience	to rethink their own experience and transform it through the creation of joint projects
Involvement of the supervisor in the educational process	low, reproductive	quite high, but the individual experience is presented in the context of only the existing problems	high, expressed in proposals for the development of projects
Independence in creating an individual educational route	there is no independence in the choice of educational programs	developed independence in the formation of the educational route, but requires consultation with teachers developed independence in the formation of the educational route, but requires consultation with teachers	when forming an educational route, there are also consultations with colleagues, a large degree of independence of the head in the educational process

Thus, it is established that educational activity is one of the professionally significant qualities of the personality of the head and, being an integral characteristic of the personality, is able to develop. Educational activity is considered in accordance with the objectives of the study, as a condition for the professional and personal growth of the head in the context of the problems of continuing education, namely, the problems of improving the skills of the head of professional education.

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Contents of Preparation of Future Entrepreneurs of Motor Transport Enterprise

Raxmatullaeva Durдона Ravshanovna PhD

Associate Professor of the Institute of Pedagogical Innovations, Retraining and Advanced
Training of Leading and Pedagogical Personnel of Vocational Education, Tashkent, Uzbekistan

ABSTRACT

The article discusses the content of training of students to the enterprise activity in the direction of preparing Motor transport sector and establishes the principle of building a system of training the content of teaching students to become entrepreneurs.

The contents of educational training system to the enterprise activity based on the principles of continuity, consistency, continuity modularity, applied direction and variation.

KEYWORDS: *systemic approach, entrepreneurship, competence, principles motor vehicles, continuity*

Assurance of high quality of preparation of graduates for entrepreneurial activities requires a systematic approach, concentrating best practices in the organization of theoretical and practical training of preparation for entrepreneurial activity.

The implementation of such approach is possible, in our opinion, on the basis of a multilevel system of educational process aimed at the development of each stage of training the students of a certain functionally complete set of theoretical knowledge and practical skills of entrepreneurship. The objectives of such a system must be:

1. Development of motivation to entrepreneurial activities, creative approach and self-determination.
2. Formation of students' competence in the field of entrepreneurship.
3. Assurance of compliance of competence of graduates with modern perspective demands of the business [1].

Key goals should contribute to solving the main task – development of principles of organization of the content of theoretical and practical learning of entrepreneurial activities taking into account the continuity of educational programmers, integration of vocational preparation by profession and preparation for entrepreneurial activity.

The basis for the development and content of the pedagogical system of preparation for entrepreneurial activity was based on the following principles:

1. The principle of continuity, i.e. continuity in the system of knowledge acquired in the system of secondary and vocational schools, to expand the theoretical base and to adapt its preparation to entrepreneurship, to give a basis for continuous improvement of knowledge, abilities and skills in terms of changes in the business environment.
2. The principle of advanced education. Principles of selection of teaching content and methodology for business activities must ensure the formation of students'

modern ideas about the role of entrepreneurship in society.

3. The principle of applied orientation of training. You must create skills of practice-oriented actions for implementation of business activity with a clear understanding of the goals and objectives, ability to independently choose methods of entrepreneurship.

In educational institution, the educational content is the content of activity of subjects of educational process. It is specified in the curriculum of the educational institution. The content of each discipline of the curriculum is elaborated in work programs.

We have done the analysis of subject content of working programs of courses within the system of methodical, as well as psychological-pedagogical and methodological literature on motor transport specialties. The best that meets the objectives and the level of preparedness of students, as well as the requirements for educational technology was selected from a set of known psychological and pedagogical technologies, forms and methods of training:

- compliance of the developed system with resources of vocational college;
- sufficient regularity and system compatibility with existing pedagogical process;
- adequate controllability of technology, the availability of diagnostic tools for its support;
- Repeatability — applications of technology in similar conditions.

Organization of an appropriate training of specialists for entrepreneurial activity in the motor transport sector requires the formation of corresponding methodical base [2]. Particular characteristics of teaching of entrepreneurship is that the subject itself - the entrepreneurial activity is characterized by a highly dynamic, complex, multi-disciplinary approach. To establish the sequence of study of subjects forming the basis of preparation for entrepreneurial activity, their interaction with the subjects that make up the content of professional training of specialist of road transport sector, the construction of the log frame of training, it is required to determine which types, methods, tools, entrepreneurial activity will be examined within the framework of the designed system.

To reflect the sequence of study of subjects, providing continuity, logical validity, regularity in the formation of knowledge, the interrelationship of disciplines it is necessary to develop a log frame, the content of training to entrepreneurship.

A distinctive feature of the training is the continuity of disciplines, involving the development of learning outcomes obtained at one stage of the learning, henceforth on the next step and focus on the end result, ensuring the formation of theoretical knowledge and practical skills needed for the final phase of entrepreneurship training – graduation paper.

For example, lecture classes form the knowledge of technology, work performed and technics as well as forms professional position of the future specialist on the organization of work, as options for used equipment and technologies are considered [3].

The acquirement of professional knowledge, skills, reinforcement of skills, and manifestation of qualities of a specialist occur during preparation of coursework. Coursework is independent activity that requires from students a creative approach, a deep knowledge of the goals, objectives of coursework, and skills of selection of ways to achieve them. Of particular importance is the public defense of work performed, which contributes to the formation of communicativeness, the ability to conduct a dialogue, economic thinking, the ability to use innovation, etc.

Students carry out all types of independent work within the developed system of training. The main form of independent work — study of additional literature, regulatory documents on the topic as directed by teacher and independently in the reading rooms, libraries by taking notes from texts. Assessment of the level of students' independent work is conducted in practical classes, scientific conferences, as well as during tests and examinations. At the same time, independent work are practiced in the form of abstracts on the theme, design work, small projects, and creative works in the form of model preparation-samples of road sections, structural elements, samples of work organization (technology of road surface repairs), schemes (controlled intersection), tables, drawings, videos, pictures, etc.

Independent work of students is the continuation and deepening of acquired knowledge, abilities and skills during lectures and practical sessions [4].

Thus, **at the first stage** of preparation of students for entrepreneurial activity the students get aware of the importance of entrepreneurship in society, in the field of transport, in particular, study of its kinds, substantive and organizational forms. This stage provides the understanding, familiarization of the future entrepreneur with the essence of this activity, the basics, and terms. The students acquire the culture of the entrepreneur, skills of

professional behavior, level of legal culture, ability, knowledge and entrepreneurial activity in the field of the motor transport sector.

The second stage of preparation (of students of professional colleges) to business activity allows us to shape the professional behavior of an entrepreneur, qualities of citizenship, the political culture of the future specialist.

The third stage allows students of higher educational institutions forming modern economic thinking for a competitive specialist, adapted to market conditions, with developed cultural skills and competencies of professional behavior. This construction of the educational process provides continuous preparation of students to entrepreneurship, allowing acquiring necessary knowledge, ability and skills.

Of particular importance in the preparation of entrepreneurial activity is the educational component, the most significant components of which are moral, civil and legal education, which involve:

- nurturing the respect for achievements of previous generations in the field of entrepreneurship, the development of moral and patriotic value orientation;
- high level of social responsibility for the outcomes of entrepreneurial activity;
- formation of modern economic thinking of competitive specialist, focused on market reforms, the recognition of the values of private sector investment in the overall development of the industry and socio-cultural sphere;
- development of cultural skills and competences of professional behavior of the future entrepreneur of the motor transport field.

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Bioecology, Agrotechnology and Medicinal Applications of Pink Catharanthus Plant

Rasulova Feruza Gofirovna¹, Ergasheva Nargiza Xoljura Kizi²

¹Head of the Department of Medicinal and Spicy Plants of

Andijan Institute of Agriculture and Agrotechnology, Andijan, Uzbekistan

²Master's Student of Andijan Institute of Agriculture and Agrotechnology, Andijan, Uzbekistan

ABSTRACT

The modern scientific name of this plant is pink catharanthus (*Catharanthus roseus*). It is formed from the Greek words catharos ("clear, pure") and anthos ("flower") and perfectly reflects the characteristic feature of the plant - unusually pure shades in the color of flowers.

When scientists first saw the plant, they decided that it was the closest relative of the famous and beloved in Europe periwinkle (*Vinca*), and therefore attributed it to this genus. And for a long time the plant was called pink, or Madagascar, periwinkle. But then the botanists took a closer look at him and realized that the mistake came out - not the brother of the periwinkle of the Madagascar guest, but only a cousin. The species migrated first to the genus *Lochnera*, and then to the genus *Ammocallis*, and only in 1837 a new genus *Catharanthus* was described.

While scientists were putting things in order in the classification, growers got used to the name pink periwinkle, or rosé wine, and still rarely use the correct name - catharanthus.

KEYWORDS: Pink periwinkle, cayenne jasmine, maiden, wheel rim, fertilizers

The plant is widespread in India, Indochina, the islands of Java, Saint Mauritius, Madagascar, the Philippines, Cuba, Reunion. In the former USSR, the first work on the introduction of the catharanthus was started in 1958 in the subtropics of Western Georgia. It is cultivated in Western Transcaucasia, in the Kuban, in Southern Kazakhstan. In more northern regions, it is traditionally considered an indoor perennial, but recently it has been increasingly used to decorate street compositions in annual culture.

Tropical evergreen shrub up to 60 cm high. Stems are erect, branched in the upper half. Leaves are opposite, sessile, oblong-lanceolate, entire, dark green with a white midrib, shiny, up to 7 cm long. Flowers are five-membered with a wheel-shaped corolla up to 3 cm in diameter, pink, sessile in the axils of the upper leaves. The fruit is a bivalve sickle. Seeds in our conditions are not tied. A plant grown from seeds planted in late winter will bloom in late spring and bloom until fall.

Materials and methods

Until the 80s of the twentieth century. The variety of forms was small: in addition to the natural form with pink flowers, in the catharanthus, there were plants with white flowers, as well as with white ones with a pink eye. The situation changed dramatically when in 1976 at one of the

US universities a program was launched to study interspecific hybrids of the genus catharanthus. Seeds of several species and forms of catharanthus were collected and their mass crossing among themselves began in order to obtain compact, profusely flowering plants with new unusual colors of flowers. The program was a complete success: by 1988, varieties such as Grape Cooler with pale pink flowers with a pink eye and Peppermint Cooler with white and red eyes had appeared. After that, breeding work with catharanthus was not interrupted, which led to the emergence of a large number of highly decorative hybrids, which they began to readily use in landscaping. After all, these new hybrid forms (strictly speaking, all modern varieties are descendants of interspecific crosses) are distinguished not only by abundant flowering and flowers of unusually pure shades, but also by significant resistance to drought and other unfavorable weather conditions. The jury members of various competitions could not fail to appreciate the beautiful catharanthus and, since 1991, have regularly marked their new varieties with the most prestigious awards.

Several excellent varieties of catharanthus have been developed over the past decade. Apparently, the most famous and titled at the moment the varietal series - "First Kiss", bred by the German company "Benari" ("Benaru") and includes 13 color options. Plants of this varietal series are distinguished by compact "bushes" about 30-40 cm high and flowers up to 5 cm in diameter in a wide variety of colors. The super novelty of this series - "First Kiss Blueberry" - with blue-violet flowers conquered last year flower growers in the USA and Canada and entered the top three winners of the annual All-America Selections.

Compact plants of varieties Vitesse, Viper, Jaio are no less beautiful. Especially for hanging baskets, the series "Mediterranean" ("Mediterranean") and "Cascade Lossom" were bred, the shoots of which, with appropriate care, can reach lengths of up to 1.5 m.

Location: warm, sunny, sheltered from cold winds. Crowded plants should not be planted on flower beds, otherwise, in rainy weather, the catharanthus will suffer from a lack of ventilation.

The soil: should be well moisturized, fertile, free from excess salts and have a pH of 5.5-5.8. An earthen mixture is prepared from equal parts of sod and leafy soil, humus, peat and sand.

Reproduction: by seeds and vegetatively. Seeds are sown to a depth of 1-2 cm in late winter or early spring. The sowing must be covered with a dark film, since complete darkness is required for the germination of the

catharanthus. At a temperature of about 24 C, seedlings will appear in 7-10 days. After sprouting, lower the temperature and expose the bowls to light. The first feeding is carried out no earlier than 2 weeks after germination, the phosphorus content in the fertilizer should not be high and it is better if nitrogen is presented in the fertilizer in nitrate form. It is advisable to make a pick when the plants reach a height of 6-8 cm and have 4 true leaves.

Catharanthus, in addition to seeds, perfectly reproduces with green apical cuttings. To do this, they are placed in washed sand and covered with a jar or plastic bag. They take root even in water.

Opinions about the need to pinch young catharanthus differ. In principle, it is not necessary to pinch all modern varieties, since the sign of enhanced tillering is embedded in their genotype. Nevertheless, to get a more compact bush, young grape seedlings are pinched once or twice. Planted at a distance of 30-70 cm.

Usage: as a ground cover, since the plant tends to grow rapidly and occupy all the free space, covering the soil with a dense carpet. The growth in popularity of the catharanthus was facilitated by the emergence of a fashion for decorative elements in the form of hanging baskets, which were often decorated with it. Its great advantage is that it is undemanding to soil moisture, as it dries quickly in suspended formulations. Although this plant has long been known in Great Britain, it spread much later in continental Europe. True, in some countries with cool climates, for example in the Netherlands, the catharanthus has to be placed in special places, especially protected from cold winds.

Results and discussion

The modes of LED lighting, which are effective for obtaining raw material of plants of the catharanthusroseus (lat. Catharanthusroseus (L.) G. Don, family Apocynaceae) in a closed ground, have been established. It is shown that the maximum accumulation of dry mass of all plant organs is provided by LED illumination with a blue to red light ratio (C: K) equal to 1: 4 and a photon flux density (PPF) of $500 \mu\text{mol} \cdot \text{m}^{-2} \cdot \text{s}^{-1}$. Under illumination with a C: K ratio of 1: 1.3 and a PPF of $200 \mu\text{mol} \cdot \text{m}^{-2} \cdot \text{s}^{-1}$, a slowdown in growth processes, a decrease in flowering intensity and an accumulation of dry mass of C. roseus were observed. observable. However, this regime turned out to be effective for stimulating the processes of biosynthesis and accumulation of terpenindole alkaloids in leaves and roots, as well as phenolic compounds in the aerial parts of plants. For the formation of the root system of C. roseus and the accumulation of phenolic compounds in it, the optimal lighting options were those with the highest tested PPF level, $500 \mu\text{mol} \cdot \text{m}^{-2} \cdot \text{s}^{-1}$. Thus, the highest yield of pharmacologically valuable terpenindole alkaloids of C. roseus leaves is provided under illumination with a C: K ratio of 1: 1.3 ($200 \mu\text{mol} \cdot \text{m}^{-2} \cdot \text{s}^{-1}$) and 1: 4 ($500 \mu\text{mol} \cdot \text{m}^{-2} \cdot \text{s}^{-1}$) 123.54 ± 1.42 and 127.21 ± 2.54 mg / plant,

respectively. The maximum yield of alkaloids accumulating in the root system was observed under PPF illumination of $500 \mu\text{mol} \cdot \text{m}^{-2} \cdot \text{s}^{-1}$ and a C: K ratio of 1: 2.5 and 1: 4 99.14 ± 5.93 and $89, 29 \pm 7.13$ mg / plant, respectively.

Growing a catharanthus in indoor conditions is a simple and even pleasant process, because the plant is very grateful and responds to care with long and abundant flowering. Katarantus will feel great on a light windowsill (it should be protected from the scorching rays of the sun) with regular spraying and feeding every two to three weeks with a solution of full mineral fertilizer. In the summertime, the pot with the plant can be taken out to the balcony, protecting it from rain, heat and wind. In winter, the plant is best kept in a bright, cool room with an air temperature of 10-15 ° C. In spring, the branches of the catharanthus should be cut by about a third.

Conclusion

Traditional healers in Madagascar and India have long used catharanthus as a remedy for diabetes, to lower blood pressure, to treat coughs and to treat tumors of various origins. The medicinal properties of catharanthus attracted the attention of researchers in the United States and Canada after World War II, when it became known that the soldiers of these countries, who were in the Philippines during the war, used the leaves of the plant instead of insulin, which was then unavailable. Studies of plant extracts have shown that when they are consumed, the effect of lowering blood sugar levels is very weak, but in laboratory animals suffering from leukemia, significant positive changes in the blood formula were noted. Later, scientists from catharanthus isolated alkaloids with antitumor activity, and set up the production of drugs such as vinblastine and vincristine on their basis. Ready-made preparations from catharanthus, as well as home-made tinctures, ointments have a pronounced therapeutic effect, but often cause strong side effects. Catharanthus can be treated only under the supervision of a doctor.

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The Analysis of Examples of Classical Literature in the Primary School

Mahfuza Rahimjanovna Shermatova

Teacher at Namangan State University, Namangan, Uzbekistan

ABSTRACT

As a result of this research, extracurricular reading in the primary grades is considered an integral part of preparing young students for the thorough study of literature, as an important tool for their moral and aesthetic education in the educational process. The purpose of extracurricular reading is to acquaint young students with children's literature, to consider the didactic basis of enriching them with new concepts of the development of reading culture, its purpose, content, type, construction, as well as scientific and methodological recommendations. enriched with.

KEYWORDS: literary hero, emotional attitude, correct reading, fast reading, expressive reading, conscious reading, literary work, character

One of the tools for developing students' speech in elementary school reading lessons is well-organized retelling. The school experience includes full, abbreviated, selective, and creative retelling. It is much easier for primary school students to retell a text in full or close to the text, while other types are relatively more difficult. The teacher's question about the content of the story read in the retelling should focus the students on thinking about the details of the story, the causes and consequences of the connection between individual events. The people involved in the development of the plot of the work, their behavior play a key role. Children gain a better understanding of the content of the work through the analysis of the participants and their behavior, characteristics. The teacher's question should focus on what the protagonists did, where and under what circumstances their actions took place, the coherent narrative, and the interrelationships.

The student uses not only analysis but also synthesis to tell the content of the work read with the help of the teacher's question: connects (synthesizes) some facts, compares them, discusses them and draws conclusions. Often, elementary school students do not understand the content of a work because they do not understand the behavior of the participants, sometimes incorrectly or superficially. That is why the teacher should make the question very thoughtful, it makes the child think, think, discuss the behavior of the participants, the connection of events, compare them, identify the pros and cons. should be. The more clearly the reader can visualize the behavior of the participants in the play, the more deeply he or she will understand the main content of the story, and the more independently he or she will retell the story.

Have students work on a specific topic in the program and have the opportunity to express their opinions about what they have read, seen, heard, or observed with evidence

and freedom. For example, in a generalization lesson that concludes a topic, children are asked which of the stories and articles they have read about the book are more interesting, as well as the participants in a story or article and their opinions about their behavior. briefly describe the content of the work read. If students have been given a field trip to explore the topic, the teacher will help them tell what they found interesting and what made a strong impression on what they saw on the field trip. They stimulate students' thinking, teach them to think actively, and are one of the main conditions of nurturing education.

It is well-known that speech is related to thinking, so it is cultivated in connection with thinking. Logical techniques such as analysis, synthesis, comparison, and generalization are used in order for students to consciously understand the work read in the lesson, to understand its main content and ideas. Different methods are used to analyze the readings. The children tell the main character in the story, and under the guidance of the teacher make a schematic plan of the work (knot, culmination, solution).

After the independence of the Republic, new programs and textbooks for primary school were created. The curriculum focused on the analysis of the examples of classic literature and the use of different types of assignments and techniques for working on the text.

The examples of classic literature is analyzed on the basis of the following important methodological rules:

1. Analyzing the content of a work and developing correct, fast, conscious, expressive reading skills go hand in hand.
2. Explaining the ideological and thematic basis of the work through its images, plot line, construction and visual aids ensures the general development of students as individuals, the growth of connected speech.
3. Relying on the life experience of students is the basis for a conscious understanding of the content of the work and a necessary condition for its analysis.
4. Classroom reading is a means of activating students' cognitive activity and expanding their knowledge of the environment.

The emotional impact of the work must also be taken into account when analyzing the work. Let the reader not only read the text, but let the author be excited about the exciting story. Encourage students to analyze the text and develop their aesthetic taste.

The Primary Reading Book contains popular art and science articles in a variety of genres. As you know, life is depicted in art through images. At its center is man, his relationship to nature and society. The rules of depiction of existence, reality in the examples of classic literature

through images, objective content and subjective assessment in concrete material are of great theoretical and practical importance for the methodology. First of all, the teacher's attitude to the events described in the work is the focus of the teacher. Students gradually begin to understand the specifics of depicting reality through images. Second, any examples of classic literature depicts specific historical events. Only a historical approach to the events in the work can give a true assessment of the work. Third, it is important to introduce the writer's life and views to the age of the students. Fourth, in analyzing a examples of classic literature, it is important to teach students to understand the ideological direction of the work.

According to psychologists, understanding a examples of classic literature is not enough to understand it. Perception of a work is a complex process that involves some kind of relationship to the work, to the reality it portrays. Younger students have two attitudes toward a literary hero.

1. Emotional attitude to the literary hero.
2. Elementary analysis.

Students use their own insights to evaluate the participants in the play. They lack vocabulary and experience to evaluate other qualities of a hero. The teacher's task is to show the qualities that the students did not notice and to introduce them into the students' speech. One more thing to note:

1. Students do not take into account the circumstances in which they acted in expressing their attitude to the protagonist.
2. They don't understand why the protagonist has to do this, they have to do the right thing for him.

Qualities of reading skills and ways to improve them

In order to fully meet and implement the requirements of the program, it is first necessary to master and improve reading skills correctly and thoroughly.

Reading skills are formed in the process of teaching literacy and improve in the later stages of teaching.

Qualities of reading skills include accurate, fast, conscious and expressive reading of the text of a examples of classic literature. Reading lessons develop and improve students' reading skills. The qualities of reading skills are interrelated, the main of which is conscious reading: whether the reader reads the text quickly and correctly, or does not read consciously, or reads it quickly as a result, if others do not understand the content of the text, read it correctly, read it very slowly, and do not pay attention to the pauses between the units of speech, the idea expressed in the text will not be understood. Reading at a certain speed and correctly serves conscious reading; correct, fast, and conscious reading is the foundation of expressive reading.

Acquisition of reading skills is an important condition for successful mastering of all subjects taught in school. Reading is the main type of activity and provides a great opportunity for students to develop ideologically, politically, mentally, aesthetically and verbally. This process requires systematic and purposeful work to develop and improve reading skills.

Learning skills are more complex and take longer to

develop. Psychologist TG Yegorov in his book "Essays on the psychology of learning children" divides the process of formation of reading skills into three stages: the analytical stage, the synthetic stage and the automated stage. The analytical phase coincides with the period of literacy training, in which the skills of word-for-word analysis and syllable reading are formed. For the synthetic stage, the word is read aloud; in which the perception of a word by sight and its pronunciation are largely consistent with the comprehension of the meaning of the word. Reading is about understanding the meaning of words. Students enter the synthetic phase in 3rd grade. In the years to come, reading will become more automated.

Reading lessons should be organized in such a way that the analysis of the content of the work is aimed at improving reading skills.

Proper reading means reading without making mistakes, that is, correct reading without distorting the phonetic structure of the word, grammatical forms, sound or syllable in the word. is to read without dropping the syllable, without adding the suffix, without changing the position of the letters, pronouncing it clearly, and emphasizing the word correctly. M. Adilova and T. Ashrapova state that "all the requirements for the norms of literary pronunciation also apply to the ability to read correctly." Yakovleva, a Russian Methodist, described the correct reading as follows: "Proper reading is the smooth and smooth copying of material." So, correct reading is reading on the basis of literary and orthoepic norms without distorting the sound structure and grammatical form of the word.

Primary school students make reading mistakes because they do not have a clear synthesis between comprehension, pronunciation, and comprehension of text content. This makes it difficult to understand the content of the text.

Correct reading depends on the length of the word, the vocabulary of the reader, the level of knowledge of the lexical meaning of the word, and the syllable and morpheme structure of the word. . Students often make mistakes for the following reasons:

1. Because there is no clear synthesis between pronouncing a word and understanding its meaning, that is, the child sees the sound side of the word first and rushes to pronounce it. It ignores the meaning of the word.

1. Due to the complexity of the syllable structure of the word. If a word has many syllables, the child will make a mistake if he has not heard it before.

3 Makes a mistake by not knowing the meaning of a word.

1. Makes the mistake of reading fast.

2. Proper reading also depends on the light and the fall of the light.

3. Consonant sounds are difficult to read in closed syllables that occur in the middle and at the end of a word.

To prevent misreading, consider the following:

1. Before reading a text, identify words, phrases, and sentences that are difficult to read, and identify ways to work on them. Practice reading words with complex structure.

2. Explain the lexical meaning of words before reading

the text, which makes it difficult to understand its content. Identify ways to interpret the meaning of a word.

3. Make tasks clear and understandable
4. Create conditions for them to read the text carefully.
5. In-house teaching, then audio teaching.
6. To take into account the individual characteristics of students in teaching, that is, to pre-distribute the text to students who can afford it, identifying easy, moderate and difficult places to read.
7. Regularly check students' reading.
8. Depending on the nature of the error, determine how to correct it methodically.
9. Warn students where mistakes can be made.
10. Using a letter stick.
11. Misreading also depends on the student's personal perception.

The teacher puts the complex words on the board or cardboard in advance writing in syllables and teaching students as a chorus gives good results.

A mistake made by students can be corrected in two ways: 1) If a student misreads the suffix at the end of a word, correct the mistake without stopping the reader from reading. can rot; 2) If the content of the sentence is distorted by misreading, the method of re-teaching is used. In this case, if the student is asked a question about the text he reads, the student re-reads carefully.

Fast reading: Speed reading dies at a normal speed, and the reading speed should not be separated from understanding the content of the text. The reading speed should increase in line with the reading comprehension rate. Fast reading is called reading, which allows you to master the content of the work being read, to consciously comprehend the content of the text.

Students' reading speeds vary depending on their reading skills. This does not mean that the program did not meet the requirements. The reading speed that corresponds to the pace of oral speech is the normal speed. Because reading too fast or too slow makes it difficult to master the content of the text.

The reading speed is determined by the number of words read per minute. In the curriculum published in 2005, the reading speed in the 2nd half of the 1st grade was 20-25 words (reading speed of an unfamiliar text was 20-25 words); 25-30 words at the end of the academic year; In the 1st half of the 2nd grade, the reading speed is 30-35 words; 40-50 words in the 2nd semester; 60-70 words in the 1st semester of 3rd grade; 70-80 words in the 2nd semester; 110-130 words silently in the 1st semester of 4th grade, 90-100 words in voice reading.

Experiments show that if a child reads a text of 250 words per minute, he will remember 200 words. If he reads in letters and syllables, his focus will be on the syllable, not the word. in the end he cannot remember the words.2

If this is applied to the reading speed of 4th graders, they will remember 100 words out of 125 words. This allows for higher performance. In 4th grade, there are even students who read 170-180 words per minute.

The rate of reading gradually increases over a period of four years in relation to correct and conscious reading. When checking the speed of reading, the teacher takes into

account the nature of the material being read, ie the ideological-thematic complexity, the structure of words and phrases, their use in children's speech, the correctness and accuracy of reading. takes The reading speed of the students will be different, of course. The teacher's task is to make the reading speed of all students as uniform as possible. This is achieved by practicing reading the text aloud.

Conscious reading: Conscious reading is a key quality of good reading. Conscious reading is the ability to understand the exact content of the text, the ideological direction of the work, the role of images and artistic means, as well as to express their attitude to the events described in the work. 'depends on the students' necessary life experience, understanding the lexical meaning of the word, the connection of the words in the sentence, and a number of methodological conditions. Nowadays, the term conscious reading has two meanings in the literature and in school practice: first, reading techniques in relation to mastering the reading process

In order to read a text consciously, students are required to have good reading skills, to be able to read correctly, and not to have difficulty in reading. The text is analyzed in terms of content and artistic means for students to read consciously.

An important condition for conscious reading is to understand the structure and content of the work. The teacher evaluates conscious reading based on the expressive reading of the text (if read aloud) and the correctness of the answers to questions about the content of the work. Conscious reading and expressive reading require each other, but they are not exactly the same.

Expressive reading is the ability to express the idea and charm of a work accurately, clearly, in accordance with the intentions of the writer, using intonation - tone. "Expressive reading is the first and foremost form of concrete and visual teaching of literature," says Methodist scholar MA Ribnikova. That is, "Expressive reading is a way to show students the content and emotionality of a work through intonation. The basic premise of expressive reading is to explain in depth the idea and artistic value of the work being read."

Tone is the sum of the moving elements of oral speech: accent, tempo and rhythm of speech, pause, pitch. These elements interact with each other and together they express the content of the work, the idea, the different moods and inner experiences of the protagonists.

Important conditions for students to master the basics of expressive speech are:

1. To be able to breathe properly and distribute the breath from the speech process.
2. Acquire the correct articulation of each sound and clear diction (burro speech).
3. Mastering the rules of literary pronunciation.

These conditions apply not only to expressive reading, but also to expressive speech, that is, to storytelling. Any student's oral story should be expressive.

One of the main means of expressive reading is the voice. Sound is inextricably linked with breathing. Therefore, the teacher begins by teaching children to control their breathing and use their voice correctly when pronouncing

work on expressive speech. Volume is characterized by high-low, long-short, speed (tempo), pleasant-unpleasant. Depending on the content of the text, students learn to read or speak aloud, to choose a fast, moderate or slow tempo in speech, and to express an emotion. Students are also introduced to pauses and logical emphasis in expressive reading.

Preparation for expressive reading is conventionally divided into three stages:

1. To understand the exact content of work, to analyze the behavior of the participants, to determine the idea of the work, that is, to understand the ideological thematic basis of the work, its images as a whole by artistic means.
2. Determine where to pause the text, the place of logical emphasis, the pace of reading.
3. Practice reading. Reread the text to be able to voice the author's point of view, his or her reaction to the events and participants.

The analysis of the content and ideological direction of the work is connected with the teaching of expressive reading. The main task in teaching expressive reading is to understand the content of the text, to express their attitude to the events narrated by the author. The teacher's expressive reading of the work is important for the development of expressive reading skills in students.

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