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The Role of Financial Technologies in the Global Economy

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ABSTRACT
The article analyses the global trends in the development of financial technologies, and their role in the development of global economy. We tried to research the existing trends in the development of financial sector and highlight the nature of the new-coming innovations.

KEYWORDS: *financial technologies, innovations, venture funds, angel investors, global economy*

INTRODUCTION

Today the role of innovation is enormous in the rapid economic development. Especially, services sector is thirsty for new ideas. Even though services are increasingly dominating the world economy, contributing over 70% of employment in OECD countries and 58% of worldwide gross national product[1], relatively small number of systematic research work has been carried out on service innovations. In general, innovation is seen as a persuasive avenue for organizations to create value and competitive advantage[2]. With the growth of services in organizations and economy, attention has been focused on innovation in the context of services over the last two decades[3].One of the leading service innovator -the Catalan restaurant El Bulli, named for several years amongst the world best restaurants and famed as a radical innovator in the sector, developed over time as one component of a broader platform of activities which included upstream collaborations with the science base as well as downstream interactions, amongst others, with food manufacturers and the hospitality sector [4].

The process of economic digitalization further enables world economy to expand through service innovations. Here the role of emerging financial technologies (fintech) is crucial as they have the potential to enhance economic productivity and ultimately foster a more inclusive and resilient financial system. Policymakers may play a key role in unlocking the benefits of financial innovation, while seeking to safeguard a level playing field for market participants, consumer and investor confidence, trust and overall resilience in the financial system[5].

The concept of fintech has matured greatly since its inception. Early innovation area such as payments and lending have seen strong maturation, with more established fintechs (businesses applying new financial technologies) now looking to move beyond niche markets to offer adjacent services and, in some cases, full stack solutions. For example, Europe has seen a number of fintechs (e.g. Klarna, Zopa and Revolut) apply for banking licenses in order to expand their product offerings. Meanwhile, countries such as Australia and the US are mulling the introduction of fintech-focused banking licenses, which could spur investment over time should they move forward[6]. The Financial Services industry is transforming with the emergence of innovative new products, channels and business models. This wave of change is primarily driven by evolving customer expectations, digitalization, as well as continued regulatory and cost pressures.

In recent years the rise of fintech in the developing countries has contributed to the faster expansion of digitalization and development of financial system. If we look into the situation in former Soviet republics, we can observe attempts to leapfrog into innovational economy. Crowdfunding has already gained significant traction in a growing number of emerging economies, including in some African countries where credit constraints are particularly severe. These early successes suggest that there could be considerable potential for fintech to enable these economies to leapfrog to a financial system where entrepreneurship and innovation may thrive[7]. It has become obvious that without resilient and effective financial system, it is hard to imagine creating national innovation system. The experience of China, India and Singapore shows that balanced growth of financial services with industrial growth, R&D, development of education system and other areas may create opportunity to foster national innovation system.

Literature Review

Interestingly, a service approach to business is not limited to subsectors of the economy that are classified as services in standard industry statistics. Services are also economic activities that can be performed by product-based businesses. Several manufacturing firms are significantly expanding the range of services they provide in combination with their core products as a way to enhance value creation and customer retention opportunities. Companies such as IBM, Xerox, and Rolls Royce now derive growing shares of their total revenues from service activities, although they are not considered as service businesses, and they often develop

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[7] L.Casanova, P.K.Cornelius, S.Dutta –"*Financing entrepreneurship and innovation in Emerging Markets".* P.22

their service profile by partnering with external knowledge sources[8].

Another point of view in support of the assumption that resilient financial system can foster innovational companies is difficulties of financing startups in their early stages of development in emerging economies, where financial system is not diversified as it is in the advanced economies. Unless startups have sufficient tangible assets to pledge as collateral, bank loans are generally not available to them. Even if they have such assets, banks in emerging economies are often reluctant to lend in the absence of sufficient credit information and ill-defined legal rights pertaining to secure transactions. Not surprisingly, therefore, loan-to-GDP ratios in these economies generally fall far short of those in advanced economies, suggesting that a significant number of companies are underserved or even unserved by banks and must rely on their founders' resources or those of friends and family. Unless external finance becomes available, startups are unable to grow and reach the stage where they become profitable due to the limited and unpredictable nature of these resources. While startups in advanced economies face the same challenge, they are more likely to be able to bridge the so-called Valley of Death by tapping into alternative funding pools, such as angel investing, venture capital, and emerging forms of financing. As with their banking systems and organized financial markets, most emerging economies' alternative funding pools have yet to achieve similar penetration levels to advanced economies[9]. So new types of financing such as crowd-funding, angel investing and other forms assist potential startups to grow to the self-sustaining level. However, the attractiveness of emerging economies for angel investors or incubators is low because of poor infrastructure, high level of corruption, low level of transparency in financial transactions and other negative factors. But continuous development of science and technology through state programs carefully designed for the development of innovative activity has proved to be effective in the example of China and India. The wide range of S&T policies that China has implemented and adjusted in the past three decades has directly affected its innovation outcomes. From 2002 to 2012, China's GDP more than quadrupled, leaping from $2 trillion to $8.7 trillion. The data reveal that these policies have effectively advanced the development of an innovation ecosystem; they have also brought about a large, educated workforce, laying a solid foundation for the future development of innovation capacity in the country[10].

India has developed a stable foundation for scientific, technological, and business education by setting up centers of excellence such as the Indian Institutes of Science (IISC), the Indian Institutes of Technology (IITs), and the Indian Institutes of Management (IIMs). Admission to these premier Indian institutions has consistently been competitive, with a 50 to 1 application to admitted student ratio for IITs[11]. In addition, 150 to 1 ratio of applications to admitted students for IIMs. This competition for admission is even fiercer when compared to admission rates in the top U.S. schools such as the Massachusetts Institute of Technology (MIT), where the applicant to admitted ratio stands at around ten to one[12] . This competitive landscape and the increasing number of strong students have provided India with a natural advantage, positioning its top institutions as some of the best in the world. Average scores at top universities have been in India's favor for a superior innovation ranking, not only among its peers but also among all nations[13].

Financial development is a critical and inextricable part of the economic growth process. Well-functioning financial systems help mobilize savings, promote information sharing, improve resource allocation, and facilitate diversification and risk management[14]. Recent research shows that the relationship between finance and growth is probably nonlinear, there is substantial evidence that financial development significantly boosts economic growth in the earlier phases of the development process following a virtuous cycle: financial development encourages savings, which in turn fosters real activity, and as real activity expands, finance grows in response to increasing demand for its services from the nonfinancial sector[15].

Analysis

Advancements in digital finance affect other areas, too. For instance, entrepreneurs can more easily access capital from friends and family over longer distances, even overseas, due to technological progress in money transfer services. At the same time, new forms of financial intermediation have emerged thanks to increased investments in financial technology (fintech). While consumer lending dominates the crowd-funding market, business lending is the second largest category measured by transaction amounts.

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[8] A.Mina, E.B.Bascavusoglu-Mareau, A.Hughes-*Open service innovation and the firm's search for external knowledge*

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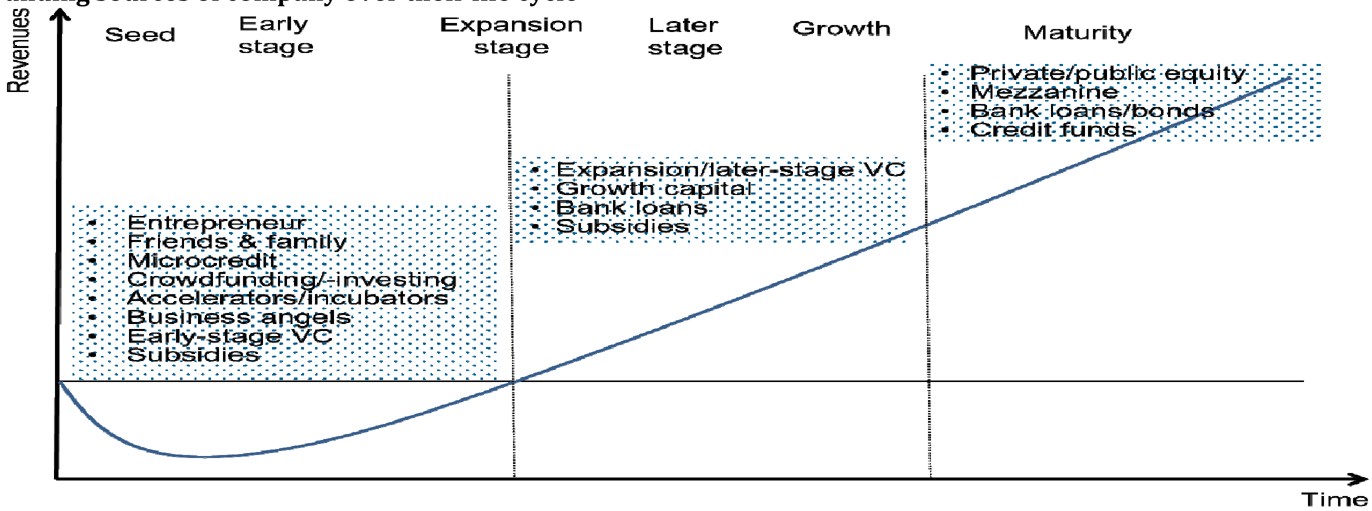
Funding sources of company over their life cycle



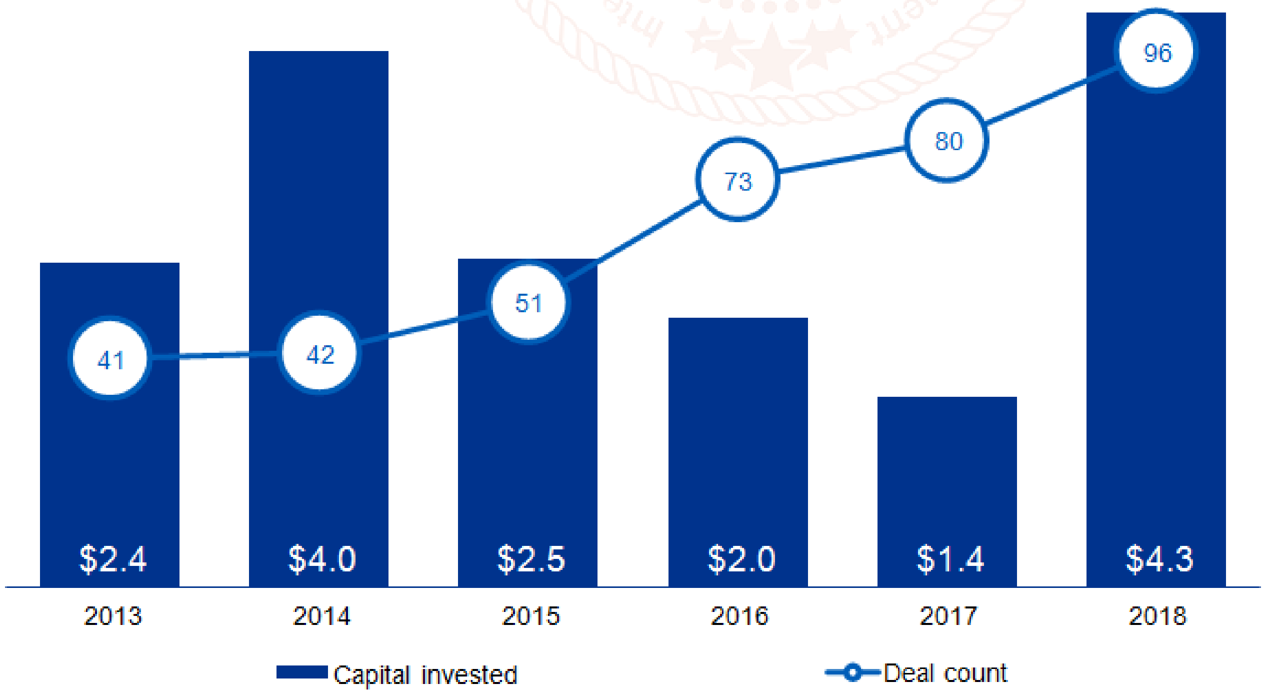
Source: L.Casanova et al –"*Financing entrepreneurship and innovation in Emerging Markets".* P.15

There is only a loose correlation between economic prosperity and the proportion of external funding of firms' investment expenditures, suggesting that other factors also play a role. One such factor is regulation. Using data from more than three million firms across Europe, Klapper and others found that compliance with superior accounting standards and property rights protection is associated with improved access to external finance and has a positive effect on firm entry and growth[16]. Given startups' contribution to innovation, it is not surprising that the World Bank's "Doing Business" reports have long advocated financial sector reforms as a prerequisite for easier access to entrepreneurial finance and hence technological progress and economic growth.

Mobile and digital technologies facilitate payment transactions by providing easy access to digital wallets, and users, especially those in remote areas, May save considerable travel time and cost, and reduce the risk of theft. At the same time, these technologies provide access to a broader range of digitally delivered financial services. These services include savings accounts, and to the extent that households switch from cash and other forms of savings to digital bank accounts, financial intermediaries' ability to provide loans to individuals and companies increases.

Banks are usually reluctant to lend to startups that have few, if any, tangible assets, little repayment history, and negative cash flows. This is true in the United States and other advanced economies; for startups in emerging economies, this challenge is often insurmountable.

Global PE (private equity) activity in fintech 2013-2018



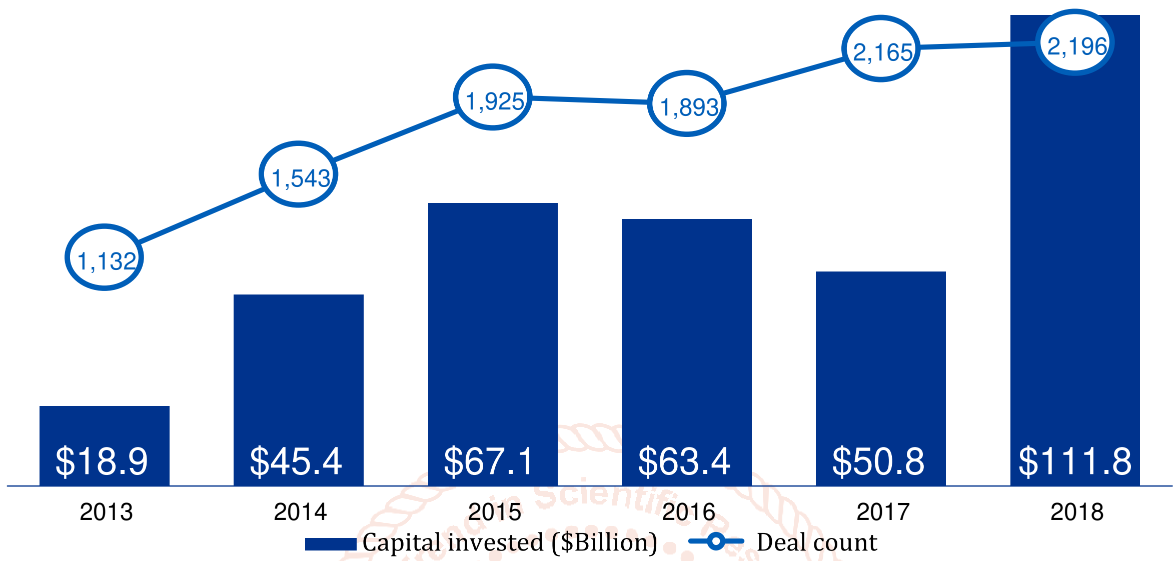
Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

Among the general M&A cycle, financial sponsors' activity is most intriguing to unpack, as it often lags both venture

[16] Klapper, L., Laeven, L., Rajan, R., 2006. Entry regulation as a barrier to entrepreneurship. J. Financ. Econ. 82 (3), 591–629.

As a result, the success of entrepreneurial firms often depends on whether they are able to find external investors willing to fund their projects. In this chapter, we look at the role that independent venture capital (IVC) firms can play in connecting entrepreneurs who have good ideas, but little capital, with investors who have money and are looking for good ideas. Investors in IVC funds are generally institutions, such as endowments, foundations, pension funds, and sovereign wealth funds (SWFs), whose commitments to IVC funds are motivated by expected financial returns. These investments should be distinguished from corporate venture capital groups (CVC) that invest in startups to complement their internal Research and Development (R&D) programs usually driven primarily by strategic considerations.

Total Investment activity (VC, PE, M&A) in fintech 2013-2018



Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

Note: refer to the Methodology section at the end of the document to understand any possible data discrepancies between this edition and previous editions of The Pulse of Fintech.

Venture capital (VC), IVC, as well as CVC are exceptional sources of entrepreneurial finance; very few startups are backed by VC funding. In the United States, the cradle of venture investing and by far the deepest VC market worldwide, only about one startup firm out of 500 receives venture capital. On the other hand, those companies that do receive VC funding make up a disproportionally large share of companies that undergo initial public offerings (IPOs). Of all the U.S. companies that made it to the public stage between 1980 and 2015, 37% were VC-backed; for technology IPOs, this ratio was 58% (Ritter, IPO database, 2016). Gornall and Strebulaev (2015) estimate that public companies in the United States that previously received VC funding account for one-fifth of the market capitalization and 44% of the R&D spending of U.S. listed companies[17]. This set of companies includes some of the world's largest and most innovative companies, such as Adobe Systems Inc., Amazon.com Inc., Apple Inc., Cisco Systems Inc., eBay Inc., Facebook Inc., Genentech Inc., Google (Alphabet Inc.), Microsoft Corp., Skype, and Yahoo! Inc. While all these companies are publicly listed, venture capitalists have also funded today's "unicorns"—tech companies such as Uber Technologies Inc., Airbnb Inc., Palantir Technologies Inc., and Pinterest Inc. that are still privately held but whose valuations have already reached $1 billion or more. Thus, although VC funding is small, its macroeconomic impact is significant.

Venture capital funds typically focus on funding tech startups in two broad industry groups:
1) Information Technology (IT)
2) medical/health/life science.

Investments in startups operating in these areas accounted for 88% of all VC deals in the United States in 2015, although these sectors represented less than 20% of U.S. GDP.

A key concern for foreign VC firms venturing into emerging markets has been the legal protection of their investments. Lerner and Schoar found that in structuring deals in low-enforcement countries, venture capitalists have often relied on equity and board control as opposed to convertible preferred stock with covenants, a more common form in high-enforcement countries[18]. At the same time, foreign VC firms have put significantly more emphasis on implicit relationships. Such relationships played a particular role in syndicated transactions with local venture capitalists in countries where an indigenous VC industry had already emerged[19].

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[17] Gornall, W., Strebulaev, I.A., 2015. The economic impact of venture capital: evidence from public companies. Unpublished Working Paper. Stanford University. https://www.Gsb.Stanford.Edu/ Faculty-research/working-papers/economic-impact-venture-capital-evidence-public-companies.

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[19] Allen, F., Song, W.-L., 2003. Venture capital and corporate governance. In: Cornelius, P., Kogut, B. (Eds.), Corporate

While VC funding of startups in Brazil, Russia, and several other emerging economies also rose during this period, the increase in investments outside of China and India was significantly more moderate. Chinese and Indian entrepreneurial firms absorbed around 95% of all VC investments in emerging markets in 2014–16. As a result, their economies are substantially more deeply penetrated than their peers at a similar stage in their development process. In fact, Finland, Singapore, the United States, and Israel, which are classified by the Global Competitiveness Report (GCR) as innovation-driven economies, are the only countries that are similarly deeply or even more deeply penetrated than China and India.

The literature suggests a variety of factors that may help explain cross-country differences in VC investing. Lerner et al. (2009) tested these hypotheses in a large cross section of countries. Their results were consistent with the arguments of Black and Gilson (1998) and the findings of Jeng and Wells (2000): functioning local financial markets for VC investments are important, as they provide an exit route for VC investors via IPOs. Further, Lerner, Sorensen, and Strųmberg found that minority shareholder rights are important for VC (as well as growth equity) deals. This finding is consistent with the exit story, in the sense that for new minority shareholders to buy stock in an IPO, it is critical that their rights are adequately protected. However, in contrast to what might be expected, the authors find little evidence for the hypothesis that barriers to entrepreneurship undermine VC investments.

Finally, VC has gained traction in Africa, as mobile and Internet penetration has increased. In Nigeria, the most populous African country, 77% of the population uses a mobile phone, while 43% have access to the Internet (ITC; data refer to 2015). In Kenya, penetration rates are similar, while South Africans and Egyptians have on average more than one mobile phone per person. Not surprisingly, e-commerce is increasingly popular, opening up new investment opportunities. A good example is Jumia, a Cairo-based online retailer specializing in electronics, fashion, home appliances, and children's items especially for the Nigerian market. Founded in 2012 by three individuals, it now employs more than 1000 people.

Conclusion

Bright and Hruby (2015) argue that the term 'e-commerce' should be replaced by 'm-commerce' in Africa, as so much of local e-commerce comes from activity on mobile devices. In fact, African countries are leading the world in the development and use of mobile money. Probably the most significant innovation has been M-Pesa, a mobile phone-based money transfer and financing service that was launched in 2007 by Vodafone Group L.L.C., for Safaricom, Ltd. and Vodacom Group, Ltd., the largest mobile network operators in Kenya and Tanzania. Since its launch, M-Pesa has expanded to several other African countries, as well as Emerging Asia and Emerging Europe. Today, there are tens of millions of users who are able to transfer money to other users, pay bills, purchase goods and services, save, earn interest, and borrow, all from a basic mobile phone. While M-Pesa has revolutionized financial services in emerging markets, there are substantial opportunities for Internet-driven growth and productivity in other sectors as well. The transformative potential of the Internet in Africa is particularly large in education, health, agriculture, government, and retail (McKinsey, 2013). Although retail may attract the greatest interest from venture capitalists, other sectors may also benefit from an emerging VC industry in Africa.

Below in figure 1 one can observe upward trend in the number of deals on investments in emerging methods of finance. In 2018, the total investments amounted 111 billion dollars, which is a great breakthrough relative to previous years. As the world economy is on the way of digitalization, the number of venture capitalists, angel investors will probably rise in future because of increasing market demand for capital.

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Foreign Experience in the Development of Agricultural Tourism and its Application in the Republic of Uzbekistan

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ABSTRACT
Agrotourism is agricultural tourism, classified as the activity of farmers providing services related to recreation and education of the population in order to sell agricultural products and earn additional income (Purdue University, USA).

The tourism industry in the modern world is one of the largest and most profitable dynamically developing sectors of the world economy. Tourism accounts for 10% of the world's gross national product, investment, jobs and consumer spending. In the last decade, according to the United Nations World Tourism Organization (UNWTO), revenues from the tourism industry have been increasing annually with an average 7.9%, while the share of agricultural tourism in the tourism sector of the economy is growing at an even higher rate. Tourism, which originated in the middle of the twentieth century in France and Italy, today has a strong place in the economy of these countries. Agrotourism has been developed not only in these countries, but also in the USA, England, Spain, Germany, Lithuania, Poland, Japan, Malaysia, etc. Agrotourism is a sphere of tourism that begins to compete with resort and cultural tourism, which is confirmed by practice foreign countries.

KEYWORDS: *ethnographic, rural, ethno tourism, rural house, rural work, agrotourism, rural tourism, MICE tourism, cultural tourism, folk festivals*

INTRODUCTION
Austria can be considered as the ancestor of Agrotourism in Europe and it has developed its agriculture and picturesque alpine landscapes with small villages. It is believed that Agrotourism began its development in Europe in the first half of the 19th century, almost 200 years ago. This was marked by the opening in France of the 1st Association of Agritourists Agricolture et turisme. Recently, some tourists prefer to spend their holidays in the countryside, where they can spend several weeks living in village houses, getting to know the rural way of life, with the local culture and local customs, taking part in traditional rural work. This type of tourism is chosen by those tourists who have already experienced a lot and want variety. Most of them are often residents of large cities who are tired of constant work stress and the hectic pace of city life. They want to spend their vacation in a calm environment away from the bustle of the city. This type of recreation is distinguished by the use of natural, agricultural and other kind of resources in the countryside. [1].

Data and methodology. Agrotourism, depending on the motivation of the consumer, can be classified into rural tourism, ecotourism, ethno-tourism, culinary tourism, geological tourism, and out-of-town recreation. Along with the concept of agrotourism, there are such types of tourism as rural, farm, soft, green, ecological. Agricultural tourism, rural and farm tourism are often used as interchangeable and synonymous concepts. This is due to the fact that this segment of the rural culture is the defining component of the tourism product. Today, agrotourism and rural tourism have several definitions.

Agrotourism is often associated with rural tourism, but the concept of agrotourism is somewhat broader. It is possible to give a definition of agrotourism based on the Western approach to this concept, but taking into account the peculiarities of the Russian segment: "Agrotourism is a type of tourism that involves tourists visiting an operating farm (hotel), agricultural enterprises or personal subsidiary farms located in the countryside." The Russian difference from Western practice lies in the fact that personal subsidiary plots, being sometimes the main source of family income, are not registered as a farm, but they are able to provide tourists with all the benefits and excursion services as on a farm. In the above definition of agrotourism, it is important that the farm is active and main agricultural activity. The services provided by agrotourism are secondary (complementary), allowing you to obtain stable competitive advantages based on available resources.

The main characteristics of agrotourism are:
- satisfaction of human needs associated with practical participation in the production process, in the life of a rural family, as well as rural society;
- satisfaction of human needs in the field of agricultural production or ethnography;
- satisfaction of emotional needs based on the desire for direct contact with pets, satisfaction of the need associated with a rural atmosphere.

Data collection and research findings.
However, agrotourism has become an attractive way of spending leisure time for tourists outside the traditional beach and hotel. The World Tourism Organization, assessing the state of agrotourism, and being one of the areas of ecological tourism, indicates that it has combined various types of recreation, developing at a very rapid pace abroad and being one of the five main strategic directions for the development of world tourism until 2020. In the developed countries of Europe, rural tourism is very popular and ranks second after beach tourism, bringing about 20-30% of the total income from the tourism industry. Currently, there are several main models of Agrotourism in the EU:

The British Agrotourism model is based on the cohabitation of farm owners and tourists. The main services provided under this model are horseback riding and hiking, which is typical for ecotourism. Today, fishing has been added to the compulsory services. A novelty should be called the emergence of farms that provide historical tourism services of certain eras.

The German Agrotourism model - the main one is mutual labor in the fields and the joint participation of tourists and owners in daily life and farm work. In fact, two types of rural tourism are popular in Germany: farm tourism itself - living together and working in the field - and ethno tourism. German ethno-tourism involves participation in all kinds of folk festivals and celebrations, these are famous beer festivals and ordinary events to celebrate the day of the village.

The French Agrotourism model - cooking and winemaking - is the main element. In this case, tourists are offered a separate house with a full menu of local cuisine, including cheeses, cognacs and wine drinks, of which there is a huge variety, given that each farmer has his or her own wine and brand.

The Italian model of Agrotourism is similar to the French model, but it has its own flavor. In addition to the culinary direction, it includes entertainment programs, physical activities from sports, visits to historical sites. Italian tourists are expected to work in the vineyards - picking and processing grapes and picking olives. Living conditions are different: it can be a luxurious villa or a simple village house. According to statistics, more than 50% of Europeans prefer rural vacations. For example, in Austria, agrotourists accounted for 16% of the total number of rural tourists in the European Union, Italy - 13%, France - 15% and Spain - 8% [1].

Results. For decades, agrotourism has been developing in Italy, Spain, France, Greece, and these countries are today the main trendsetters in the segment of world agrotourism, a huge network of private rural hotels has been developed here, thousands of various tourist attractions have been created, hundreds of routes have been developed. Students regularly go to farms in the United States to earn extra money during the summer holidays. A large number of farms in Colorado, Texas and Arizona are looking forward to additional hands. The conditions are relatively modest: a room for one or two people is provided for living, meals with the owners of the house and not a very large monetary reward. Forbes has selected some of the countries in which it is especially pleasant to do Agrotourism. The table shows the cost of entertainment in different countries. [4].

Table 1: The cost of entertainment in Agrotourism in different countries[4].

Country	Entertainment activities	Value
Croatia	Collecting olives, working in the vineyards, searching for truffles with specially trained dogs	€ 30-80 per person per day
Czech Republic	Opportunity to milk a cow or take part in shearing sheep, making cheese from goat milk, participating in a hunt	from € 3 for accommodation in a campsite
Sri Lanka	Carving wood and ivory, working on tea, rubber and coconut plantations, as well as teaching the subtleties of Sri Lankan cuisine	from $ 2000 per person for 13 days
Poland	The basics of blacksmithing, making oszipiek cheese made from sheep's milk	from € 8 for accommodation in a campsite
Cyprus	Caring for goats and sheep, helping the owners in baking bread, picking oranges and cherries	from € 40 per person per day
Italy	**Participation in making pizza, picking oranges**	**from € 30 per person per day**

In recent years, agrotourism has become a rather popular form of recreation. This trend was picked up by many travel agencies and began organizing tours to farms. Long-term agricultural tours are rare. Basically, tourists prefer vacation time or weekend tour. Firms provide visa support, organize x operates in 53 countries [5].

The activities of the worldwide Help Exchange organization are similar to WWOOF, the main difference is that it offers not only farms for employment and recreation, but also schools, orphanages, churches and other organizations that need help and additional working hands. Kibbutz Volunteer is an agricultural community organization in Israel with a lot of work and labor shortages. It is constantly necessary to harvest, milk cows, look after livestock and do other household and household duties. However, working and rest conditions are always negotiated [6].

Uzbekistan is mostly an agricultural country. Rural tourism, as a new type of recreation, can play a large role in the tourism segment of Uzbekistan, using both inbound and outbound tourist flows. According to statistics, Uzbekistan was visited by 6,748,500 tourists in 2019, while this figure was 5,346,200 people in 2018. Of them, 51.3% were persons aged 31-55 (52.1% in 2018), 20.2% - aged 55 and older (19.4% in 2018), 19.5% - aged 19-30 (20.4% in 2018) and 9.1% - persons aged 0-18 (8.1% in 2018). Taking into account the importance of various social and cultural entertainment events for attracting tourists to Uzbekistan, various events have been organized since last year, considering the specialties of each region. In particular, such major events as the first pilgrimage (Ziyorat) tourist forum (Bukhara region), the Bakhshi art festival, the Archaeological forum (Surkhandarya region), the Game of heroes (Khorezm region), the Muynak motor rally, the Element music festival (Republic of Karakalpakstan), CIS Tourism Fair (Samarkand Region), Geotourism Forum, Pomegranate Festival (Kashkadarya Region), Electronic Music Festival, Gastronomic Festival, World Influencers Congress (Tashkent).

As part of the action plan for the development of MICE tourism, approved by the Cabinet of Ministers, potential objects for holding MICE events in the regions were studied, a unified register was created and the "Meetings & Events Catalog" was developed. In addition, to coordinate such events, a Congress and Exhibition Center is being created in the structure of the committee. Favorable ecological and climatic conditions, the necessary infrastructure, a unique ethnographic culture with traditional hospitality - all this is present in our country and can be used for agrotourism. Agrotourism, ethnographic, rural, green, rural tourism - all these are synonyms of one type of tourism taking place in any rural area (village, village, farm, estate, private house), where tourists, escaping from noisy cities, get acquainted with life and customs of the local population, live in rural houses, take part in rural work. During festivals and holidays (especially Navruz), tourists can see various competitions, participate in various cultural events.[7] of greatest interest for rural tourism are old settlements with unpretentious architecture using the traditions of the past, the inhabitants of which follow any traditions from folklore. At the same time, ecologically clean rural food, fresh air, the opportunity to participate in any small rural work, contribute to the strengthening of both physical and mental health. From an educational point of view, agrotourism provides an opportunity to learn many types of village activities: horse or donkey riding, harvesting fruits and vegetables, haymaking, milking a cow or goat, cooking, familiarizing with national crafts and crafts (embroidery, weaving, modeling, etc. pottery). On the cognitive side, a tourist learns a lot from the customs and mores of a particular region, gets acquainted with the unique folklore and culture (musical performances, customs). Agrotourism has been well developed in Europe. In addition to accommodating tourists in rural houses and farms, there is the possibility of accommodation in reconstructed ancient castles, monasteries and mills, where visitors come into contact with antiquity to a large extent. The main set of services - living in a rural house, eating rural food, picking plants and berries, caring for pets, hayloft, fishing and many other types of services and entertainment are organized at a high level. Almost all regions of Uzbekistan have great potential for rural tourism.

The development in this kind of tourism can make a huge contribution to strengthen the rural economy, create additional jobs in the hospitality industry, reduce the outflow of the local population to cities, raise the cultural and intellectual level of villagers, and stimulate the production of organic food. Agrotourism also contributes to the revival and development of national crafts and trades, customs and rituals. From the point of view of preserving natural resources, rural tourism also plays an important role here. You can start this activity with a small start-up capital. Then, many villagers in popular resort areas of the republic, independently installing tapchans, along the banks of rivers and reservoirs, attract many car tourists from cities. Some people are already talking about an independent industry in this area - the so-called slipper tourism. True, here, often poorly maintained sanitary and environmental standards. What does an ordinary villager get as a result of organizing rural tourism? First of all, it is a high level of profitability, the possibility of providing jobs for fellow villagers, intellectual development associated with new creative work, raising the educational level, mastering new professions related to service. Forgotten crafts, rituals and traditions receive a revival and a new impetus. In return, tourists get a good rest for a reasonable price, strengthen their mental and physical health, improve their knowledge of rural life, practicing with specific examples. New impressions and communication with rural workers develop a personality, its desire for self-improvement. [3].

In foreign agrotourism, a kind of exchange between a tourist and a landowner is also practiced, when a tourist, in exchange for free accommodation and food, participates in agricultural work for part of the day. Many people would like to participate in the collection of melons or cotton. In fact, this type of activity can be practiced a year-round by harvesting two or three crops a year. During Fall in the mountains, it is not a bad idea to attract these tourists to pick walnuts, almonds, berries, cherry plums, hawthorns, rose hips, where participants also get involved in mountain nature, learn a lot from the life of mountain villagers. you can definitely combine here such tours as purely ecological or nature tours. Then, the tour participants get acquainted with folk (and partly with traditional) medicine in the case of collecting medicinal herbs. During haymaking, many of the tourists would like to take part in it. In this case, an overnight stay in warm weather can be offered in the hayloft. [2].

Suzma sellers in Gus

In the workshop of a ceramist

Laid table for uests

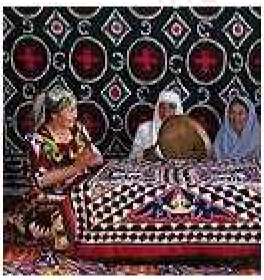
Master Class with Suzanne

Almost all regions of Uzbekistan have the necessary resources for the development of rural tourism. They are diverse natural conditions, from foothill and mountain landscapes to steppe and desert areas, where rural settlements are everywhere with adjacent rural lands - fields, gardens, vineyards, pastures. And all kinds of natural monuments, memorial places of worship, architectural and archaeological monuments located in the immediate vicinity of these villages can be used as additional ecological, cultural and educational objects for visiting and familiarizing with them. Rural tourism is often mixed with ecological tourism and it is sometimes difficult to separate one type of tourism from another. From this interaction between them, rural and ecological tourism can only get more benefits. What can attract visitors to our country? What looks so extraordinary in the eyes of a foreign tourist?

First of all, these are peculiar tourist brands of Uzbekistan: a peculiar multi-storey nature, unique oriental architecture, picturesque villages surrounded by poplars and rows of mulberry trees, adobe and stone dwellings, donkeys, camels, an oriental meal, hospitality, dastarkhan, tea drinking, fruits and vegetables and much, much other ...

In Uzbekistan, rural tourism is well developed in the Jizzakh and Navoi regions, in the area of the northern slopes of the Nurata ridge. In such villages as Eski Farish, Ukhum, Hayat, Mejrum (Majrum), Sentyab, guest houses are organized. The guests of these houses make fascinating walks in the mountain tracts, get acquainted with the flora and fauna of the Nurata Biological Reserve. There is a possibility to rent horses and donkeys. Of the sights of this region, one can note individual petroglyphs, the high-mountainous lake Fazilman, as well as a huge specimen of the eastern biota in the village of Mejrum. Usually, after visiting guest houses in the villages of the northern slopes of the Nurata ridge, tourists go to yurt camps located in the immediate vicinity of Lake Aydarkul. Here they can get acquainted with the nature of the Aydar-Arnasay lake system, as well as come into contact with the sands of the Kyzyl Kum desert, which are close to the camp. A camel ride through the dunes of these territories towards the village of Dunglek will pleasantly add to the overall experience. Acquaintance with the life of desert dwellers and their traditional way of life can also be included in the program of these tours.

Making patir



Performance beshkarsak

Head for bread

Tandoor - family hearth

By developing rural tourism in the Nuratau-Aydar-Kyzylkum region, it is possible to create a kind of ethnographic cultural center. And with sufficient funding, on the basis of some village, organize a special "aul-town" for receiving tourists. To create a garden around the town, vegetable gardens, where tourists could plant seedlings, take care of the beds, and collect fruits in the future. Such a town can be built in taking into account old technologies (clay, stone), but new technologies can also be used for a more fortified frame and reliable walls with ceilings. A separate room can be allocated for organizing an ethnographic museum with various exhibits of household items: old irons, spinning wheels, pottery machines, kerosene lamps, kettles, pots and spoilage. A cart can be placed in front of the entrance to the museum. Many residents of nearby villages will receive additional jobs in this tourist town. The general impression of all this ethnographic village-village will be like a kind of open-air museum.

Additionally, you can organize eco-trails from this town to the mountain tracts and offer tourists to ride a horse or a donkey. In such an ethnographic center, tourists can familiarize themselves with and learn how to bake cakes in tandoors, participate in the preparation of dairy products (butter, suzma, kurt). Locals can also arrange musical performances. And if any of the villagers has a wedding, then why they don't invite dear guests to it? The revival of local crafts not only enriches the entire tourist product, but also stimulates their development.

If the villages in which it is possible to organize agrotourism are in close proximity to the traditional tourist routes along the Great Silk Road, then this only plays into the hands. Although there are many lines of this route through the territory of modern Uzbekistan, it is necessary to develop the associated infrastructure for the comprehensive implementation of the new route. In the Samarkand and Tashkent regions, which are rich in vineyards and production for their processing, special tasting tours can be offered. In Samarkand, such a wine tasting tour is already underway. In the mountainous areas of these regions, the program of the tasting tour can offer visits to apiaries and tasting of honeycomb honey and other beekeeping products. And local shepherds can tell a lot about their work, offer a cup of milk and talk about the technology of making kurt or suzma. In terms of combining natural and agro-tourist components, one can mention the development of tourism in the Zaamin district of the Jizzakh region. In addition to the traditional sanatorium and resort tourism, to some extent developed in the vicinity of the Zaamin sanatorium, the region is currently actively promoting the region in other spheres of tourism, including ecotourism and active recreation with elements of rural tourism. Already, in such villages as Duoba, Peshagar, Khatap, Beshbulak, Urikli, guest houses are being created, where tourists are offered a varied program: "kelin-salom", "honey festival", "kumys show", "beshbarmak", "dombra show ", Joint cooking of national dishes (kozon-patyr, kurt-davo, kozon-kabob, kozon-non), etc. In addition, you can get acquainted with the sights of the Zaamin National Park (unique juniper forests, a waterfall, the Sherbulak spring, the centuries-old walnut tree" Bobo -Yongok ", Peshagar Caves). Sometimes it is worthwhile to time the agrotourism routes for all kinds of holidays, events and festivals. For example, to conduct such tours during the spring holiday of Navruz, when tourists are offered all kinds of competitions, contests, tastings, dances. The experience of such a festival was at one time held in the Baysun mountains of the Surkhandarya region, which has powerful ethnographic and natural components. And the architectural and archaeological sites of the region, especially Old Termez, complement the already list of sites worthy of tourism. Kupkari games are held in almost every village every year, and sometimes several times, where you can also invite tourists, even for one day.

Agrotourism has great potential in the field of domestic tourism, as well as in the developmet of small business. This type of tourism allows to create new jobs in rural areas, stimulates to some extent the development of rural infrastructure, raises and develops the cultural and educational level of the local population. Travel companies can organize and develop rural tourism by negotiating with farmers, mahalla committees and other representatives of local authorities. And of course, one cannot do without external investment, a good tax and legal basis, and also qualified personnel. [7].

Conclusion

From the conducted research, we came to the conclusion that Uzbekistan is an agricultural country, agrotourism will become a locomotive for the development of tourism in Uzbekistan. Thus, agrotourism is a profitable direction for the development of the agricultural sector of the economy, focused on environmentally friendly goods and environmental services, which can make a sufficient contribution to the regional budget. This is a successful and independent direction, it is interesting in terms of attracting investors to the development and expansion of existing ones and the creation in the future of modern agrotourism areas. Agrotourism, acting as an incentive for the formation of agricultural parks, eco-clusters, contributes to the preservation of the national identity of the regions of the country, is one of the factors in the development of rural areas: it helps to increase the employment of the rural population, reduce the migration of rural youth to megacities, increase the duration of the tourist season and is an affordable type of recreation at a cost. To achieve the goals at the present stage of development of agrotourism, it is necessary to create the following mechanisms: national public organizations uniting estates, agrotourism farms and enterprises, participation of such enterprises in international associations, an increase in the number of estates certified according to international standards in the agro-tourism system, dissemination of information on the development of agrotourism in country through international electronic databases, as well as the creation of a system of state support for agrotourism business and the development of its infrastructure.

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"All Is Well, That Ends Well"- Stylistic Features and Shakespearean Language

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ABSTRACT

The article describes the peculiarities of distinctive points of writer's style, utilization of expressive means and grammatical deviations. The author focuses on the findings from the play "All is well, that ends well" by William Shakespeare. The article also reveals some features of his writing style acknowledged as Shakespearean language.

KEYWORDS: *Grammatical deviations, license of poets, stylistic devices, oxymoron, metaphor, writing style, expressive means*

A language is a diamond for skillful writers and bards to shape it with varying styles. English is a language of international repute as it has significant historical development. Crucially, any language user should have knowledge on luminaries and contributors who have vast impact on language development. Majority of the English speakers claim the vital influence of William Shakespeare on English literature as for dramatic works and sonnets. However, not everybody has discovered the valuable contribution of the skilled playwright into the English language. He coined considerable amount of new words and phrases which made an enduring contribution to the enrichment of English language.

Importantly, in terms of speech culture of the English language, William Shakespeare made an outstanding contribution. The grammar and sentence structure were the basement for the Standard English.

His every literary work contains impressive stylistic devices, expressive means, coined phrases as well as sentence constructions which are self-evident proof for ubiquity of his legacy.

Material and Methods

The study reveals the peculiarities of Shakespearean language due to the standpoints of stylistic analysis. The primary data source is "All is well, that ends well" compiled in a collection called" The Complete Works of Shakespeare". In order to reference the study data, the researcher mentions Act, Scene and the Character.

The article targeted to clarify the linguistic deviation and writing style of Shakespeare in the realm of "All is well, that ends well". The author utilized the observation method and conducted the qualitative research.

Hopefully, stylistic approach could be helpful to the ESL speakers to digest the Shakespearean language. The researcher reckons this study serves to analyze grammatical deviation and creativity of the writer.

Significantly, the title is still considered as the most frequently spoken phrase by English speakers throughout the world. This saying is used in everyday speech and native speakers utter it unconsciously, not knowing to quote the "quintessential British dramatist" (Maria Delgado, a theater professor).

In the first place, Shakespearean language is distinctive for boundless metaphors. He utilized them to express the feelings and thought of characters, consequently managed to colour their speeches. "All is well that ends well" involves numerous impressive metaphors, easily lead to feel the state of the characters.

Countess: The tyranny of her sorrows takes all livelihood from her cheek.

Helena: Knowing him is enough. On's bed of death;
King: Skill infinite or monstrous desperate;
Parolles: A most harsh one, and not to be understood without bloody succeeding;
Bertram: And found her wondrous cold;
Parolles:I know him: 'a was a botcher's prentice in Paris, from whence he was whipt for getting the shrieve's fool with child-a dumb innocent that could not say him nay.
King: Our own love waking cries to see what's done,
While shameful hate sleeps out the afternoon.(King, Act V, Scene 3)
Second Gentleman: Ay, madam, with the swiftest wing of speed.(S.G. Act III, Scene 1)
King: Th' inaudible and noiseless foot of Time;
Parolles: Drunkenness is his best virtue, for he will be swine-drunk;
"All is well that ends well" features inclusive expressive means, especially exaggerations, representation of something as more extreme or dramatic than it really is, serve to bewitch the readers:
Parolles: I find my tongue is too foolhardy; but my heart hath the fear of Mars before it, and of his creatures, not daring the reports of my tongue.
The writer skillfully used oxymoron in the play, one of the stylistic devices- a combination of contradictory or incongruous words:
Be not holy-cruel. Love is holy; (Bertram, Act IV, Scene 3)
No,no,no,son was misled with a snipt-taffeta fellow there, whose villainous saffron would have made all the unbak'd and doughy youth of a nation in his colour.

The talented bard was the man of creativity. He was a real master of the language, who knew no boundary to create remarkable speech acts. Even the writer dared to "break" the regular rules for literary service also called "the license of the poet".

Bertram: The best wishes that can be forg'd in your thoughts be servants to you!
Helena: I have forgot him; my imagination
Carries no favour in't but Bertram's.
If Bertram be away. 'Twere all one.
Lafeu: Let us go see your son, I pray you;
I long to talk with the young noble soldier.
Lafeue: But one that lies three-thirds and uses a known truth to pass a thousand nothings with, should be once heard and thrice beaten.
Parolles: Within ten year it will make itself ten.
Second Lord: He has much worthy blame laid upon him for shaking off so good a wife and so sweet a lady.
Helena: I put you to the use of your own virtues, for the which I shall continue thankful.

The use of pronouns in the way of Shakespeare is known characteristics of the writer's writing style. The works might not have been spread unless he wrote in common and familiar way of that period. Significantly, he dared to make his own direction, which leaded contemporaries after him.
He must needs go that the devil drives.(Clown, Act I, Scene 3)
Wilt thou needs be a beggar?(Contess, Act I, Scene 3)
The wars hath so kept you under that you must needs be born under Mars.(Helena, Act I, Scene I)
Mine honorable mistress.(Helena, Act I, Scene 3)
Mine age is weak;(Countess,Act III, Scene 4)

In the realm of conditional sentences, Shakespeare has a personal signature. The devoted writer paced own steps to use of Conditional Mood provides the expressiveness of the speech.
If it be so, you have wound a goodly clew;
If it be not, forswear't; howe'er, I charge thee. (Countess, Act I, Scene 3)
If she be very well, what does she ail that she's not very well?(Helena, Act II, Scene 4)

It is obvious from the historical sources that, some contemporaries blamed the poet for lack of knowledge and breaking the formed rules. Naturally, "The bard of the bards" was loyal to his principles and keep writing in own style, known as "Shakespearean language" later.
There shall your master have a thousand loves; (Helena, Act I, Scene I)
My fear hath catch'd your fondness;.
Therefore tell me true;
That in their kind they speak it; (Countess, Act I, Scene 3)
In this my light deliverance, I have spoke;(Lafeu, (Countess, Act II, Scene I)
Thus he his special nothing ever prologues.(King, Act II, Scene I)
I have not wrong'd you!
My lord your son made me to think of this,
Haply been absent then.
Shall be my surety; fore whose thorne 'tis needful; (Helena, Act IV, Scene 4)
I wonder, sir, sith wives are monsters to you. (King, Act III, Scene 6)
King: Necessitied to help, that by this token;(King,Act V,Scene 1)

William Shakespeare created compound words which served to deliver the targeted meaning. As British linguist rightly stated: "With language you should be master and not the servant. Shakespeare teaches me to dare to be creative, to push the rules a little bit. If the word isn't there, make one up".
Contess: Wilt thou ever be a foul-mouth'd and calumnious knave?
Second Lord: He's a most notable coward, an infinite and endless liar, an hourly promise-breaker...
King: Shall seem expedient on the now-born brief;
Contess: The many-colour'd Iris, rounds thine eye?
Helena: In our heart's table-heart too capable.

One of the deviations observed in the writer's legacy, is to shorten the words or not writing the full word. This type of words provided the incredible sense respectively. This issue was investigated by Fathu Rahman, who conducted a rigorous research on deviation discussed the apocope- to delete a syllable or letter from the end of a word. The works of Shakespeare are full of "unfinished" words and they occur rhetorical power.
Our remedies oft in ourselves do lie;
Looks bleak I' th' cold wind; withal, full oft we see;
Sure, they are bastards to the English; the French ne'er got 'em;
Ev'n as soon as thou canst, for thou hast to pullat a smack o' th' contrary;
Y'are shallow, madam-in great friends;
Weary se'nnights nine times nine;
Keep it not;you cannot choose but lose by't. Out with't.
I am sure thy father drunk wine-but if thou be'st not an ass, I am a youth of fourteen;

The gifted writer was a real master of the language, as many luminaries claimed, his words beginning with prefix-un, can be peculiar point of his language.
Parolles: Five or six thousand; but very weak and *unserviceable.*
Clown: Marry, you are the wiser man; for a man's tongue shakes out his master's *undoing.*
Widow: To her *unworthiness.* It nothing steads us;
King: Unquestion'd welcome and undoubted blest.
Helena: As nothing can *unroot* you.
The negative meaning defined by the help of verbs was peculiar to the writer's style.
King: And yet I know not-thou didst hate her deadly.
Helena: I dare not say I take you;
Bertram: Which holds not colour with time, nor does;
To you that know them not. This to my mother.
King: Believe not thy disdain, but presently;

The writer was a sage person and he was multilinguist at the same time. These quotes about Shakespeare could provide with the irrefutable fact respectively.
"Shakespeare's language is full of resonance of Latin, Spanish or Germanic terms. The Irish have often said it's a myth he's English, he's actually Irish" states Maria Delgado, a theater professor at Queen Mary University of London. "He was the most Spanish of writers" quotes Borges, Argentine short-story writer.
"All is well that ends well" also includes these quintessential writing features of the playwright:
Parolles: Tongue, I must put you into a butterwoman's mouth, and buy myself another of *Bajazet*'s mule.
Parolles: Sir, for *a cardecue* he will sell the free-simple of his salvation, the inheritance of it;
Clown: But it is your *carbonado'd* face.
Second Lord: *Throca movousus, cargo,cargo,cargo.*

One might be upbrought by the means of wise words in the speech of characters.
First soldier: *Half won is match well made: match and well make it;*
King: Crying "That's good that's gone"Our rash faults
Make trivial price of serious things we have;
There is adroit utilization of contradictions in the play.
Countess: *Ah, what sharp stings are in her mildest words!*
Helena: *That can such sweet use make of what they hate,*
When saucy trusting of the cozen'd thoughts.

Conclusion

Inevitably, the majority of non-native speakers face to difficulties in understanding the Shakespeare's language. Consequently, there would be a certain breakdown in analyzing meaning of the speech. In order to solve the challenges faced by ESL speakers, they need commensurate knowledge on linguistic deviations and writing style of the writer.

In conclusion, William Shakespeare was creative writer and valuable contributor of the English language. Therefore his phrases, coined words have been quoted in everyday speech over the centuries. Robert Graves rightly stated:"The remarkable thing about Shakespeare is that he is really very good- in spite of all the people who say he is very good".

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Issues of Psychological Security Formation in Youth Against Information Threats

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ABSTRACT

The article presents research analyzes and conclusions on various information impact on youth psychology, youth protecting importance from information threats.

KEYWORDS: *information threats, psychological security, socio-psychological analysis, personality threat qualities, manipulation, aggression manifestations, students' education.*

INTRODUCTION

One billion of the world's population is young people between 10 and 24 ages. "Youth are our hope. Peace, economic development, social justice, tolerance - all this depends on youth potential realization... ". More than 400 million youth live in troubled parts of the world and face various challenges. In addition, youth with education and employment problems are more likely to be various threats target. The "hired workers" majority in destructive organizations are young people at 17-24. Young people need special protection[1].

One of the most pressing issues in social psychology around the world is the youth ability to withstand various threats, extensive work is being done to prevent delinquency and crime among students, destructive ideas expressed as manipulations result of various kinds, to eliminate threats against them. These studies serve as a theoretical basis for comprehensive socio-psychological features, scientific research on its formation, the characteristics study of independent thinking in students, behavioral issues in the educational process study of deviations in student behavior, aggression, emotional instability, the accumulation of assertive behavior in the individual.

One of the significant directions of our state policy is to follow the motto "Youth education is always relevant" in our country, to bring them up as harmoniously developed people, to protect them from foreign ideologies and attacks, to form skills to combat various ideological threats. The Action Strategy for five priority development areas of the Republic of Uzbekistan for 2017-2021 sets "Education of youth who are physically healthy, mentally and intellectually developed, independent-minded, loyal to motherland, strong outlook on life, deepening democratic reforms and increasing their social activity in the civil society development "[2] tasks. In the globalization era, various vices, dangers and harmful drug addiction effects, immorality, and "information attacks" have begun to enter into Uzbek families and youth lifestyles.

"It is well known that the younger generation upbringing has always been important and relevant. But in the 21st century in which we live, this issue is really becoming vital matter." For education to be perfect, however, there must be no room for complacency. "Threats such as religious extremism, terrorism, drugs, human trafficking, illegal migration, 'information attacks' are on the rise, undermining the beliefs and family values that have existed for centuries."[3].

A social psychological questionnaire was used to study students 'core values and susceptibility to external influences. Our students were more interested in what they valued and what they did in their spare time. The obtained data were analyzed by categories. In the social psychological survey, "Whose advice did you rely on when choosing a profession?", the question was answered by 31% students, my parents, 53,7% have their own opinion, 13,2% of my teacher and 2,1% of my close friends. It can be seen from the answers that the issue of career choice was taken seriously. It should be noted that the answer that I have my own opinion on this issue was found to be 3,5% for girls and 50,2% for boys. Hence, on the above issue, it can be said that girls are often influenced by the opinions of those around them, while boys rely on their independent opinions.

"Do you think a person can be friends with everyone?" 40% of students answered no, 53% answered that they can be friends with their parents, and 7% answered that they can be friends with a person they like. From the answers, one can witness that the family is valued for more than half of the students.

To the question connected with information attacks "What kinds of music do you like the most?" 37,6% of respondents liked classical, classical melodies and music, 8% of rock, 18% of modern national music, 8,7% of foreign melodies and music, and (21,5%) did not listen to music at all. "What discs do you have more at home?" 30% of students answered that foreign feature films, 18% of students answered that there are discs of national feature films, 28,8% of students have

[1]Source: UN News. Report by UN Secretary General Antonio Guterres on the occasion of International Youth Day..https://www.un.org/development/desa/ru/news/social/youth-day-2018.html

Decree of the President of the Republic of Uzbekistan on February 7, 2017 PD-4947 "On the Action Strategy for further development of the Republic of Uzbekistan." Collection of legislation of the Republic of Uzbekistan.2017. - Issue 6 (766)..

[3]https://sputniknews-uz.com/analytics/20170703/5736267/Mirziyoyev-yoshlarga-Hukumat-eshiklarini-ochdi.html

discs of famous singers in their dormitories, and 11% of students answered that there is books collection.

"Who can easily change your mind?" 50,6% of students chose the answer “parents” and 18% chose the answer “teacher”. This means that 68.6% of students ’opinions can be influenced by people who are a reference group for them, i.e. parents and teachers.

Table 1: Indicators distribution of family and external influences importance in students life.

(marks are in percentage (%) (n=424)

		Girls (n=204)	Boys (n=220)	Total (n=424)
1.	The importance of family and loved ones	41.2	30,3	71.5
2.	Rely on your own conclusions	3,4	12,2	15,6
3.	Significance of external influences	7,6	5,3	12,9

By categorizing the emphasis in the questionnaire, the analysis was carried out by dividing it into areas that are important in students’ lives and can influence their opinions. The results showed that 71,5% of students' opinions can be influenced by family members and close relatives, 15,6% rely on their own conclusions and experiences, and 12,9% are exposed to external influences. Family and close relatives and susceptibility to external influences can be observed in female students than in male students (Family and close relatives 30,3%, external influences 5,3%). We think this is probably due to our mentality.

For research purposes, we used a questionnaire developed by us to study the threats of social networks and the impact of “Information attacks” on youth psychology.

The collected data were statistically processed and analyzed using computer programs. A total of 445 students were involved in the study.

The results of the empirical study were quantitatively analyzed and it was found that the negative impact of information attacks on the upbringing of young girls was also high.

“Where can young people get information about "information attacks"? - 58% of respondents answered from the Internet, 20% from the press, 22% from close friends. This means that information about "information attacks" is spread through the Internet.

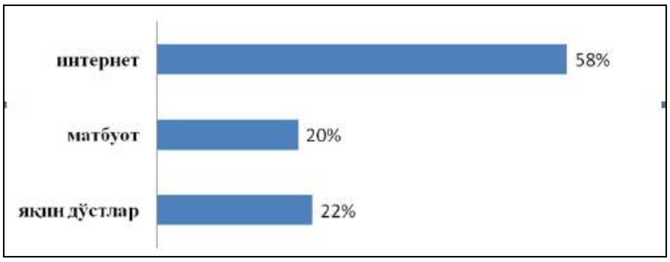

Figure 1. Information about "information attacks" sources of youth

Based on the results of the questionnaire survey analyzed above, young people have a partial understanding of the appearance of external threats. In the first stage, they have a high tendency to follow attacks that are alien to them, without having a complete picture. In the 3 year of studying at a scientific school, it is possible to observe changes in their views on information attacks. Mostly students receive information about external threats from social networks and mass media and are exposed to the effects of alien attacks (68%).

For research purposes, we used Bass-Dark’s methodology “Identify manifestations of aggression” in our study.

In processing the results obtained, a comparative qualitative analysis of the mean value of individual and group aggression with a high degree of visibility was performed. The most common type of aggression in all subjects was physical and aggression, and the least defined was negativism and guilt aggression.

Table 2: Aggression Indicators in youth (according to “student”)

№	Types of aggression	$\bar{x}$	t_{st}=	P
1.	Physical aggression	6,2	2,02	P=0,05
2.	Verbal aggression	4,8	3,55	P=0,05
3.	Indirect aggression	2,9	3,55	P=0,05
4.	Negativism	5,73	2,7	P=0,001
5.	Tension	7,8	2,02	P=0,001
6.	Suspicion	6,16	2,02	P=0,01
7.	Sadness	7,8	2,02	P=0,05
8.	Feelings of guilt	6,2	2,02	P=0,001

As a result of the correlation analysis of the interactions between the results of the methodology, the physical aggression in the students formed a positive correlation with the aggression directed at someone, that is, physical aggression is directed at others in a high-achieving student (r= 0,2010**; p<0,01), verbal(r= 0,499**; p<0,01) aggression is also high, while irritability and negative emotions (r= -0,293**; p<0,01), law - aggression in the form of behavior against the rules (r= -0,306**), guilt and remorse (r= -0,133*) on the contrary, the negative link showed an indicator.

Table 3: Intercorrelational relationships of aggression outcomes (based on Bass-Dark)
*p<0,05: **p<0,01

Types of aggression	Physical aggressionагрессия	Verbal aggression	Indirect aggression	Negativism	Tension	Suspicion	Sadness	Guilt.
Physical aggression	1	0,201**	-0,293**	-0,306**	-0,394**	-0,062	0,499**	-0,133*
Verbal aggression		1	-0,103	-0,358**	-0,440**	-0,177**	-0,353**	-0,102
Indirect aggression			1	-0,001	-0,052	-0,305**	-0,097	-0,167**
Negativism				1	0,139*	-0,233**	-0,006	-0,187**
Tension					1	-0,004	0,251**	-0,083
Suspicion						1	0,100	-0,065
Sadness							1	-0,010
Guilt								1

However, the value in "anti-rule behavior form" had an inversely correlated relationship with the remaining values (is equal to r= -0,293, r= -0,306, r=- 0,358, r=-0,133, p<0,01). In addition, students have not yet been able to develop their creative potential, to be active enough in social relationships, to be able to work on themselves, to develop willpower, to be dissatisfied with their work and performance, to have the ability to evaluate their behavior. it is obvious that they are not formed and do not have the ability to form independent opinions in the acquisition of knowledge.

III year students who participated in the study had a broader understanding, which in turn meant that they had a higher level of **psychological and security information**. We believe that the process of forming information psychological security in students will be successful if they have a high level of awareness of the threat and its consequences.

Based on the results of the conducted methods, students can be divided into the following groups:
- a group of students with a very low level of aggression and hostility, competence to eliminate the threat;
- a group of students with the ability to partially eliminate a threat with moderate aggression and hostility;
- a group of students with a high level of aggression and hostility, who do not have the competence to eliminate the threat.

We believe that by identifying a group of students with a high level of aggression and hostility, a high risk of intimidation, and working with them on the basis of a training program, it is possible to bring the student's personal aggression and hostility to the norm.

The third chapter of the research, entitled "**Socio-psychological analysis of the qualities associated with information psychological security in youth**" highlights the threats expressed in society, the results of monitoring the effectiveness of psycho correctional program, psycho correctional training.

An analysis of the methodologies conducted after the psychological trainings aimed at the formation of information psychological security and the comparative results of the methods of clarifying experiments were conducted. In order to determine the socio-psychological characteristics of the aggressor, we used R. Kettell's 16-factor questionnaire. The methodology was conducted in both the training group and the control group students. The personality traits of group students with low levels of aggression and students of groups with high levels of aggression differed. In a group of students who exhibited aggression and hostility at the norm level, factor A was significant (r = 1,68;), which meant that students in this group had high levels of openness and sincerity in communication. In the group of students with high aggression, the level of communication can be seen. Significant negative (-0,98**; p< 0.01) correlation was identified in the second group on the F-phase (reasonable) - sensitivity (excitement) factor.This means that the more aggressive and hostile a person is, the more likely he or she is to complicate everything, take everything seriously, and be affected. L– reliability - a negative (-2,86*; p< 0.05) correlation in the first group and a positive (0,34**; p< 0.01) correlation in the second group.

This means that a person who is in the norm of aggression thinks that everyone is kind and good, speaks openly even to people he does not know well, easily trusts them with their secrets, values, is a compassionate, cheerful, kind person in the community. The higher the level of aggression and hostility, the more cautious the students in this group will be, the more likely they will be misunderstood in the first place. They see evil everywhere and do not trust anyone. They are not sincere with their friends, claiming that they are capable of injustice. Others in the team are jealous of success. They think they are not valued. They are strict in their dealings with people, but they don't like competition. A negative (-1,15*; p< 0.05) correlation was found in the first group on the factor of propensity to O - self-confidence - guilt. This means that if the aggression is normal or low, the person will be cheerful, cheerful, satisfied with life, confident in their abilities and luck. They pay close attention to all that is happening.

No such link was identified in the second group. Q_2 - conformism (group dependence) - a positive (2,07** p< 0.05) correlation was found in the second group on the independence factor.Based on the result, it means that the higher the aggression, the more likely they are to give up any facilities to maintain their independence and ignore the opinions of others in their activities.

R. Through the Kettell test, students 'personal characteristics were explored. The test was calculated and analyzed separately in the control and training group students. Experimental group subjects formed personality traits such as communicative, high intelligence, emotional stability, independence, thoughtfulness, high normative behavior, courage, gentleness, diplomacy, self-confidence, high level of self-control, adequacy of self-esteem.

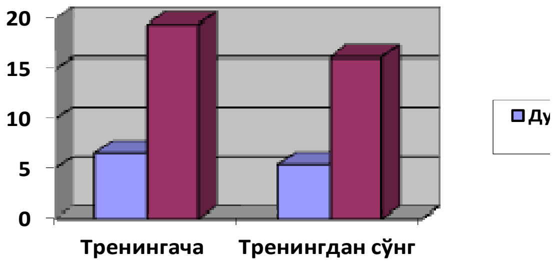

Figure 2. Changes in the rate of aggression in students as a result of training sessions.

At the end of our formative training sessions, the results of the 'Bass-Dark' " Identifying manifestations of aggression "questionnaire survey were compared in the experimental group and the control group, and a decrease in aggression was observed in the experimental group.

It can be observed that aggression and hostility were high among students during the pre-training period and decreased after the training sessions. In the pre-training condition, physical (7,06), person-centered aggression (6,4), irritability (5,2), negative emotion (3), verbal aggression (7,27), showed high rates. Hostility (-13,75) and aggression (3,299) have differences in pre-training and post-training performance, and confidence level equal to r = 0.001; r = 0.002.

The training aimed at the formation of information psychological security in young people affected the socio-psychological characteristics of students and led to a decrease in the indicators of aggression and hostility.

Table 4: Comparative analysis of the results obtained by the Bass-Dark methodology

Appearances of aggression	Before training		After training		t-criteria	p
	M	σ	M	σ		
Physical aggression	7,06	1,03	5,06	0,9	3,553	**,031**
Indirect aggression	6,4	1,10	3,03	1,07	9,548	**,045**
Tension	5,2	0,93	5,1	1,16	-3,548	**,001**
Negativism	3	1,14	1,73	0,9	4.65	**0,001**
Sadness	2,6	1,12	2,4	1,33	-11,926	**0,001**
Doubt	4	1,92	3,2	2,16	-8,059	**0,001**
Through verbal hearing	7,27	2,06	4,0	1,81	6,498	**0,001**
Hostility	6,63	2,52	5,4	1,98	-13,75	**0,001**
Aggression	19,5	3,95	16,2	3,87	3,299	**0,002**

The training aimed at the formation of information psychological security in young people affected the socio-psychological characteristics of students and led to a decrease in the indicators of aggression and hostility. The training sessions showed a positive result. So, we believe that a special program can have a positive effect on personality traits.

As a result of scientific research on the socio-psychological aspects of the formation of information psychological security in young people, the following conclusions were drawn:

1. In the process of rapid development of information, the number of threats is growing, and the formation of a psychotype of threatening youth remains a topical issue.

2. Senior students have a broader understanding of "Information Attacks" than 1 year students. Most of the subjects had a partial knowledge of "information attacks" while studying in the 1 year, and they did not have an idea of the threat, the consequences of the threat.

3. It is effective to recommend anti-threat information components of psychological security in the form of a model *"Emotional element - Behavioral element - Reflection process - Cognitive element"* on the basis of functional participation. The emotional element - "compensation" and "hypercompensation", "choice of a model of social protection" (reflection), the definition of acceptable and undesirable characteristics in the system of personal characteristics, as well as the subject's knowledge and skills are involved in ensuring resilience.

4. Threats to various areas of youth have a complex structure, and the main means of protection against them is the formation of information psychological security. The formation of the psychological element of information is effective in a systematic way, if the information is carried out taking into account all the factors that determine the formation of the psychological element, in particular, the individual psychological and mental characteristics of the person.

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The System of Innovation and its Impact on Economic Development

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ABSTRACT
The article discusses the factors that influence the development of innovational activity in the republic. In order to test the impact of innovation expenditures on the volume of innovations in the republic, we used linear regression analyzes and found strong interdependence. Also, we discuss the role of human capital and the level of development of financial system in stimulating continuous investments on innovational activity . Furthermore, after analyzing the data about implemented innovations in 2019 in the republic, we found that higher educational as well as research institutions participated in innovational activity very passively, which is of great concern.

KEYWORDS: *innovation, innovational economics, service, national innovation system, investment, economic mechanism, R&D, linear logarithmic regression analyzes, venture funds, angel investors*

INTRODUCTION
Today, Uzbekistan is gradually paying more attention to the creation of an innovative economy. The creation of the Ministry of Innovative Development of Uzbekistan and a fund for supporting innovative development and innovative ideas is the first step towards developing the economy through innovation. Adoption of strategies of action for further development of the Republic of Uzbekistan on the 2017- 2021 years, allowed to speak boldly about the economic reforms in strategic areas of the economy including the development of a national innovation system. The level of development of services, in particular educational services, strongly influences the well-being of the people. A quality educational service is a fundamental condition for creating a national innovation system. In a short period of time, a lot has already been done to create an innovation system, most importantly, specific tasks have been set for the near future on the implementation of innovation policy.

At the moment, as statistics show, the share of participation of universities and research institutes in the development of innovations remains low. Also, investment in innovation has declined in recent years due to the low efficiency of investment assets. This all speaks of the need to create a sustainable economic mechanism for the implementation of innovations, taking into account the interests of business and government, which should bring optimal benefits to society. Also, it is important to note, that in the implementation of innovation policies should take into account the interests of business and other internal and external factors that can change the direction of economic development. Creating favorable conditions for business and small business can create competitive markets and thereby improve the quality of the final product. But at the same time, it is important to develop and improve educational services in the republic. In developed countries, the university s are a hub of scientific research development. Many important radical innovations were created in the laboratories of universities.

The main part
President of the Republic of Uzbekistan Sh.M.Mirzioev in his message to the Oliy Majlis emphasizes that " ... Today, we turn to the path of innovative development, aimed at radical improvement in all spheres of public life and society. And this is natural. After all, who is winning in today's rapidly developing world? Only that state that relies on a new thought, new idea, innovation. Innovation means the future. If we begin to build our great future today, then we must do it primarily on the basis of innovative ideas, an innovative approach [1]. One of the greatest economists Zh.A. Shumpeter first proved h the innovation according to him "constructive destruction" and "industrial mutation", facilitates rapid growth [2]. American scientist Michael Porter in his book “Competitive Advantage of Countries” argues that innovation is a key factor in achieving competitive advantage at the micro and macro levels [3]. According to Cape, a broader definition of innovation is as follows: innovation can be a product or service, a new production process, a new organizational structure, or a new plan or program for employees of enterprises or organizations [4]. Professor I.T. Abdukarimov defines innovation as an investment, providing and replacing the generations of techniques and technologies, new equipment, technology, arising from the achievements of scientific and technical process [5]. According to Professor OA Abdurakhmanov, innovation in tourism is a tourism product and services that contain innovations for implementation and thereby contribute to the professional development of employees [6].

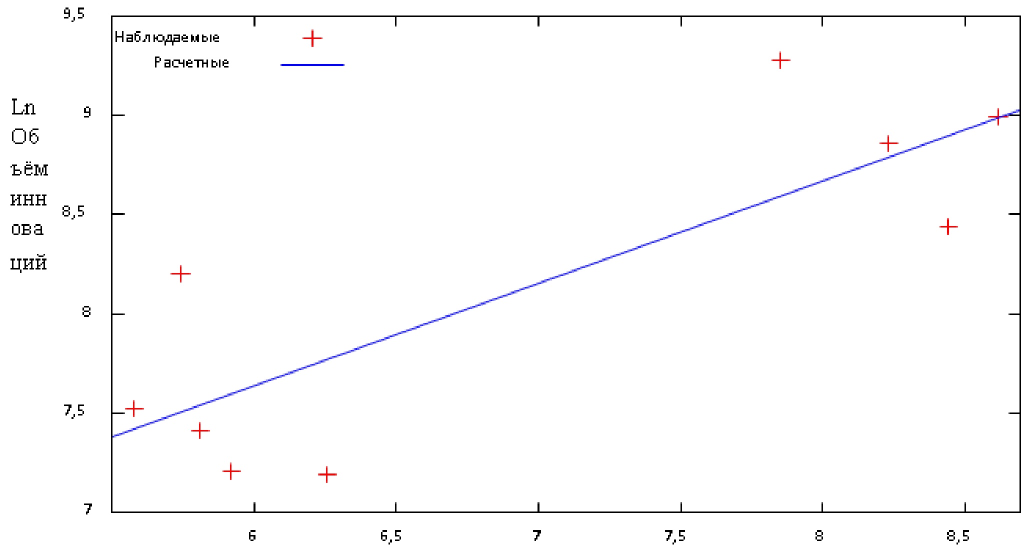
Literature Review
Scientific activity, which is the main source of innovation, is one of the types of services. The service sector accounts for almost half of the country's GDP. Famous scientists K. R. Makkonell, S. L. Bryu, F. Kotler, T. Levitt and others in their works investigated the definition of services. For example, F. Kotler defines service as " activities that can be offered to one person by another person or beneficial effect which prevents own than - or [7]. Among Uzbek scientists, I.S. Ochilov defines a service as “the conscious activity of a person, society, and the state that brings benefit [8]”.

Methodology
We used the log-linear regression model for checking the volume relationship of innovation with the cost of innovation. The calculations were performed using the Gretl program.

Main content

Today, Uzbekistan pays great attention to the development of an innovative economy. The experience of developed countries shows, that the introduction of innovations and the creation of national innovation system gives its results in the long term. But, it is also important to note that innovations themselves do not live a long time or do not have time to be realized without government intervention[9]. Many states, especially developing countries, are faced with the problem of creating favorable conditions for the development and promotion of innovations. "Since bureaucrats are interested in a large salary and the power of their bureau, it is rational for them to increase the budget of their bureau rather than optimize the social product [10]". This statement means that a purely bureaucratic way of innovating is prone to failure due to lack of sufficient incentives. In addition, policymakers in charge of innovation policy are usually poorly informed about the market by which entrepreneurs and therefore tend to err in the implementation of innovation policy. Therefore, it is very important to analyze what exactly contributes to the growth of innovation.

In order to assess how effective the costs of innovation are, we decided to test the relationship between **costs** and the **volume of innovation** (innovative products, works and services) from 2008 to 2019. We tested the data on various models and settled on the linear logarithmic regression model, since the simple linear model had a heteroscedasticity problem (different observed variances). Below we obtained regression model using the program Gretl and graph the observed interrelationship between x and y (chart №1). According to the results of the calculations that the value of *p* is very close to zero and, therefore, it can be argued that the model explains well the relationship. The value of R squared tells us that the cost of innovation explains 68% of the change in the volume of innovation, which is quite significant. According to our model (1.1), if spending on innovation increases by 1%, then the volume of innovation will increase by 0.51%. Hence, it is clear that the efficiency of costs must be increased at least twice in order for the costs to pay off.



*ln vol_innov = 4.54 + 0.51 * ln exp_onR&D* (1.1)

Observed and estimated volume of innovations from expenditures on innovation (Graph No 1)
Source: Calculations were made by the author based on the data
https://stat.uz/uz/432-analiticheskie-materialy-uz/2038-innovatsion-faoliyat

In 2019, the expenditures of developed countries on research and development reached: 2,79% in the USA, 3,29% in Japan, 2,93% in Germany, 2,22% in France, 3,28% in Sweden, Israel 4,25%, in South Korea 4,23% of GDP . Observations show, that in the developed countries on the State account for 30-50% of the cost of the national R & D including at stimulating the development of small innovative business expenses [13] .

It is believed that the foreign investment in the developing world is one of the main factors of economic strength. Foreign direct investment, represented by foreign enterprises, allows the development of competition and thereby constantly stimulates the improvement of the final product or services. The state plays an important role of the "first customer" here. It is state-owned enterprises that actively cooperate with foreign companies and played an important role" the guarantor of the investors in China [14]. In addition to the state, big companies are usually able to develop innovations independently and have sufficient financial resources for investment in large scientific projects.

Conclusions and suggestions

Today many measures are taken to develop the innovational activities, in particular, legislation is being revised and reformed, as well as precise directions for the development of innovation are approved. Unfortunately, due to the fact that investments in innovation are typically associated with high risks [15], it is also necessary to develop the financial system to provide constant flow of investments. It is important to take the following measures to improve innovation in the republic:

1. To stimulate the activities of universities in important technical areas. Improve the quality of educational services by attracting foreign specialists ;
2. create close cooperation between manufacturing enterprises and universities through a centralized

system of inquiries. Improve the exchange of information between business and universities;
3. establish a close relationship with international research centers. Encourage local professionals to collaborate with their foreign counterparts and;
4. cooperate with international financial institutions to improve the investment climate in the country. Encourage the development of non-traditional methods of financing in the republic.
5. continue studying the nature of the interaction between the interests of government and business in the implementation of innovation policy.

In conclusion, we can say, that economic development is highly dependent on innovation and innovation in business. In particular, the application of technological innovations in the service sector, for example, in the educational service, can improve the quality of education and thereby raise the quality of human capital. But in order to maintain a long-term growth in investment in human capital, as the experience of developed countries shows, we need such levers of financing that would very quickly adapt to the changes taking place in the scientific world. The role of the state as the initiator of the financial reform is colossal, especially when creating favorable conditions for cooperation between business and universities and research centers.

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Classification of the Activities of the Madrassah of the Temurian Period

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ABSTRACT

In the ancient Oriental world, the madrassahs built by the Timurid and the educational process in them had a very high status. This article gives a brief overview of the education system in madrassahs built during the Timurid period and the subjects taught there. In addition, it lists the leading scientists of their time who worked under Amir Temur and Mirzo Ulugbek.

KEYWORDS: *Amir Temur, Qur'an, hadith, teaching, debate, mudarris, mutawalli, sheikh, naqv, orthography, classroom, treasury, khanaqah*

INTRODUCTION

The famous madrassahs of the East have historically been established as universities, which are inextricably linked to the emergence of new methods of education. In the eighth and ninth centuries, students were taught science, mainly in mosques, where they were taught the sciences of Islam as well as Islamic sciences (the science of transport) and individual sciences (the science of the mind). They wrote what the Taliban were told during the teachings. This method is called the 'spelling' method. Since the 10th century, schools have abandoned the 'spelling' method. Adam Metz, a Swiss Arab scientist, writes: "The advent of new teaching methods, in turn, has led to new types of educational institutions. While the 'spelling' method was considered the highest in learning, the 'tadris' method (commentary) has been the leading method since the 10th century. The tadris method was inextricably linked to the scientific debates that took place at the time, and mosques were not suitable for debates. As a result, a madrassah was established by that time. Schools were left in front of the mosques.

Special buildings were built for madrassahs, the largest madrassahs were built by rulers, large landowners, Sharia and religious leaders. The madrassah reflects the most beautiful traditions of Eastern architecture. Extremely high and majestic minarets have also been built in madrassahs and mosques. The building accommodated rooms for 2-4 students, teachers, a trustee, the mosque imam, a muezzin room and several classrooms. There was also a rich library, reading room and a place to observe their work in large madrassahs of national importance. For example, Mir Arab Madrassah in Bukhara had rooms for over a hundred students.

Main body

Samarkand madrassahs played an important role in the science of the Timurid period. Ulugbek Madrassah was one of the most famous madrassahs in Movarounnahr and Khorasan. It was two-storey and had 55 rooms. Each room consisted of three rooms for two students: a hostel, a study room and a boiler room.

Another important issue that needs to be clarified. In the past, mosques and khanaks were built near the madrassah. According to Soviet ideology, khanaks were often considered in scientific works only as places of memory for dervishes and calandars, sheikhs and ascetics. The Uzbek Soviet Encyclopedia says this: the mosque was built as a resting place for dervishes, and large halls of large khanaks, built as part of mausoleums as a centre of dervish associations, were surrounded by rooms for pilgrims.

Usually there are verses from the Koran or hadith on the roofs and doors of madrasahs that require knowledge. For example, Mirzo Ulugbek's invitation was engraved on the roof of a madrassah in Bukhara built in 1417 under the title "Education is compulsory for every Muslim and Muslim woman". Such verses in the Koran and the call for hadith had helped to develop knowledge among young people.

The classification of the sciences taught, the level of teaching and the position of teachers are divided into two levels: the first is a general education institution called a madrassah. In this group of madrassahs, the science of transport - religious sciences - and the science of the mind - general sciences and social sciences are taught in depth. These madrassahs have existed in small towns and sometimes in big cities. Students who graduated from madrassahs worked mainly as teachers in ordinary schools, imams in mosques, muftis in Kazakhstan and in other positions, and some talented young people continued their studies in madrassahs.

The second was called Madrassahi Oliya, and education was at the highest level. There were high school graduates, and these madrassahs were located mainly in central cities, in cities with developed science and culture, such as Samarkand, Bukhara and Herat.

In madrassahs, as a rule, four days a week - Sunday, Monday, Tuesday and Saturday; two days - Wednesday and Thursday are self-studying days; and Friday is a day off. The study lasted six months a year, and as a rule the school year started on the first day of the month and ended on the first day of the hamal month. In the months of Hamal, Savra, Javzo, Cancer, Asada and Sanbulah, students were busy with their work. Special decrees from the khans and kings came to the madrassah about this.

In both groups of madrassahs, the morphology and syntax of the Arabic language are studied deeply and for a long time. Because in madrassahs almost all the works in all subjects and their comments are written in Arabic, and perfect knowledge of Arabic is required. Regardless of madrassah disciplines, narrative science (the Koran, hadith, law, mysticism) and related sciences have formed the basis of the curriculum. Some madrasas taught mental science, administrative science and military science in accordance with their specialisation. Because they are mainly government officials or military leaders who serve in public administration and participate in embassies. Accordingly, the encyclopedia of Oriental pedagogy by Unsurulmaoli Kaikovus, *"Kobusnoma"*, *"Siyar ul-muluk"* ("Politics") by Nizamulmulka, *"Gulistan"* and *"Boston"* by Sheikh Saadi was studied in depth in such madrassahs.

The madrassahs operated under the general supervision of the Alam and Khasikalons, but the madrassahs were under the direct supervision of kings, khans and emirs, who appointed teachers in the state level madrassahs, checked their knowledge and checked students periodically. Alisher Navoi's younger contemporary, historian and poet Zainiddin ibn Abdujalil Wasifi (1486–1566) described a case where Ulugbek appointed a madrassah teacher in Samarkand in his book *"Bada ul Vakoye"* ("Beautiful Stories") : "On a happy autumn day in 813 (1420), the madrassah was completed, and all the people, scientists, scholars, judges and courtiers gathered in the courtyard of the new madrassah. Everyone wondered who would be the first teacher at this Firdavsmon and madrassah.

Addressing the audience, Mirzo Ulugbek said: "A person who has matured in all sciences must be the first madrassah teacher. Then one of the people came out and said that I would take the exam. Under Mirzo Ulugbek's leadership, the exam classes will be held in the presence of ninety scientists and students. Only Kazizad Rumi and Mirzo Ulugbek understood this examination lesson, which was read at a very high scientific level, according to al-Majisti Batlimus (Claudius Ptolemy). It was Shamsiddin Muhammad Havafi, a leading scientist and teacher of his time.

The methodology of teaching in madrassahs deserves special attention. Mirzo Ulugbek often used the method of discussion in his teaching. Indeed, the method of discussion leads, firstly, to the development of the learner's speech and, secondly, to a deeper understanding of the subject. Mirzo Ulugbek not only taught the students, but also taught and talked to madrassah teachers and scientists working at the observatory, thus improving their skills. There are 100–150 students studying at Ulugbek madrassah. All great scientists who lived and worked in Samarkand: Kazizada Rumi, Mirzo Ulugbek, Shamsiddin Muhammad Havafi, Giesiddin Jamshid Kashi, Alauddin Ali Kushchi taught specific sciences and conducted research at the Ulugbek Observatory.

Not all students were able to graduate from the madrassah and obtain a certificate. At the university, firstly, the attention and demand for academic subjects was so high that many students are 20–25 years old and some have dropped out.

The Manuscripts Fund of the Institute of Oriental Studies of the Academy of Sciences of the Republic of Uzbekistan has a permit issued to Rumi Shamsiddinu Muhammad Balkhi, a madrassah teacher from Ulugbek Kazizoda Kazizoda, who successfully graduated from the madrassah. In addition to emphasising the potential and perseverance of this student in the study of natural sciences, it lists the names of works that have been studied in detail in the madrassah.

Conclusion

In conclusion, those who successfully graduate from madrassahs were given a diploma (a document in some sources) that allows them to teach in different madrassahs.

The madrassahs were rich libraries that housed unique books, outstanding periodicals, sahofs and calligraphers. They copied new books and added necessary works to the library. In addition, talented students used the private libraries of kings and great thinkers.

Such bright pages in the history of our madrassahs lasted until the 17th century, when the collapse of the Timurid kingdom began to have a negative impact on the life of madrassahs. Madrassahs also functioned in later periods of the Ashtarkhanids and khanates, but the teaching of transport sciences dominated their curriculum. But it was at this time that mental sciences (secular sciences) were raising Europe.

This means that during the Timurid period, education was conducted with high methods of its time and there was also potential in the eastern world.

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Through Modular Training Increasing the Efficiency of Education

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ABSTRACT

Professional development through modular training in the article the masses of the wider use of its possibilities to make education more effective are described and appropriate conclusions are made, recommendations are given.

KEYWORDS: *module, modular training, micro-module, taxonomy*

INTRODUCTION

The effective use of modern education, the wider use of its potential, remains one of the main requirements of modern education.

The way we organize the educational process, the mechanism of its implementation is concise, clear, easy to apply in practice, we can choose the most optimal means and methods of independent learning, and at the same time increase the pace of learning with minimal time.

As a result of research in this area, new ideas have been put forward, including the optimization of education, the gradual acquisition of knowledge and skills, the activation of the listener's activity and its transformation into an object of the educational process, programmed learning.

Just as the acceleration of scientific and technological progress in the XXI century has led to radical reform of all spheres of life, the renewal of the educational process should be linked not only with modern information technology but also with innovative ideas, concepts and technologies and accelerate their optimal use. the task of applying the most effective methods of education to raise it higher is on the agenda.

One of the most common methods of effective teaching today is the "modular system of teaching".

Module means "norm" in Latin. It is well known that the acquired knowledge has a certain logically complete, indivisible value of appropriate quantities. For example, let's take concepts, the idea that is formed in the formation of a concept is expressed through speech, transformed into a combination of words.

Thus we see that the concept constitutes the basic indivisible structure of knowledge, and that the criterion of knowledge which cannot be divided is the module. (ie: specific tariffs, rules, theorems, laws, axioms, etc.)

The module is a logically complete part of a certain form of formalization of educational programs in academic disciplines.

The module embodies holistic ideas about a particular field of science. The information it contains reflects the widest range of complexity with a clear structure and integrity to achieve the didactic goal. The modular system is the science itself in a particular completed part or whole of science. It can cover several courses. Its structure will have a mandatory base component and a variable part.

Materials and Methods

Professor N.H. In the words of Avliyokulov: "The module is a logically complete unit of educational material, aimed at studying one or more fundamental concepts of the subject".

The modular learning system is based on the assimilation system, which is a feature of the human brain. The human brain perceives the unit of information as a stream, not as a whole, but as a quantum (indivisible quantity). Therefore, it is recognized that the most effective way is to organize education on the basis of the idea of adapting learning to the system of assimilation of the human brain.

The micro-module in each module serves a specific purpose and function in the formation of specialty disciplines, whose goals are reflected in state educational standards or requirements and represents the main goal of mastering the specialty discipline.

The module is an independent structural unit, and in-service training students do not have to study the entire course, but only a number of modules. It also allows gifted students to optimally plan their individual and independent work (modular credit system).

The purpose of the transition to modular training is:
- Continuity of reading;
- Individualization of reading;
- Creating the necessary conditions for independent study of educational material;
- Accelerate reading;
- Achieving effective mastery of science;
- Achieving full disclosure of listeners ’abilities and high learning outcomes;
- Students are given the opportunity to choose subjects in their specialty.

The trainee will have the opportunity to complete the training program ahead of schedule.

The beginning of modular teaching in teaching technology is to define the teaching objectives of the subject. It is a continuation of it in setting learning objectives on topics. Theoretical and practical training is a goal-oriented learning process. These processes are conducted to achieve specific learning objectives that are predetermined. If the learning objectives are not set, then the content and didactic structure of the lesson is violated. It is important to develop pre-appropriate learning objectives for the formation of theoretical and practical lessons.

Results and Discussions

By classifying learning objectives into categories and sequential levels, it is recommended that pedagogical taxonomies be used to clearly articulate learning objectives. Taxonomy (derived from the Greek word and "taxis" - to place in order and "homos" - to mean law). Taxonomy includes a category that is structured based on the natural relationship of objects and is based on a multi-step principle for describing objects. American educator B. Blum's taxonomy of learning objectives is the most common taxonomy in the world. In practice, learning objectives are developed for each theoretical and practical lesson. These goals are categorized in the taxonomy from the following perspective:

1. To know is to remember and recall facts and principles. In this case, the listener can remember the acquired knowledge and tell it.
2. Understanding - is an indicator of the ability to understand the essence of the studied material, draw conclusions, analyze the current situation. Interpreting as an indicator of understanding, summarizing the material, or making suggestions about subsequent events, and so on.
3. Application of methods, rules, general concepts - this includes the application of rules, methods, concepts, principles, theories. At the same time, learning outcomes require a higher level of mastery of the learning material than comprehension.
4. Analysis - the ability to divide the whole into elements, the gradation of these elements and the ability to establish relationships, to know the principles of organization of the whole. In this case, the learning outcomes are characterized by their high intellectual level in terms of understanding and application, as it requires knowledge of the content of the learning material and its internal structure.
5. Synthesis - the creation of a whole of given elements in order to create new structures. Appropriate results represent a creative activity aimed at creating new schemes and structures.
6. Evaluation - the evaluation of materials and methods taking into account the adopted objectives. This category requires the achievement of learning outcomes based on all previous categories and evaluative opinions based on clearly distinguishable criteria.

Adequate verbs are used to define learning objectives, ie the purpose of the subject should be defined in such a way that the purpose is clear, so the basic phrases on each topic should be specified separately. It will be necessary to set the depth of each basic phrase, the study. That is, the listener will have to master one basic phrase at the level of knowledge, the other at the level of evaluation of some basic phrases. An example of the coordination of verbs in the clear classification of learning objectives can be shown in the following table:

№	Categorization of learning objectives	Verbs that categorize learning objectives	Coordination of verbs categorizing learning objectives
1.	To know	To say back Note Notification Name, To name Write	Expression Differentiation Recognition Tell me Repetition
2.	Understanding	Give evidence Replace Identify, mark Explain	Convert, rotate Change Show with photo Comment, disclose
3.	Apply	Application Calculation Demonstration Use, training	Identification Done Computation Implement, solve
4.	Analysis	Quote Highlight Differentiation Classification Offer	Predict Disassembly Distribution Check Grouping
5.	Synthesis	Discover Generalization Planning Development	Systematization Add Create Design
6.	Evaluation	Diagnosis Proof Justification Measurement Approval	Evaluation, verification Control Comparison, Comparison with

Conclusion

Thus, the more clearly the learning objectives are articulated and categorized, the easier it will be to assess the level of achievement. The closer we can categorize and define learning goals, the closer we will be to achieving them.

In short, in modular teaching, each specialty is considered as a whole module, and the system of disciplines studied in it are micro-modules of the whole module, which in turn is divided into smaller modules, and the listener passes the system of modules in a continuous, consistent manner. in connection with the sciences.

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The Negative Impact of the Birtual Threats to the Political Stability of the Society

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ABSTRACT

In the following article the definitions of the virtual world, virtual world and virtual threat, the negative impact of the virtual threats to the stability of the society are analyzed from the scientific-theoretical viewpoint. Also, the information on the diverse approaches to the impacts of the virtual threats to the life of the society.

KEYWORDS: *Virualistics, virtual world, virtual threats, state, society, person, upbringing of youth*

INTRODUCTION

The formation of Virtualistics has led to the opening of new facets of the socio-political life of society, innovative changes in the reform of the system of state and public administration. The rapid development of the world of computers and the Internet in particular has created wide opportunities for the regular communication of government agencies, civil institutions, public organizations with the population, especially young people. At the same time, it is possible to learn from the activities of various political forces and centers that today, as a result of the increasing opportunities for information in the virtual world, this sphere is becoming a powerful political, economic and ideological weapon. Indeed, “the XXI century remains in history as a period when the diversity of information exchange, the sharpening of ideological polygons, in one word, the struggle for domination over human consciousness. During this period, the preservation of national security, culture and spirituality must be considered at the level of the chief factor for every nation that thinks its future” [6.79] remains.

Main part

The term “Virtual world” was introduced into scientific problems by Jaron Zepel Lanier in the end of the 1970s at the Massachusetts Institute of Technology. He uses the term virtual scientist for the first time in the world in 1984. This term is a characteristic expression of the idea of the existence of a person in an environment created by a computer. According to M.Yuryev, nobility is an event that did not grow to Origin, a being that did not grow to appear[4.269] the field of science that studies the virtual world visualualistics. Virtual world is one of the basic concepts of realism is that simulakirs are components of virtual reality, and these are things that are extremely visible, reliable, the possibility of close capture exists[1.248]

Virtualistics is interpreted as a new direction, teaching and approach in World Science. Studies in the same direction in the US and European countries began from 1946 year, while studies in this direction within the CIS appeared in the 80-90 years of the 20th century. In her book “Philosophy and methodology of science” N.Y. Shermukhamedova expressed such an opinion about the authorship; “when we were thinking about the phenomenon of reality, we first wanted to focus on the belief that reality should be connected with the pursuit of a known goal.”[5.200-204] it is possible to observe that the virtual threats posed as a result of the informatization of society negatively affect the political stability of society: first of all, this process is taking place in connection with the transformation in socio-political life. The fact that developed countries are trying to influence the consciousness of citizens of other developing countries shows to what extent this problem is relevant. In the second case, the fact that new manifestations of socio-political threats are manifested mainly in the form of virtual information, dictates that every citizen has a sufficient level of Information Culture. After all, "the desire to meet their demands and needs in the history of mankind at the expense of other peoples has provoked ideologies such as robbery and aggression, the chauvinism of the great statehood and aggressive nationalism, fascism and extremism. Such ideas have caused a lot of suffering and tribulation to the peoples' heads."[2.15] therefore, it is evident that ignoring or opposing new trends in ensuring political stability in the society can lead to the dismissal of the political management system. Especially negative effects such as extremism, terrorism, drug addiction, socio-political conflict are equally threatening to all parts of the world.

Proceeding from the research topic, it can be said that there are two approaches to the classification of objects of virtual threat. From the first and common point of view, such virtual threat objects are three: the state, society and person. Supporters of the second view believe that it is appropriate to include society, social class, large and small social groups and individuals into virtual threat objects. In this process, the ways of influencing the soul and consciousness of a person are chosen by the influencer in accordance with the object, the same method for all objects is not suitable. If the impact on the state is carried out in one way, there are cases of using a different method of information to influence the individual. Accordingly, the scope and amount of damage caused can also be different in the virtual world, from very large to insignificant. This, in turn, arises from the possibilities of material, scientific, psychological, technical and mainly political influence, the purpose of the influencer on each individual.

The Virtual threat has such a unique character that it has the opportunity to seriously negatively affect all other spheres: the outlook of the individual, the political stability of society, the peace of the state, the distraction of public opinion and, ultimately, the spiritual, political, economic, cultural upsurge of each country. Because the penetration of information into the consciousness of society, organization, family, person is not so noticeable. In order to distinguish between positive and negative information, to master good information and reject harmful, human consciousness is developed, it is necessary that he himself is strong-willed. And the main name of the population of each country does not have such an opportunity. Therefore, the first place in the information stability must be occupied by information disseminators: servants of state structures, journalists, educators, employees of public organizations, etc.

Results

The nature and order of information available in the Virtual world serves as an inherent barrier of political tranquility and stability of society. In particular, if the state of diversity of religious thoughts in virtual life is manifested, an indicator of instability, the problematic situation in the system of religious relations is interpreted as a specific sign of maturity. Today, the information factor is becoming more and more important than power in the political sphere. Therefore, the success of the countries in foreign policy is of paramount importance not only with military power and economic potential, but also with the provision of mass diplomacy tasks aimed at establishing control over the information and cultural spheres that are taking place on a global scale. Also, today, with the help of operational methods, the message of this or that event, event is delivered to all points of the Earth's surface in one zone. It is worth noting that the information attack is widely used by various forces in the implementation of merciless geopolitical interests. This situation shows that the geopolitical forces are trying to exert pressure on the world's major TV channels, Internet sites of various political forces, trying to use them in their own interests. In such circumstances, it is important that the process of information transfer is carried out on a world-wide basis by democratic rules. In this regard, it should be noted that today's demands deny the only model of democracy. Because every sovereign state aspires towards the construction of a democratic society, first of all, relies on its values, national mentality, plans for the future are drawn up from this, and the goals are expressed in the interests of those people. On the second hand, democracy does not reject universally recognized laws, but strengthens it. It should also be remembered that the laws that have appeared somewhere in the second place cannot be applied to a full life as such. It is necessary to study its effective sides, draw conclusions from its shortcomings and conduct activities based on the historical, cultural values of that people.

The fact that young people, especially those whose worldview has not yet been fully formed in the virtual world, as well as those who do not have their own strict opinion position, are watching the claims of religious, magical power that pulls them to their net shows how important it is to study the problem. Under such circumstances, UNESCO, Los Angeles Museum of Tolerance (USA), the US Institute of Global cooperation, the Center for the study of religions under the Central European University (Hungary, Budapest), the Center for tolerance education (USA), The Center for Holocaust and tolerance (Hong Kong), the German Academic Exchange Service, the Goethe Institute in Tashkent, the German people's University, the ban on the dissemination of information on what and the oppressor of disagreements, the propagandist of violence and beating, porn, particular attention is paid to the scientific and practical study of the problems of limiting information that negatively affects the status, reputation and reputation of individuals, as well as domestic corruption. Therefore, in order to prevent or eliminate virtual threats of such religious content, "we need to attract investments in our country not only to economic sectors, but also to the sphere of know how scientific developments "[3.88], which is of paramount importance.

Conclusion

Well, firstly, virtual threats of religious content on a global scale are becoming a phenomenon that has a negative impact on the views of religious tolerance prevailing in society. At a time when the process of integration and globalisation in the social, economic and spiritual spheres is intensifying in the world, it is increasingly important to pay special attention to the development of research on the study of the political essence and essence of virtual threats of religious content. Secondly, complex changes are taking place in the system of political stability on a global scale. Especially the mercenary information, which is obscured by some political subjects, is directly and indirectly influenced by other societies, States, national units, religious beliefs, age characteristics. The main purpose of this project is to negatively affect the political stability of society, to draw Social, national groups back to each other, to call for revolutionary actions, to predict deceptive, socio-political and economic crises, and to show that the major disagreements between the states consist of false ideological attacks. Thirdly, in the developed countries of the world, reliable means of eliminating these problems, efforts are being made to develop excellent programs, a large amount of funds are being allocated, many sites are being filtered. It is also a natural situation for international terrorist and extremist organizations to try to exert their influence through the virtual world. When all countries understood the threat of terrorism, international, regional and national security and stability, the global threat of tragedy to humanity as a whole, they would have achieved better results than when they worked together.

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International Commercial Arbitration

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ABSTRACT
This article is devoted to the complex analysis of the English legislation of the international commercial arbitration. The author analyzed the commercial disputes and the bodies that proceed these disputes in England as well as main statutes regulating the international commercial arbitrations of England. The international commercial practices of the London International Court of Arbitration are described. Moreover, the author represents the main conclusions formed on the basis of the provisions of the national legislation on commercial arbitration and the regulations of the most well-known international arbitrations in England.

KEYWORDS: *International commercial arbitration, commercial disputes, arbitration institution, the London International Court of Arbitration (LCIA) , the LCIA Rules, Arbitration Act 1996*

INTRODUCTION

The development of international business has often been accompanied by disagreements among the participants in the trade and monetary relations. This contributes to the recognition of international commercial arbitration as the most effective means of resolving such legal disputes. International commercial arbitration shall settle foreign economic disputes arising between entities of foreign economic activity whose enterprises are registered in the territories of different States and has become, particularly in the context of globalization, an integral part of the international business infrastructure. The attractiveness of international commercial arbitration to companies and entrepreneurs of different countries, including foreign investors, is related to its political neutrality, the freedom of parties to choose arbitrators, Greater confidentiality and effectiveness of the dispute settlement procedure, as well as acceptance of the results of the procedure by the vast majority of States.

The Model Law of The United Nations Commission on International Trade Law (UNCITRAL)the international character and balance of most of the formulations of which embody the essential principles of the arbitration of international commercial disputes and determine the legal mechanism for regulating them. A review of the laws and regulations of the standing international arbitration centres of some countries reveals the undeniable merits of international commercial arbitration versus business disputes The Court of International Jurisdiction of a State. These advantages apply both to the litigation procedure itself, which is specifically designed to deal effectively with commercial disputes between companies from different countries, but also to the relevant procedural results.

One such country with great influence in the world of arbitration is the United Kingdom. The usefulness of such a territorial selection for this study is not random. The main reason for this is that the United Kingdom is today a country whose arbitration centres are known all over the world. It is a State whose courts have been involved in both national and international disputes for many years.

Therefore, the study of the activities of international commercial tribunals in the United Kingdom in the examination and resolution of trade disputes and the compilation of their practices is becoming increasingly relevant.

This paper will deal with the manner in which commercial disputes are heard and resolved in England and Wales, since English law is limited to England and Wales, and although Scotland and Northern Ireland are part of the United Kingdom, each of them has separate jurisdictions.

Main part

The term «arbitration» in English is explained as «A non-court alternative method of resolving disputes, where an arbitrator or panel of arbitrators is appointed by the parties to make a binding decision, from which there are very limited grounds of challenge» [11]. English researchers most often define arbitration by its distinctive characteristics. Arbitration for commercial disputes is referred to in the literature as "commercial arbitration". In England, most researchers note the lack of a clear definition of «arbitration» in both legislation and practice.

The widespread use of alternative (ADR) commercial dispute resolution in England does not diminish the role of international commercial arbitration. The various ways of settling commercial disputes and the active introduction of alternative dispute resolution methods not only do not diminish the role of commercial arbitration in England, but also increase the substantive and procedural aspects and legal aspects of its effectiveness in dealing with individual commercial disputes by improving the choice of the procedure for resolving such disputes and reducing the overall burden on international commercial arbitration.

The English legal system has traditionally been geared towards giving full support to the arbitration proceedings by State courts. While, of course, it is possible here to challenge a decision of international arbitration in serious violation of the rights of one of the parties, such cases are not known recently, because it is unlikely that London-based arbitrators would allow one of the parties to be offended in the arbitration proceedings.

Statistics

According to a recently published study on international arbitration, 64% of the lawyers of large companies with global business operations identified London as the best place to arbitrate (whereas Paris - 53% and Singapore - 39%) [12]. It is not by chance that the English capital has gained this reputation, the English courts' attitude to international arbitration and the activities of the London Court of International Arbitration are the most significant factors in the choice of experts.

Arbitral institutions

The London International Court of Arbitration («LCIA») is one of the oldest and leading institutional institutions of international arbitration, which administers the arbitration efficiently and impartially, regardless of the location of the parties and within any system of law. A.D. Kejlin pointed out that the content of the London Court of Arbitration cases «...deal with various issues arising in trade turnover, in particular, disputes related to concluded trade transactions, interpretation of their terms, execution etc.» [5, p15].

Established in 1892 and serving as the leading administrative international arbitration institution in the United Kingdom, LCIA is located in London and is highly sought after by businessmen and lawyers from many countries around the world who seek to ensure that their international disputes are handled independently and competently, as well as to ensure that arbitration is supervised by English courts known for their positive attitude to arbitration.

LCIA is a non-profit organization managed by the Board and the Court. The LCIA Board, "made up largely of prominent London-based arbitration practitioners, is principally concerned with the operation and development of the LCIA's business and with its compliance with applicable company law", whereas the LCIA Court includes a President, six Vice Presidents and up to 35 members, of whom only six can be UK citizens at a time. In this way, the true international character of the activities of LCIA is ensured. The functions of the LCIA Court are mainly "appointing tribunals, determining challenges to arbitrators, and controlling costs" [4]. However, the full Court does not administer individual cases – these functions are delegated in accordance with Article 3.1 of the to the President and Vice Presidents of LCIA [8]. They offer a combination of the best features of the civil and common law systems, including in particular:

- Maximum flexibility for parties and tribunals to agree on procedural matters
- Speed and efficiency in the appointment of arbitrators, including expedited procedures
- Means of reducing delays and counteracting delaying tactics
- Emergency arbitrator provisions
- Tribunals' power to decide on their own jurisdiction
- A range of interim and conservatory measures
- Tribunals' power to order security for claims and for costs
- Special powers for joinder of third parties and consolidation
- Waiver of right of appeal
- Costs computed without regard to the amounts in dispute
- Staged deposits - parties are not required to pay for the whole arbitration in advance [9].

The procedure of arbitration proceedings of LCIA is determined by special rules issued by this court. The current rules of the London International court of Arbitration entered into force on 1 October 2014 and apply to arbitration proceedings initiated on or after that date. "These LCIA Rules comprise this Preamble, the Articles and the Index, together with the Annex to the LCIA Rules and the Schedule of Costs as both from time to time may be separately amended by the LCIA Rules" [7].

These rules contain a number of new features, such as:

- LCIA arbitration tribunals are explicitly empowered to impose costs sanctions on parties who engage in 'non-cooperation resulting in undue delay
- Party representatives are deemed to have agreed to abide by principles of ethical conduct set out in the Annex to the 2014 LCIA Rules
- New rules were adopted for the appointment of emergency arbitrators [4,p125].

Thus, attractiveness of the London Court of International Arbitration for companies and entrepreneurs from different countries, including foreign investors, is largely due to:

- Its continuing status of the largest financial center and world market
- Its reputation as a neutral and impartial jurisdiction
- Accounting for the activities of courts in enforcing arbitration agreements and awards [2].

This is also evidenced by the statistics of the number of appeals to this court. According to LCIA's 2019 Annual Casework Report, a record number of arbitrations were referred to the LCIA - 406 cases, of which 346 were referred under the LCIA Rules, with non-UK parties accounting for 81% of its users. In 20% of those cases where the claims were quantified, the sum claimed was between USD5 million and USD50 million, with the sum claimed exceeding USD50 million in a further 9% of cases. Trending industries once again included banking and finance, energy and resources, and transport and commodities (accounting for 32%, 22% and 15% of disputes respectively). Moreover, one of the distinctive features of LCIA, to date, is the leadership in gender diversity, with a further increase in the overall number of female arbitrators in LCIA arbitrations (163 out of 566) – representing 29% of all arbitrator appointments, compared with 23% in 2018 [10, p2].

In addition to the LCIA, there are a number of other institutions that are commonly used in international arbitrations held in England and Wales: International Chamber of Commerce (ICC), London Maritime Arbitrators Association, Chartered Institute of Arbitrators (CIArb), etc.

Arbitration Law

In the history of arbitration law in England, many arbitration laws were adopted, which laid the foundation for the development of arbitration law in England. One of the last significant statutes is Arbitration Act 1996 of England [1] of 17 June 1996 (entered into force on 31 January 1997), which relates to arbitration in England & Wales or Northern Ireland (Section 2) and is based on the freely expressed will of the parties, provides Contracting parties with a number of appropriate tools that provide the greatest possible certainty as to the interpretation and fate of their contractual relations in the event of a trade dispute. Although the Arbitration Act of 1996 contains many of the principles enshrined in UNCITRAL (UN Commission on International Trade Law), but it has some important differences, including the following:

- The 1996 Act applies to all forms of arbitration, whereas the Model Law only applies to international commercial arbitration;
- Under 1996 Act, a party may appeal an arbitral award on a point of law (unless agreed otherwise);
- Under 1996 Act, an English court is only able to stay its own proceedings and cannot refer a matter to arbitration;
- The default provisions of the 1996 Act for the appointment of arbitrators provide for the appointment of a sole arbitrator as opposed to three arbitrators;
- Under 1996 Act, where each party is required to appoint an arbitrator, a party may treat its party-nominated arbitrator as the sole arbitrator in the event that the other party fails to make an appointment;
- There is no time limit for a party to oppose the appointment of an arbitrator under the 1996 Act;
- The 1996 Act does not prescribe strict rules for the exchange of pleadings.

English courts demonstrate a pro-arbitration attitude by defending and supporting the parties' agreement to arbitrate their disputes. This support may include suspension of proceedings in English when the case is to be submitted to arbitration (Section 9), or temporary proceedings in support of arbitration by suspension of proceedings or injunction (Section 44).

The 1996 law expressly requires that the settlement of arbitration disputes be fair and uninterrupted (Section 1) and that the arbitrator be impartial (Section 33). Based on the authority granted to the court to remove the arbitrator (Section 24), the arbitrator must also have the qualifications required by the arbitration agreement and be physically and mentally capable of conducting the proceedings.

It is also worth noting that, the 1996 Act cannot have any relations to cases, that were initiated prior to the date on which the 1996 Act came into force. Therefore, the overall impact of the new Act may take some time to bring to the attention of those who use English arbitration.

Conclusion

This study has shown that, international commercial arbitration in England has long been part of the system of foreign trade, having established itself as a reliable place for resolving disputes complicated by foreign elements. Having incorporated a high level of support for the arbitration procedure, it has become really flexible and efficient thanks to its laws and courts that are very respectful of arbitration and guarantee minimal involvement in arbitration proceedings, as well as many experienced arbitrators and lawyers based in London or in neighboring European jurisdictions.

In addition, a competent international lawyer will be able to choose an arbitration clause that corresponds to any contract, from multi-billion-dollar investments to the delivery of a small batch of inexpensive goods. A party to a dispute that makes full use of the English law granted to it by the applicable arbitration rules will have the full opportunity to present its own position, despite the fact that the arbitrators will be foreign specialists.

At the same time, recognizing some of the shortcomings and problems of English arbitration, arbitration institutions will improve their legal frameworks and expand the opportunities for parties to obtain interim measures of protection.

Apart from that, there has been some discussion as to whether Brexit will have any impact on the practice of arbitration in London. A 2018 survey carried out by the Queen Mary University of London determined, that more than half of the respondents, who took part in the survey, think that Brexit will not have any affect to English arbitration [13]. They believe that its 'formal legal structure' is likely to remain unchanged and to continue to support arbitration. The reasons for this, as noted by legal experts, are following:

- "First, the United Kingdom will remain a signatory to the New York Convention and the pro-enforcement attitude of the courts will continue;
- Second, the legislation governing arbitration will remain unchanged as this is domestic rather that European;
- Third, Brexit will not materially change the substantive content and application of English law as a governing law should not remain a popular choice for parties in their international contracts;
- Fourth, Brexit may make arbitration more attractive for commercial parties as court judgments will no longer be enforceable under the Brussels Regulation (recast), Regulation 1215/2012 after Brexit is completed;
- Fifth, Brexit may mean that English courts can issue anti-suit injunctions to restrain parties from bringing proceedings before courts of a European Member State.
- Sixth, the UK's obligations under EU law may sometimes conflict with its obligations under arbitration-related treaties (such as the Washington Convention) but this will no longer be the case" [3].

From the above, we can conclude that arbitration in England will remain in its high position among other arbitrations in the world for many years to come and will continue its dynamic growth in attracting more and more international disputes around the world.

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Problems and Solutions of Natural Gas Purification from Acidic Components

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ABSTRACT
Natural, organo mineral, synthetic and composite sorbents are used all over the world to purify oil and gases from acidic components, and their production increases every year. 55% of them are used for cleaning natural and industrial gases from sulfur-containing organic compounds, mercaptans, carbonyl sulfide, carbon disulfide, carbon dioxide and other sulfur-containing compounds.

KEYWORDS: *industrial gases, sulfur-containing organic compounds, mercaptans, carbonyl sulfide, carbon disulfide, carbon dioxide*

INTRODUCTION
Today in the world developed technology of synthesis of new types of nanostructured sorbents, their use for the purification of acid gas mixtures produced in the processing of oil and gas, stability of the physico-chemical properties of sorbents and improve environmental conditions in processing factories , scientific research recycling of sorbents[1]. In recent years, our country has focused on methods for cleaning natural and exhaust gases from sulfur-containing organic compounds, mercaptans, carbonyl sulfide (COS), carbon monoxide, carbon disulfide (CS_2) and sulfide esters (RSR), as well as in the oil and gas processing industry [2-4].Certain results are being achieved in the development of new high-performance composite absorbers for gas purification and in the improvement of purification technologies. The strategy of actions for further development of the Republic of Uzbekistan defines the tasks "to raise the industry to a qualitatively new level, deep processing of local raw materials, acceleration of production of finished products, development of new types of products and technologies". In this regard, scientific research is aimed at creating new composite absorbers with different functional groups intended for cleaning gases from high-sulfur components in natural gas processing and chemical industries. Decree of the President of the Republic of Uzbekistan dated February 7, 2017 №.PD-4947 "On the strategy of actions for the development of Uzbekistan for 2017-2021", №. PD-4891 dated April 6, 2017 "on critical analysis of the volume and composition of goods (works, services), deepening localization of import-substituting production", №. PD-3689 dated may 21, 2018. "On additional measures to improve mechanisms for introducing innovations in industries and sectors of the economy", September 21, 2018 №. PD-5544 "on approval of the strategy for innovative development of the Republic of Uzbekistan for 2019-2021", 2018 №. PD-3983 dated October 25 of the Republic of Uzbekistan. The implementation of the above-mentioned resolutions and the resolution "on measures to accelerate the development of the chemical industry", as well as other regulations related to this activity, is an urgent task today[5-6]. Many scientists have carried out research on improving technologies for cleaning natural and secondary gases from sulfur compounds with composite sorbents. Y. Axelrod, S. Blank, A. Cole, H. Man, A. Afanasiev, D. Kemplbel, V. Rogozin, V. Mastek, A. Lunin, E. Dillon, Yu. g. Frolov, A.A. Alimov, B. N. Khamidov, M. P. Yunusov, V. P. Guro, S. M. Turobzhonov, G. Rakhmatkariev and others. At the same time, scientific research is currently underway to obtain new effective additives based on secondary resources and production waste for the synthesis of composite sorbents, as well as the use of these additives to improve the anticorrosion of equipment with a high absorption volume, low absorption and desorption temperature, low foaming, low consumption of absorbents, ensuring a longer service life, technological, practical, environmental and economic aspects of new composite sorbents based on diethanolamine and methyl diethanolamine have been studied.

METHOD
However, in all cases, the main focus is on cleaning up sulfur compounds, and little attention is paid to cleaning up natural gas from gas deposits with high levels of carbon monoxide. MDEA was selected as the most suitable absorbent for natural gases that together contain sulfur compounds and carbon monoxide. The best way to solve this problem is to chemically absorb carbon monoxide before natural gas enters the absorbent. This, in turn, not only reduces corrosion, but also reduces the consumption of MDEA by 2 times. In this work, the physical and chemical properties of sorbents were used, and their structure was studied by IR spectroscopy, potentiometry, photocolorimetry, gas chromatography, thermogravimetry, and other modern methods of analysis.

RESULT
It is also possible to reduce the carbon monoxide content of gas supplied to the population to 0.1-0.3% instead of the current 1.6%. If 1 million m^3 of gas is produced per day in gas fields, the amount of carbon monoxide in it will be 16,000 m^3. If this amount of methane gas is used instead of carbon monoxide, the same amount of methane gas will burn:

$CH_4 + 2O_2 = CO_2 + 2H_2O + 878$ kJ

In this case, you can get 627142 kJ of heat. It is not difficult to understand how long it will last for a car, apartment or other room. If 16,000 m^3 of carbon monoxide is converted to the form of calcium carbonate, in addition to producing 71 tons of deposited chalk, a local product for the construction and pharmaceutical industries can be obtained. Most importantly, the creation of about 50 new jobs will contribute to the well-being of our people.

Under production conditions, sedimentary chalk is effectively produced from industrial waste, imports are stopped, and products are produced for export instead. It uses acid gases from natural gas. Under factory conditions, increasing the amount of carbon dioxide in natural gas not only increases the consumption of MDEA in the adsorber, but also leads to a very high rate of corrosion of the adsorber. By reducing the amount of carbon dioxide in natural gas, the adsorber increases productivity by reducing the consumption of MDEA imported into the currency, and also dramatically reduces corrosion. This situation is not only beneficial in this regard, but also allows you to turn imports into exports by producing new products and creating new jobs.

The scientific novelty of the research is as follows:
the influence of bulk quantities of H_2S/CO_2 absorbent temperature and process pressure, and time of technological process on the physico-chemical properties of developed composite absorbent;

it is determined that the corrosion properties of composite absorbers in plants, in addition to the temperature and degree of saturation of their H_2S and CO_2, depend on the ratio of H_2S/CO_2 in gas, diethanolamine and methyldiethanolamine;

improved technology for cleaning natural and secondary gases fromacidic components with composite sorbents.

CONCLUSION

Also, carbon dioxide released into the atmosphere creates a greenhouse effect in the Bukhara region, which in turn solves this problem. This also makes it possible to set up a chalk production workshop for the education system based on the resulting deposited chalk. The resulting precipitated boron increases the level of purity, which makes it possible to establish a workshop for the production of chalk for the medical, pharmaceutical industry and for the production of toothpaste. The practical significance of the research results lies in the synthesis of highly effective composite sorbents used in the process of cleaning natural and waste gases. Their use in the process of cleaning natural and waste gases is justified by improving the absorption capacity, the temperature of absorption and desorption, the content of acidic components in the regenerated solution, foaming, reducing the loss of the absorbent, increasing the service life of the absorbers, as well as improving the environmental condition.

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Assignment and Importance of Mathematical Problems in Primary School

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ABSTRACT

This article presents the methods needed to solve mathematical problems in elementary school today and the process of converting the solution of mathematical problems into arithmetic operations, the results of experiments and observations. Some simple problems are turned into complex problems and solutions are given.

KEYWORDS: *Arithmetic, example, problem, solution, equation, methodology*

INTRODUCTION

We know that children who go from kindergarten to school want everyone to learn what they are learning and want to learn in a fun way, and in the classroom with great interest in drawing, sketching, rebus, tabular assignments. the same rules apply in the teaching of mathematics. Primary school mathematics textbooks based on the study of child psychology are based on the above rules.

Main part

During the observations, the problem-solving skills of primary school students are much higher than the problem-solving skills, for the following reasons:

- students use their fingers to determine mathematical addition and subtraction without reason, as a rule;
- learn to divide numbers into special classes while counting addition and subtraction;
- they do not forget because they are the same and use them a lot, that is, because they can apply them in their little lives;

Based on the above reasons, we can conclude that examples are easier than problems, but when solving problems, we use these simple addition and subtraction operators, which means that problem solving is one step higher than solving problems.

In solving problems, interest in the subject develops, in general, independence, freedom, assertiveness, diligence, purposefulness develop. In educating students, vital issues also help to broaden their horizons. Working on issues leads to the development of students' personal skills in a systematic and planned manner.

Working on an issue begins with mastering its content. In the early stages when students are not yet literate, they need to learn to read aloud the important elements of the condition by listening to the text of the problem being read by the teacher, and then, in order to better master the problem condition, each student must listen to the text of the case and read the matter independently. They should be encouraged to read the issue aloud first and then aloud and expressively.

Problem-based learning in the primary grades is done through the formation of new concepts, the transition from solving simple problems to solving complex ones. There are various simple problems of addition, subtraction, multiplication, and division, that is, problems of multiplying and subtracting numbers by multiple and equal parts to find the sum of the same additions. simple problems of finding unknown components of comparative operations, as well as various complex problems, including problems that can be solved, finding the sum of two multipliers, and then multiplying, dividing, and so on. consider.

Issue 1: 53 kg of meat was delivered to the first store and 15 kg less to the second. How many kilograms of meat did you bring to the second store?
Answer: 53-15 = 38 (kg).

Issue 2: 53 kg of meat was delivered to the first store and 15 kg less to the second. How many kilograms of meat are delivered to both shops?
Answer: 1. 53-15 = 38 2. 53 + 38 = 91 (kg).

The above issues are common to first and second graders. The words "more", "less", "more" are fixed in the minds of students, and then they calculate the problems by thinking about which of these rules, so the mind is looking for the right formula, and the problems in the textbooks is also based on this template.

Issue 3: Asror participated in a sports competition for 4 days, each time gaining the same number of points as the previous day. If Asror scored a total of 208 points in 4 days, find the points he scored each day.

Solution: In solving this problem, the subject of the equations must be covered, which means that the first day received (x) points, the second day received the total points of the previous days, ie the first day received the points, in short (x), the third day received the first and second (x + x) on the fourth day, (x + x + (x + x)) on the fourth day, and the total score on the sum of the four days. equals: 1. $x + x + (x + x) + (x + x + (x + x)) = 208$
2. $8 * x = 208$
3. $x = 208/8 = 26$
So x = 26, which is 26 points on the first day, 26 points on the second day, 52 points on the third day and 104 points on the fourth day.

If a given problem is similar or similar to the problem solved in the classroom, then students should be taught to find a way to solve the suggested problem independently. To do this, students need to learn the simplest general ways to approach problems.

Under the guidance of a teacher, students should be able to write a short and clear description of the problem, and be able to draw or illustrate the condition to make it easier to find solutions. Students should be able to clearly explain what is known and what is not known in a problem, what arises from the condition of the problem, and in what order the answer to the problem can be found using arithmetic operations. Students will be able to understand why they chose each action, the expression on the problem or the meaning of the action to solve different types of problems, this or that concept in addition to the formation of this or that relationship. serves to provide a deeper understanding of the connections between. In order for students to acquire the skills needed to solve a problem, they need to be taught to understand certain connections between given and sought in different life situations. Thus, when working on problem solving, the student should not only think about this or that problem, but also take care of the systematic and systematic development of specific skills that shape problem solving skills. Because the general complex skill of problem solving consists of these special skills.

In addition, tables, diagrams, and graphs are used to display a variety of information in newspapers, magazines, reference books, and encyclopedias in the lower grades. They help to convey information in a concise and visual way.

Problem 4: A cyclist travels 40 km in 4 hours. On the way back, his speed was less than 2 km per hour. How many hours did he spend on his return?

If the 4th graders understand and solve this problem, it will be very useful in the future study of physics, where we are talking about speed, the essence of which will be revealed in later classes, below is an example of how a 4th grader can solve it. we bring.

Solution: If we first travel 40 km in 4 hours, we find that we travel 10 km per hour, which is 40/4 = 10. In the second case, it is said to be less than 2 times this speed, which means 10-2 = 8, which means that it travels 8 km per hour on the way back, and the distance does not change to 40 km. If we find the time, we divide the distance by the speed of that distance, 40/8 = 5 hours.

The following factors contribute to the difficulty of understanding and solving problems in the primary grades:
- not teaching to imagine;
- it is easier for guardians to solve problems than to explain them;
- students' attention to numbers in the form of problems;

Conclusion

In order to take advantage of the opportunities to solve problems in elementary school math classes and to formulate the arithmetic operations used in solving these problems, the essence and content of each concept and its practical experience of students should be used. training in concretization, along with the study of methods of division, in general, is based on the comparison of similar patterns in other operations, as well as on the analysis of exercises and problem solving, working on errors and using them effectively.

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Labor Protection in Life Activity Study the Legal Framework

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ABSTRACT
To learn how to overcome and protect the various forms of risks that occur in the production activities of a person, to provide theoretical knowledge and practical skills in terms of ensuring labor safety and creating safe and healthy working conditions. Measures aimed at the safety of a person in the labor process, the maintenance of his health and working capacity have been established.

KEYWORDS: *labor protection, ergonomics, Labor Code, basics of safety equipment, safety equipment*

INTRODUCTION

The main goal of all economic and political reforms in our country is to create decent living conditions for all citizens living in our country. Of course, the creation of suitable living conditions is carried out on the basis of scientific and technical progress, and this, in addition to the relief of human labor, causes a variety of dangerous phenomena, as a result of which all sorts of seemingly unfortunate events: injuries and occupational diseases arise. But everyone who lives on this holy land wants to live better, that is, to fully satisfy his material-spiritual and social needs. It is for this reason that a person becomes engaged in tireless activities.

Activity is one of the main conditions necessary for a person to live. Labor is the supreme form of activity. Judging by the philosophical point of view, the most characteristic definition of the concept of "man" is "Homo agens", that is, "man in action". Of course, the form of activity and labor is diverse, which includes practical, mental and spiritual processes in the sphere of production, culture, public works, scientific works and other spheres of life. Labor in production is irregular, the current law does not comply with the rules, standards and instructions, it can not only cause injury or damage to the head, but also in some cases lead to death. Of course, this requires the organization of a scientific basis to protect a person from all kinds of hazards in his labor activity-natural, technical, anthropogenic, environmental and other types. It is precisely the main objectives and tasks of the science of "labor protection" are aimed at solving this issue, which is carried out on the basis of the science's own laws, methods and principles.

Labor protection

measures aimed at maintaining the safety, health and working capacity of a person in the labor process. The legislation sets out socio-economic, organizational, technical, sanitary-hygienic, therapeutic-prophylactic measures used in the process of labor. Safety of the working person, protection of health, ability to work, creation of healthy working conditions, prevention of the risk of occupational diseases, prevention of injuries in production, etc., are the tasks before Labor Protection.

The rights of citizens to work in the Republic of Uzbekistan in safe and comfortable working conditions are enshrined in the Constitution (Article 37). Specific measures aimed at the practical implementation of this constitutional guarantee are specified in the Labor Code of the Republic of Uzbekistan, the law "on protection of Labor" (6 may 1993), a number of other laws and legislative normative acts. In Uzbekistan, large financial resources are allocated and mastered for labor protection. The right to work in a healthy and safe working environment is one of the most basic labor rights of citizens of the Republic of Uzbekistan. Labor protection requirements and standards the Labor Code, the rules of the internal Labor order of enterprises and organizations produced on the basis of the requirements of the law "on labor protection", collective agreements, sectoral or regional collective agreements, other internal normative legal acts of enterprises, labor protection standards, which relate to a particular sphere, profession, place of work.

All enterprises, institutions and organizations must create healthy and safe working conditions for their employees, take security measures, organize labor protection services, carry out other organizational technical activities, regardless of the form of ownership and method of Economic Conduct. Compliance with the rules of labor protection is controlled by special state bodies and the public. The general control over compliance with the laws, including labor protection laws, is exercised by the Prosecutor General of the Republic of Uzbekistan and its subordinate prosecutors. Enterprises that violate the requirements of the labor protection law may be subject to financial and economic penalties, disciplinary, administrative, legal and criminal liability in relation to their officials, and material damage caused by their fault.

The main content and social significance of labour protection science

The science of "labor protection" is a theoretical science aimed at studying the ways of eliminating and protecting from risks of various forms that occur in the activities of a person in production. It develops and improves on the basis of extensive scientific and practical research. The establishment and development of laws, regulations, standards, instructions, rules and sanitary technical norms, as well as a continuous education and training system on the basis of scientific theoretical research, play an important role in ensuring the safety of human labor. The main purpose of the science of labor protection is to provide students with theoretical knowledge of the dangers that arise during the period of labor activity in the production of man, the reasons for their occurrence and ways of elimination, ensuring labor unrest, as well as creating safe and healthy working conditions, and an expression of the formation of practical skills. In accordance with the above, students should theoretically master the following during the study of science:

- theoretical basis of Labor security. An understanding of ergonomics and labor safety psychology;
- a system of basic principles, methods and means of ensuring labor safety;
- fundamentals of labor safety management;
- legal and organizational bases of Labor security.
- Laws on labor protection, system of standards, regulations, instructions, norms of sanitary production and other normative acts:
- the content of planned activities on ensuring labor safety in production, creating healthy and safe working conditions, the procedure for its development;
- procedures for analyzing, verifying and documenting unfortunate events in production;
- to examine the methods of increasing the economic efficiency of Labor security, identifying the causes of unfortunate events;
- the procedure for providing workers and servants with personal protective equipment aimed at ensuring safe working conditions and ways of their use;
- sanitary and hygienic measures to create healthy and safe working conditions;
- safety rules in the use of technical means of production, machine tools and devices;
- fire safety. The reasons for the origin of the fire, its prevention, technical means and methods of extinguishing the fire;
- procedures and rules for providing first aid to injured persons.
- Based on the above theoretical knowledge, each professional should be able to practice the following with the study of science:
- assessment of hazardous and harmful production processes;
- make independent decisions in the selection of optimal options for ensuring labor safety;
- to know the procedures for familiarizing with and documenting safety equipment manuals ("instruction");
- competently examine unfortunate events and identify their causes;
- independent analysis and study of labor protection guidelines ("instruction");

Main sections of labor protection

The science of labor protection consists mainly of the following 6 sections:

1. Theoretical basis of labor protection.
2. Legal and organizational basis of labor protection.
3. Sanitary and labor hygiene of production.
4. Safety equipment basics.
5. Fire safety.
6. Provide first aid when injured.

Chapter One

in the theoretical framework of labor protection, the ergonomic and psychological basis of labor protection, the main ways of creating harmless and safe working conditions, the analysis of the main factors that determine the working conditions and safety, the characteristics of the working conditions in production, the methods of verification of working conditions and safety, the classification of work by physical weight and harmfulness, in production, issues such as the prophylactic foundations of injury and occupational illness, social and economic aspects of labor protection are studied.

Chapter Two

legislation on the implementation of labor protection in production on the legal and organizational basis of labor protection, creation of healthy and safe working conditions, including state laws (the law on labor protection, the Labor Code, etc.), regulations, normative acts, state standards, ways of their implementation and responsibilities of the management personnel in this regard, state control organizations and public controls on the creation of healthy and safe working conditions, their functions, rights are studied such issues.

On organizational bases, such issues as the organization of work and rest regimes, the provision of workers with special clothing, personal protective equipment and prophylactic food, the organization of medical examinations, the role of trade unions in the organization of labor protection, the conclusion of labor contracts, guarantees of employment and the realization of the rights of citizens to work, wages, the establishment of labor discipline.

Chapter Three

In "industrial sanitation and labor hygiene" the causes of pollution of air in production buildings and workplaces, normalization of harmful substances contained in air, sanitary norms and requirements, permissible amounts of harmful and toxic substances, normalization of air composition of workplaces, ventilation and heating systems, noise and vibrations, reducing their impact on human health and working capacity, as well as methods of protection against them, issues such as sanitary hygienic requirements for enterprises and production buildings, as well as residential and residential areas of the population, personal hygiene are studied.

Chapter four

general safety requirements imposed on the working processes of cars and cars in the "fundamentals of safety equipment", technical means that provide security (fences, storage devices, brakes, alarms, safety signs, etc.), working with safety equipment, lifting and unloading machines and devices in the use of machinery and equipment in production, electrical safety, maintenance of machinery and equipment, repair and maintenance of machinery and equipment, carrying out transport works, when using pressure-operated containers and devices, cooling liquids (freon, ammonia, etc.) and working with toxic chemicals, drilling of oil and gas, use of oil and gas wells, transportation and storage of oil and gas, safety techniques are studied.

Chapter five

general requirements for fire safety in "fire safety", the essence of the burning process, the causes of fire and explosion, classification of materials according to the properties of combustion and explosion, categories of explosion, burning and fire hazard in production, fire zones, fire protection systems, classification of buildings and structures on fire resistance, fire extinguishers, fire water supply, fire extinguisher, issues such as fire connection and alarm, organization of evacuation work during a fire are studied.

Chapter Six

"provision of first medical care" provides information on the methods of providing first medical care in the event of injury.

History of science development and interaction with other sciences

The long past life experience of mankind confirms that any activity carries a potential risk. Of course, this confirmation has an axiomatic feature. However, it is also possible to manage and reduce the level of risk in production conditions. But in any case, the absolute security cannot be achieved.

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Ecotoxicants and Pathologies Occurring in Productive Animals Body under their Influence

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ABSTRACT
The article provides information on the ecotoxicants composition formed by industrial production and pathological processes occurring in the productive animal bodies from their harmful effects.

KEYWORDS: *man-made, industrial waste, pesticide, dyspepsia, bronchopneumonia, fluorosis, lung cancer, neurotoxic, hematotoxic, hepatotoxic, nephratoxic*

INTRODUCTION
Today, the ecology and food issue remains one of the global concerns in the whole world.

Man-made factors are also caused by human impact on nature and have a detrimental effect on the environment, wildlife and the food products quality.

As a result of chemical and technological processes introduction in various economy sectors in order to develop industrial production, conditions are being created for real environmental pollution.

In recent years, in the regions, as a result of extraction processes and industrial raw materials processing expansion, a large amount of harmful toxic wastes are released into the atmosphere, causing its pollution. A number of toxins accumulate in the feed, and eventually such products are used for animal and human consumption.

Industrial wastes are wastes from factories, industrial enterprises and mines that are generated as a result of industrial activities, including any means that are unusable in the production process. Hazardous wastes can be toxic, flammable, reactive or radioactive. Industrial wastes can fall into the sea basin as a result of polluting the air, soil, or nearby water sources. [10].

The United States produces 7,6 billion tons of waste annually. [11].The World Health Organization states that air pollution is the most dangerous in terms of its impact on human health. [13].

Scientific research
The research was conducted using existing livestock belonging to farms in Sariosiya and Uzun districts of Surkhandarya region and Karmana and Kyzyltepa districts of Navoi region, which are affected by industrial waste. In monitoring the hydrocarbon oxides, nitrogen oxides, nitrogen dioxide, gas temperature, differential pressure, technological parameters and emissions calculation from industrial enterprises, using special photometric equipment multigas "OPTIMA-7" gas analyzer and drinking, natural and wastewater and soil composition determination "Expert-003".

In determining the ecotoxicants toxicity level based on the of L.I. Medved and etc. classification (1986), on the basis of G.F. Karomoslov and etc. classification (1986) in animals immune status assessment, effects on animals' reproductive activity on the basis of I.V. Sanotsky and etc. classification was determined using similarly accepted clinical diagnostic methods.

Research data
According to the World Health Organization, the cancer incidence in the world has increased fourfold in the last 25 years. [5].

Millions of tons of mineral fertilizers and pesticides are applied to crops every year. According to the data, the pesticides production exceeds 3,000 tons per year. [6].

The number of chemical compounds produced in the chemical industry today is more than 500,000, from which about 40,000 are harmful to humans and animals. Unfortunately, about 12,000 of these chemical compounds contain hereditary toxins. [1].

Ammonia, which is released from the air, causes many respiratory problems. Diseases caused by air pollution can extend to the eyes, skin, nose, and throat, eventually leading to pneumonia or bronchitis. There have also been reports of numerous headaches, nausea and dizziness occurring in people in the area. [12].

About 20-24 water tons is used to extract each coal ton from the mines. During the year, 2.5 billion m^3 of contaminated wastewater from coal mines is pumped to the surface. Excessive levels of various harmful substances in the water increase the underwater animals sensitivity to it and cause various levels of poisoning among them, which has a negative impact on environmental processes. [8;9].

Water pollution can have dangerous effects on the human body. The main ones are diseases transmitted by bacteria, parasites and chemicals. Because by drinking safe water, people are protected from diseases (plague or typhoid) that they can suffer from. [14].

As a result of the Aral Sea drying up, the land salinity has increased 10 times. As a result, this condition accelerated soil erosion. Currently, about 2 billion land hectares are lost due to erosion. [2].

The total atmosphere pollution with harmful modern man-made factors is 4 billion tons, of which the main pollutants are aerosols and gases, and 300-500 million tons are harmful dust. [7].

The main sources of anthropogenic emissions into the atmosphere are thermal energy and industrial producers, oil and gas refineries and vehicles.

Sulfur and nitrogen oxides, which are industrial wastes, can be stored in the atmosphere for up to 15 days, during which time they can be blown away by winds up to 1,000 km. In this case, one state can become a constant pollution source for another state.

At present, air pollution is caused by fuel emissions from vehicles. There are 1 billion cars in the world, and their exhaust gases contain about 500 organic, toxic compounds, 40 of which have carcinogenic and mutagenic effects on the body. [1].

Heavy metals are also one of the most polluting factors in the atmosphere. The damage is mainly caused by cadmium, zinc, cuprum and various wastes burning in furnaces. The plant, which has a capacity of 1 million thermal energy kilowatts, emits 1 kg of mercury and 0.1 kg of arsenium lead to the atmosphere from burning about 1,000 tons of coal per day. [3].

In the end, all these harmful substances accumulate in the biosphere, and then they enter the humans and animals' body through food, drinking water and air, causing various diseases. Because these substances have neurotoxic, hematotoxic, hepatotoxic, nephratoxic and respiratory traumatic effects that are harmful to the body.

A number of harmful wastes emitted from industrial enterprises and their effects on the body, as well as toxicity and danger level.

Table 1

	Name of harmful waste	The norm	Manipulation
1	Nitrogen ammonia	0,39 mg/l	Causes acute and chronic poisoning in the body. As a result, the hemoglobin amount in the blood decreases, leading to an increase in the methemoglobin amount. Oxygen deficiency occurs in the animal's body. It also reduces fetal growth and development in pregnant animals. It belongs to III class in toxicity and danger terms.
2	Nitrogen nitrates	9,1 mg/l	
3	Nitrogen nitrite	0,02 mg/l	
4	Ammonia	0,046 g/s	Induces acute poisoning. The eyes and respiratory system are injured. Pain, swelling and burning of the skin are observed. It belongs to IV class in toxicity and danger terms.
5	Fluorine	In water 0,7-1,5 mg/l 20 mg/kg in coarse feed	Fluorosis in the body (disrupts the minerals, carbohydrates and proteins metabolism in the body's enzyme system) leads to disease, as well as osteomyelitis, infertility, lung tumors, skin burns, necrosis, and disrupts calcium metabolism. I class
6	Hydrogen fluoride	In the air 0,1 mg/m^3	It has strong poisons and dangerous effects. It has reproductive activity, ganadotoxic and embryotoxic effects, cumulative properties and mutagenic effects. It belongs to the I class on toxicity and danger level.
7	Sulfur dioxide	0,1 mg/l	Disrupts the central nervous system and blood-producing organs activity in the body. Causes swelling and asphyxia in the lungs. It belongs to II class in toxicity and danger terms.
8	Nitric oxide	0,005 mg/l	Causes acute and chronic poisoning. Causes an increase in the methemoglobin amount in the blood. Pain, nephrosis, and liver dysfunction are observed. It belongs to II class in toxicity and danger terms.
9	Carbon monoxide	In the air 0.01-0.9 mg/m^3	Causes acute poisoning in the body. As a result, the central nervous system disorders occur. It has an embrotoxic, toxic effect on the fetus. It belongs to IV class in toxicity and danger terms.
10	Inorganic dusts	0,062 g/s	It carries and spreads germs and worms' eggs. As a result of exposure causes bronchitis, conjunctivitis, dermatitis, allergies, poisoning, oncological diseases in the body. It belongs to III class in terms of toxicity and danger.

Mineralization processes caused by water pollution and its impact on the body.

Table 2

	Harmful substances in water	The norm	Manipulation
1	Cuprum ions	0,001 mg/l	After ingestion, severe abdominal pain occurs, manifesting cases of tachycardia, asphyxia, paralysis, hemolysis in the blood, renal failure, jaundice and allergies. It belongs to II class in terms of toxicity and danger.
2	Cuprum	1,0 mkg/l	
3	The process of mineralization of water	1000 mg/l	It leads to metabolic processes disruption in the body.
4	Phenol	in 0.001 mg/l water	Disrupts the central nervous system activity in the body. Causes allergies and cancer. Deficiencies occur in the kidneys. It belongs to III class in terms of toxicity and danger.
5	Sulfate	in 100 mg/l water	Disrupts metabolism and liver function. Reduces sexual activity (ganodotoxic). It belongs to IV class in toxicity and danger terms.

Conclusions and conclusions.

Most of the chemical toxicants enter the body through the respiratory tract, gastrointestinal tract, skin and mucous membranes. In high amounts, these chemical wastes and harmful dusts can have negative effects on the livestock and poultry bodies, such as carcinogenic, teratogenic, embryotoxic and allergic.

As a result, it causes various pathological processes in the body. In particular:

1. The nervous system diseases (neurosis)
2. The digestive system diseases (dyspepsia, atony, tympani, gastroenteritis)
3. The respiratory system diseases (lung cancer, bronchitis, pneumonia, bronchopneumonia, pleurisy, laryngitis)
4. Metabolic disorders (Fluorosis, hypovitaminosis A, liver and kidney disease, allergies, osteomalacia, dermatitis, oncological diseases, mastitis, conjunctivitis)
5. Genital diseases (infertility, fetal developmental pathology, testicular hernia)
6. Poisoning (pesticides, chemical fertilizers)
7. Parasitic diseases (coccidiosis, hemosporidiosis, fasciolosis)
8. Hereditary diseases (disability)

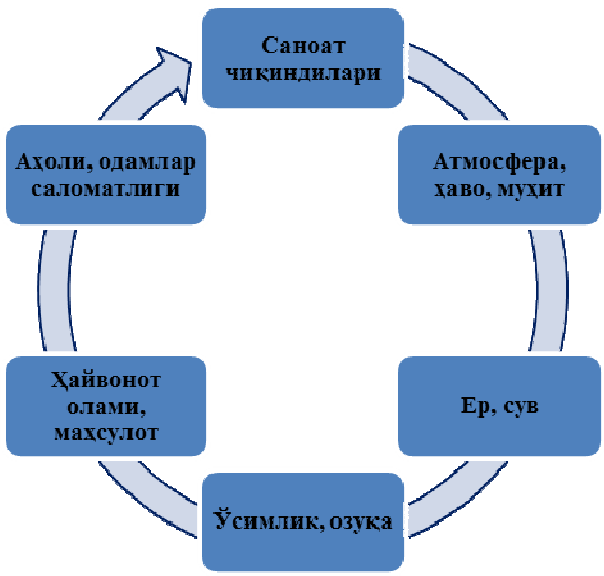
As an exposure result to chemical toxicants, various pathological processes occur in the animals' immune system and reproductive activity. In particular, their immunodepressive effect on the immune system leads to a decrease in overall resistance in the body and an increase in local animals susceptibility to infectious diseases. [4].

In animal reproductive activity, a decrease in fertility leads to the offspring death in the next developmental period, barnyard and infertility among females, and diseases such as testicular hernia in males. [6].

Chemical toxicants are the main organs that accumulate in the animals body: liver, spleen, heart muscle, kidneys, lungs, adipose tissue, muscle tissue, tooth and bone tissue, blood, mammary glands and stomach mass. [4].
Decreases in the protein, carotene, phosphorus, reserves of alkalis and calcium amount required for the animal body due to the harmful industrial wastes impact, naturally have a negative impact on animal productivity and the products quality derived from them.

Conclusions

1. The continuous movement interdependence of hazardous industrial wastes in the external environment can be described as follows:



2. Harmful waste leads to fluorosis, osteomalacia, hereditary diseases, nervous system, respiratory system, digestive diseases and metabolic disorders, the reproductive organs diseases and poisoning among livestock.
3. Harmful chemical toxicants increase the animals susceptibility to infectious diseases, as a result of which the immune system, from the immunodepressive effect, decreases the overall resistance in the body.
4. Decreased fertility in the animals reproductive activity leads to infertility and infertility among females, and to the diseases occurrence such as testicular hernia in males.
5. As a result of water contamination with various wastes, its high mineralization level leads to metabolic disruption processes in the animals' body. To eliminate such cases, it is advisable to use EWTU (electrochemical water treatment unit) water electrochemical treatment equipment.
6. The treatment system creation based on modern technologies, which recycles industrial waste and gases, will create the basis for the harmful effects elimination on the environment and its inhabitants organism.
7. Conducting regular, veterinary and sanitary control quality analysis of consumer goods produced in agriculture and animal breeding ensures the various diseases prevention that occur among the population.

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Hole Transportation in Photocells Based on Hydrogenated Amorphous Silicon

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ABSTRACT
In this manuscript, amorphous hydrogenated silicon films were studied by using the photo-CVC vidicon target characteristics. In the photo-CVC characteristic, a region is observed that obeys the quadratic law. It is explained that the changes contribution in the *a-Si:H* dielectric constant and the hole lifetime depending on the applied voltage for obtaining information from this section about the hole transportation mechanism is too significant.

KEYWORDS: *amorphous semiconductor, hydrogenated silicon, vidicon target, hole traps, traps energy, mobility gap, sticking centers*

INTRODUCTION
At present, the photovoltaic devices quality and efficiency, including solar cells based on amorphous hydrogenated silicon *a*-Si:H, cannot sufficiently meet the requirements for semiconductor photo converters. The solar cells efficiency based on *a*-Si:H under standard conditions (AM spectrum 1.5 - 1000 W/m^2) reached 8-10% [1], and for tandem structures, calculations show that it is possible to achieve up to 12-15% and more [2].

It is known that the photocurrent in solar cells consists of two components, that is, electron and hole. The difference in the mobility value of these components is very significant (μ_e=13 cm^2/W·s and μn=0,67cm^2/W·s). This means that hole photocurrent fraction in the photocurrent is insignificant.

Therefore, in many works to study the transfer mechanism, the electron dependences and hole photoconductivity of *a-Si:H и a-Si:H(B)* samples on temperature and it was found that in high-quality *a*-Si:H samples, the electrons photoconductivity depends very little on temperature, , and in lightly boron-doped *a-Si:H* samples, the holes photoconductivity depended on the temperature at which the stationary photoconductivity was measured in planar samples [3].

To analyze the solar cells characteristics and find ways to further increase their photo conversion efficiency requires a detailed fraction study of each current carriers type and to establish their transfer mechanism.
This work is devoted to the theoretical study of the current-voltage characteristic (CVC) of hole photocurrent and shows the obtaining information possibility from individual photo-CVC sections about hole transfer mechanism.

The vidicon target photo-CVC analysis and calculation.
To study the hole transfer mechanism in the photocurrent structures based on *a-Si:H*, it is necessary to have a monopolar photocurrent, in which only photo generated holes are current carriers. We will consider a structure, that is, the vidicon target structure (Fig.1*a*.), in which all layers consist of *a-Si:H*.

If illumination is produced from the *n* layer side by light with λ~400 nm wavelength, then the light is absorbed at the *i* -layer surface and a carriers "reservoir" or a layer enriched with holes is formed in this *i* -layer part.

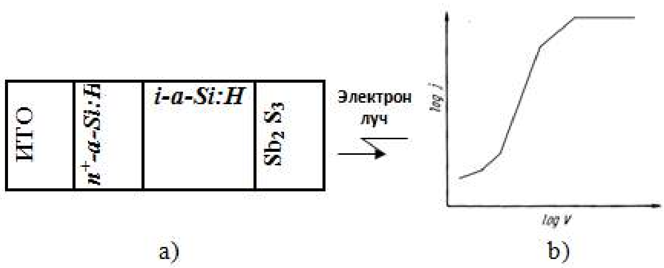

Fig.1. The vidicon target (a) structure and the vidicon target ideal photo-CVC (b).

When a reverse voltage is applied, only holes are current carriers. This phenomenon was discovered when measuring the photoconductivity by the vidicon method [4].

It is known from the studies' results of such photo-volt-ampere characteristics structures that photo-CVC consists of several sections [8].

This photo-CVC behavior can be explained as follows: suppose that at low temperatures the entire space charge is formed by photo generated mobile holes in the valence band, then the transfer phenomena can be represented as follows. Hole traps create deep energy levels, so that the reverse holes thermal ejection can be neglected, moreover, the traps are evenly distributed over the volume. The traps concentration is much higher than the equilibrium holes concentration in the *i*-layer, which confirms the low value of the dark current. Then, at low voltages, almost all injected photo generated holes are captured by traps, so the hole concentration in the *i*-layer depth will not increase. This position corresponds to the ohmic region in the photo-CVC obtained at low temperatures. With increasing voltage, all traps are filled with injected holes and the hole concentration begins to grow.

At some voltages, the injected holes concentration is much higher than that deep traps. This will happen if the photo generated holes concentration is greater than the traps concentration. If these conditions are satisfied, then for this case we have the following equations:

For current density

$$j = ep\mu_p E + D\nabla p \quad (1)$$

For the electric field distribution in the *i-a-Si: H* region, we have Poisson equations

$$\frac{\partial E}{\partial x} = \frac{4\pi e}{\varepsilon}(p + N(f-1)) \quad (2)$$

and the equation for the charge exchange kinetics

$$N\frac{\partial f}{\partial t} = \frac{\Delta p}{\tau_p} - (f-1)\frac{\Delta N}{\tau_n} - g \quad (3)$$

Here *N* is the hole traps concentration in the mobility gap, X is the concentration of injected photo generated holes, τ_p is their lifetime, μ_p is the hole mobility, g is the thermal generation rate of the *i*-regions majority carriers, f is the filling factor of hole traps, and this value at thermodynamic equilibrium is determined by the following expression:

$$f = \frac{1}{1 + \frac{N_d}{G\tau}}$$

Here *G* is the photogeneration rate.
To solve these equations, we will evaluate some terms of these equations. Due to the diffusion smallness coefficient, we neglect the second terms (1) of the equation. Due to the dark current dependence on voltage [5], it can be seen that g thermal generation is insignificant, so we will not take it into account. The quantities ΔN, Δp, ε and *f* depend on the applied voltage. As the voltage increases, the injected holes number in the *i*-layer increases strongly and all traps become filled, as mentioned above, then the filling factor is *f = 1* if thermodynamic equilibrium occurs between the traps and injected holes. Then the following condition is satisfied: $\frac{\partial f}{\partial t} = 0$ и $p >> N$, taking into account the above-given conditions from equation (3) we have $\frac{\Delta p}{\tau_p} = 0 \Rightarrow \Delta p = 0$ or $p = const$ then the equation (1) and (2) takes on the following:

$$j = ep\mu_p E \quad (4)$$

$$\frac{\partial E}{\partial x} = \frac{4\pi e}{\varepsilon} \cdot p \quad (5)$$

Solving together (4) and (5) the equation we have the following expression for the relationship between E и j $\frac{\mu_p \varepsilon E}{4\pi}\partial E = j\partial x$. To integrate this expression, it is necessary to estimate the lower integral bounds. As is known, in the vidicon mode, the incident light is absorbed at the *i*-layer surface to x_0 depth. This thickness, in which the holes are photogenerated, can be called a "virtual" cathode. With an increase in the external stress, this section expands, but at lower stresses, we can assume *x << L*, *L* is the *i*-layer thickness, therefore we will integrate from 0 to *L*.

Considering the above conditions, we get the relationship between the applied voltage current.

$$j = \frac{\mu_n \varepsilon}{8\pi} \cdot \frac{U^2}{L^3} \quad (6)$$

Thus, we got the Mott's quadratic law. As seen from (6), the photocurrent value depends only on the hole parameters. Therefore, information on the hole transfer mechanism can be obtained. To show this expression reliability and applicability for the Vidicon photo-CVC target, we will analyze the experimentally obtained graphs and carry out a numerical calculation. In [6], photo-CVCs were obtained at different temperatures (Fig. 2).

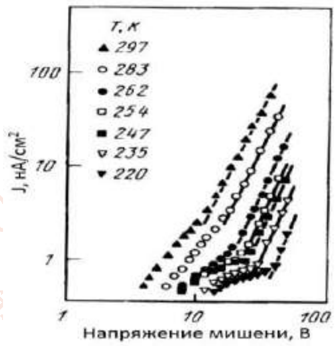

Fig.2. Photo-CVC obtained at various temperatures.

As can be seen in the temperature dependence, the photo-CVC section, which obeys the "quadratic" law, is shifted almost parallel to the high voltage region. This photo-CVC behavior for samples with different thicknesses satisfies (6) equation. The holes' photoelectric parameters depend on temperature, therefore, from this section of the photo-CVC, it is possible to obtain the temperature dependence of the holes' photoelectric parameters. And this case requires additional research. To determine the holes' photo generation rate, we used the following expressions.

Where $I_0^{p(s)}$ is the incident light spectral density, $\alpha_i(\lambda)$ is the incident light coefficient in the *i-a-Si: H* layer, T_{ni} is the *n* layer transmittance into the *i*-layer, *p* and *s* are polarization indices, to obtain a photo-CVC plot obeying the "quadratic law", we will use the following values and estimates of some parameters of *i-a-Si: H*.

When measuring the vidicon target photoconductivity, the light falls normally and is completely absorbed in the *i*-layer, in addition, the *n*-layer thickness is insignificantly relative to the *i*-layer. Then $R_{pi}=0$, а $T = \frac{n_{in}}{(n_{ni}+1)^2}$ Where n_{in} is the relative refractive index. If we take into account that the *n* and *i*-layer consists only of *a-Si: H* then $n_{in} \approx n_{ni} = 1$ and T=1. The coefficient values of defect absorption $\alpha(\lambda)$ ~1-10 cm^{-1}, the holes mobility μ_p=0,67 $cm^2/(B\cdot c)$, m=34÷35 and d_i≈1 μm. When light is absorbed at the surface *i*-layer, as indicated above, a carriers "reservoir", that is, holes, appears, and along with it, a potential difference appears between the *i*-layer part that absorbed and not absorbed light. Photo generated holes must overcome this potential barrier. The potential barrier height depends on the energy distribution width of the defects state density near the Fermi level. As is known, the defects state density near the Fermi level is several orders of magnitude lower than the state density in the rest of the mobility gap. Therefore, when the incident light is absorbed at these levels, all the electrons in these states pass into the conduction band and due to this, the Fermi level shifts downward. The distribution of these states obeys the Gaussian law[7].

$$N(E) = (2\pi\sigma^2)^{-\frac{1}{2}} \exp(-\frac{(E-E_0)^2}{2\sigma^2})$$

Here E_0 is the state density peak of the Gaussian distribution; σ is the energy width of this distribution. Given the above data, it can be assumed that the potential barrier height is comparable to that value.

When the $\Delta\varphi = U$ condition is fulfilled, all photo generated holes are injected into the entire *i*-layer without obstruction. And then the two conditions p>>N and p=const are fulfilled, therefore, the section that obeys the quadratic law begins with this voltage.

If the total photo generated holes concentration is less than the defects concentration, that is, $p<N$, the area that obeys the "quadratic" law is not observed. This is evidenced by the obtained photo-CVC at low illumination or samples with a high defects concentration [4,8]. Thus, we will be able to determine the voltage at which the "quadratic" section begins.

Since in *a-Si:H* samples lightly doped with boron, hole traps are the main trapping centers for non equilibrium holes [4]. In this case, the hole lifetime τ_p is determined by hole traps concentration N_d , N_d , $\tau_p = (C_p^0 \cdot N^0)^{-1}$ Here C_p^0 -is hole capture ratio.

With the holes injection with a higher concentration, that is, $p>N^0$, with increasing voltages, hole traps gradually capture more holes. This leads to these traps recharge, as a result of which the hole traps concentration decreases. Accordingly, the hole lifetime increases and, as a consequence, an additional increase in the photocurrent should occur.

At high voltages, the entire *i*-layer is filled with injected holes with an almost constant volume concentration *p*, which means that the photocurrent does not obey the quadratic law.

This voltage can be estimated by equating the hole transfer time to the *i*-layer thickness with the Maxwell relaxation time, from this voltage the ohmic section or saturation current begins. Comparing the hole transfer time with the Maxwell relaxation time, we can estimate the stress in which the quadratic section ends.

Obtained results discussion and their comparison by experiments

To compare the theory with experimental data, let us use the results of [4], in which *a-Si: H* samples with different parameters and under different illumination were studied by the vidicon method.

In [4], the measurement was carried out on the same type sample, but at different illumination powers. As can be seen, with decreasing illumination power, the number of photo generated holes decreases, when the concentration of photo generated holes goes down below the $p=N_D$ boundary, the quadratic section is not observed. This is also an additional proof of our assumption.

From the experimental plots obtained in [8], it can be seen that no other photocurrent dependences on the applied voltage were observed before the quadratic beginning section. That is, when voltage is applied, a section begins, which obeys a quadratic law. This photo-CVC behavior can be explained by low value of the defect concentration in the mobility gap. In [4], *a-Si:H* samples were investigated by the vidicon method at different temperatures [Fig. 2]. Different sections of the photocurrent can be distinguished from the graph depending on temperatures. The calculated data of the vidicon photo-CVC target according to formula (6) with some photoelectric parameters dependence use on the applied voltage and without it is shown in Fig. 3.

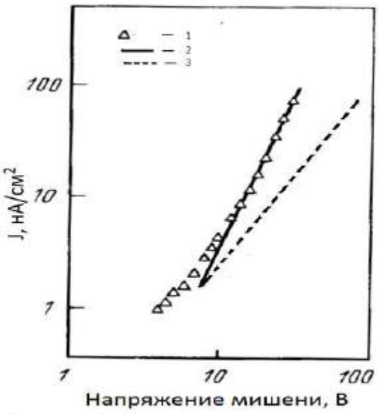

Fig.3. Experimental (1) and calculated (2,3) vidicon photo-CVC target. (2) - taking into account the change in ε and τ from the applied voltage, (3) - obtained without taking into account the change in ε and τ

As you can see, if we take into account the above-said dependences, then the calculated photo-CVC are in good agreement with the experimental data. A decrease in the photocurrent at low temperatures can be explained as follows: a decrease in temperature reduces the holes thermal ejection probability from trap states into the valence band. In addition, the potential barrier value also depends on temperature; therefore, the photo-CVC behavior at low temperatures requires additional research.

Conclusion

Based on the above, we can conclude that on the quadratic section of the photo-CVC vidicon target based on *a-Si:H*, the photocurrent not only depends on the applied voltage directly, but it is necessary to take into account changes in the dielectric constant of the *ia-Si:H* layer, the lifetime holes τ from the applied voltage. Thus, it is impossible to obtain reliable information on the hole mobility from equation (6). To determine the hole mobility, it is necessary to take into account the changes in the dielectric constant of the sample under the influence of an external voltage. As mentioned above, with a change in the distribution of injected holes, the lifetime increases and, in turn, the transfer of holes decreases. Therefore, these changes are also appropriate to take into account.

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Problems and Reforms in the Training of Higher Education Personnel in the Years of Independence

(On the example of the Fergana Valley regions of Uzbekistan)

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ABSTRACT
The article analyzes the reforms of the higher education system carried out during the years of independence in the republic and regions of the Fergana Valley, aimed at training highly qualified personnel meeting the requirements of modern times. The study also reflects the existing problems in this area and the measures taken by the government to eliminate them.

KEYWORDS: *Republic of Uzbekistan, Fergana Valley, higher education system, reforms, regulations*

INTRODUCTION
One of the most important stages of the education system is the higher education system, which is aimed at training highly educated personnel. At this stage, the training of personnel who can have a significant impact on the rapid development of the economy. In the early years of independence, as in all stages of the education system of the republic, the priority was to develop the system of higher education, to raise it to a new level, to train personnel that meet modern requirements. In this regard, great importance was attached to the adaptation of this sector to the market economy, the radical reform of the higher education system.

One of the main reasons for the beginning of the reform of the higher education system in the early 1990s was the shortage of modern staff in the country. According to the data, the percentage of university graduates trained for industrial and construction enterprises in the Union is 34%, in Uzbekistan - 17%, plus 27-30 people per ten thousand people in the Union, and in Uzbekistan - 16-21 people with higher education. The need for higher education in the country is twice as high as in the Union, and even higher in Fergana region [1. p 3].

MAIN PART
It was in this context that the reform of the higher education system began. The main emphasis in the implementation of the initial reforms was based on the requirements of the time and the needs of the republic: first, the sustainability of university education; secondly, the division and specialization of higher education institutions; thirdly, it is aimed at regionalization and expansion of higher education [2. p 301].

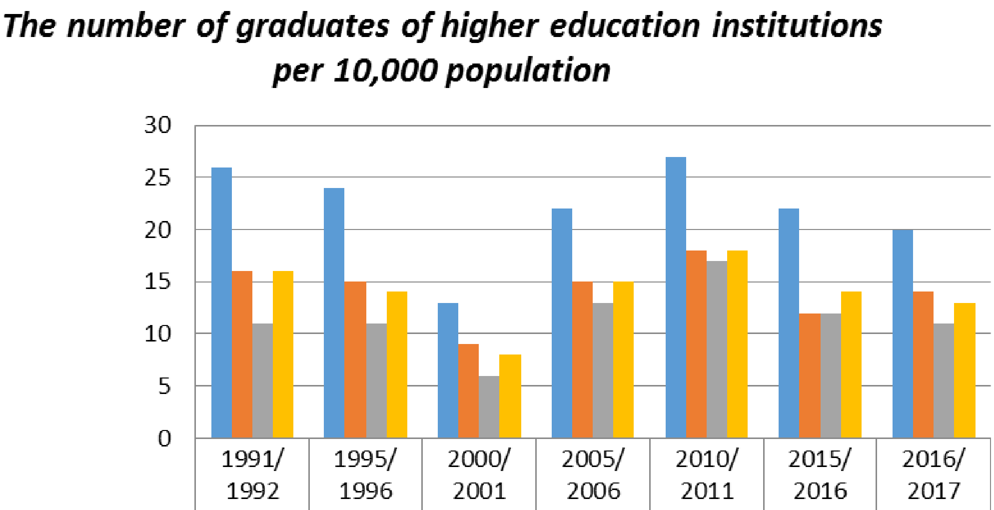
In order to meet the needs of the Republic in higher education, meeting the requirements of the times, the Decree of the President of the Republic of Uzbekistan "On the establishment of new higher education institutions of the Republic" dated February 28, 1992, PF-356. In order to further improve the system of higher education, improve the training of highly qualified specialists and researchers, as well as to provide all regions of the country with them more fully and evenly, a number of higher education institutions have been established in the country [3. p 60–61].

If in the pre-independence 1991/1992 academic year, there were 52 higher education institutions in the country [4. p 3] In the 2016/2017 academic year, there were 76 higher education institutions in the country, including 20 universities, 36 institutes, 2 academies, 11 branches, and 7 branches of foreign OTMs [5]. At the opening of foreign higher education institutions and branches, special attention was paid to the cooperation of the republic with the developed countries of the world, the United Kingdom, Russia, Singapore, Italy and Korea.

It should be noted that in the first twenty-five years of independence, the coverage of young people with higher education has not increased, in line with the growth of the number of higher education institutions in the country. This has created problems in the training of highly educated personnel in various fields. President of the Republic of Uzbekistan Sh. Mirziyoyev, in his address to the Oliy Majlis on the results of 2018, touched upon this issue, emphasizing the following. “In the past, the coverage of graduates of higher and secondary special education institutions in Uzbekistan with higher education was 9-10%. Thanks to the measures taken over the past two years, we have managed to increase this figure by more than 15%. But that is not enough. Because if we look at the experience of developed countries in the world, this figure is 60-70% of them "[6].

Despite the increase in the number of higher education institutions in the country, the quotas for the enrollment of young people in higher education, ie admission to higher educational institutions, have not been increased in line with the growing population. This, in turn, has led to a reduction in the number of highly educated people among the population. The following table provides detailed information.

Table 1



	1991/ 1992	1995/ 1996	2000/ 2001	2005/ 2006	2010/ 2011	2015/ 2016	2016/ 2017
Republic of Uzbekistan	26	24	13	22	27	22	20
Andijan region	16	15	9	15	18	12	14
Namangan region	11	11	6	13	17	12	11
Fergana region	16	14	8	15	18	14	13

From the above table we can see that in 1991, 26 specialists with higher education were trained per 10,000 population in the country, and by 2000 this figure was 13, which is 50% less than in 1991. In 2016, this figure was 20. As we noted above, in 1991 the Republic was lagging behind the All-Union level in terms of training more highly educated personnel per 10,000 population, while in 2016 the figure was even lower than in 1991. The number of higher education in Andijan region was 16 in 1991, 14 in 2016, 11 in Namangan in 1991, 11 in 2016, 16 in 1991 and 13 in 2016 in Fergana region. In the Fergana Valley, we can see that the number of highly educated personnel per 10,000 population is much lower than the number of staff. If we take into account the fact that the population increased by more than 30% compared to 1991, this, of course, is a matter of concern.

The decrease in the number of people with higher education among the population has led to a shortage of people with higher education in a number of areas of society. For example, out of about 60,000 educators working in the field of preschool education, only 21% had higher education and 79% had secondary special education [7]. It was time to find a solution to this and many other problems in the education system, to develop this area at the level of modern requirements.

It should be noted that in 2017, as in all areas of our society, a lot of attention is paid to the implementation of a number of reforms in the higher education system. Many important decrees and resolutions of the President of the Republic on the development and reform of higher education have been adopted. Particular attention is paid to the effective implementation of decrees and decisions. For example, if we look at the quotas for admission of young people to higher education institutions, in the 2018 academic year, the enrollment of students in higher education institutions increased by 30% compared to 2017 and by 62.4% compared to 2016 [8. p 1]. At the same time, the number of students studying in higher educational institutions of the republic has increased. For example, in the 2016/2017 academic year it was 264095, in the 2017/2018 academic year it was 279674, and in the 2018/2019 academic year it was 344790 [9]. It is no exaggeration to say that the adoption of the Decree of the President of the Republic of Uzbekistan dated October 8, 2019 "On approval of the Concept for the development of the higher education system of the Republic of Uzbekistan until 2030" marked the beginning of a new reform of higher education in the country. According to the decree, by 2030, the level of higher education coverage will be increased by 50% on the basis of the development of public-private partnership in the field of higher education, the organization of public and private higher education institutions in the regions.

Great attention is paid to the consistent implementation of reforms in the higher education system in the regions of the Fergana Valley. For example, in Fergana region in 2018, the Resolution of the President of the Republic of Uzbekistan dated September 26, 2018 No PP-3952 "*On the establishment of a branch of the Latvian Higher School of Information Systems Management in Fergana*" and the Cabinet of Ministers of the Republic of Uzbekistan dated September 22, 2018 VMQ-754 In accordance with the Resolution "*On the establishment of the Kokand branch of the Tashkent State Technical University named after Karimov*", branches of leading higher educational institutions of the republic and foreign countries were opened in Fergana region. At the same time, it is no exaggeration to say that the establishment of the first non-governmental Kokand University in the country in 2019 is the result of the attention paid today to the development of the non-governmental education system in the country.

The effectiveness of the work aimed at developing the system of continuing education in the Fergana region, as well as in the country, is highly valued by international organizations. In particular, the inclusion of Fergana, the only city in Uzbekistan in the UNESCO World Network of Educational Cities, is one of the most educated cities in the world. Two years ago, there were 5 universities in Fergana region, today there are 11. These factors also played an important role in making Fergana the most educated city in the world.

In recent years, the state has paid great attention to the development of higher education, training in modern advanced areas and specialties, the opening of new higher education institutions. In particular, in 2019, 19 new universities, including 9 branches of prestigious foreign universities, were opened to promote higher education. In cooperation with leading foreign universities, training on 141 joint curricula has been launched. A total of 146,500 students were admitted to higher education institutions, which is twice as many as in 2016 [11].

As a result of reforms in the sector, over the past three years, new educational institutions and new ELPs have been opened in the country in cooperation with advanced foreign countries. In particular, in 2018-2020, 43 OTMs were established, including 28 local and 15 foreign OTM branches. To date, the number of OTMs in Uzbekistan has reached 125 [12]. As a result of the opening of branches of foreign ETCs in the country and the attention paid to the development of the non-governmental education system, today there are 22 branches of foreign ETCs and 9 non-governmental ETCs in the country. The positive changes that are taking place as a result of the reforms in this area will help young people to acquire knowledge at the level of modern requirements and become competitive professionals.

CONCLUSION

In conclusion, it should be noted that during the years of independence, a number of achievements have been made in the field of higher education in the country. But it should be noted that along with the successes, there were also some of the problems we mentioned above. In recent years, our government has been paying great attention to the development of higher education at the level of modern requirements, increasing the quality and quantity of training and providing them with all sectors of our economy.
Based on these, we want to put forward some suggestions;

- It is necessary to set quotas for admission to universities by universities, as well as to allocate targeted quotas in areas with high demand for personnel in some areas of socio-economic spheres.
- It is necessary to further simplify the entrance exams to universities and strengthen knowledge control over the results of courses.
- It is expedient to develop joint faculties in each department of higher education.
- Innovative technologies should be widely introduced into the system of higher education.
- By increasing the attractiveness of the country's universities, it is necessary to create ample opportunities for foreign youth, including young people from Central Asia, to study in the country's universities.
- It is necessary to widely introduce information technology in the system of higher education in the exchange of documents, as well as to create an environment of free movement and communication for professors and students to work more on themselves.

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Proverb Euphemism as a Means of Expressing the Individuality of the Speech of the Characters

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ABSTRACT
The use of parems in speech shows the level of the character, the extent to which he reflected in his mind the mental world of the nation to which he belonged, the extent to which he used the wisdom of the people.

KEYWORDS: *communication, linguistic point, proverbs, parables*

INTRODUCTION

This is manifested primarily in the skill of the writer, the artistic attitude of the character, the purpose of the artistic intention and the direction of the flow of artistic thought. Proper organization of communication tactics and strategies of communicators in the process of communication, as well as proverbs and sayings used to assign the reader attitude to the characters, play an important role in demonstrating their communication culture, linguocultural competence.The word artist is able to enjoy the fruits of his or her skill by demonstrating a combination of social and character traits of language tools. "Parems such as proverbs, parables, parables, idioms, which are the product of folk wisdom, have an important expressive role in reflecting the spirit of the social environment, revealing the idea and purpose of the work of art, the inner world of characters, giving speech and expressiveness. From a linguistic point of view, proverbs, parables, parables of the idiom type have common and different sides.

Main part

The study of the semantic properties of paremas can provide rich material for linguopoetic analysis. "[2]

We refer to the texts:

– Son, don't be angry with your mother. He says everything only because he is against marrying from Margilan. But if you ask me, I will not insult our godmother or daughter-in-law in Margilan in any way, but I would say that they were the most suitable people to marry us, my dear son. A parent who is not happy for you to rest and grow is not considered healthy.You should believer in this. But as long as some of our current opinions don't lie to you, you have a right to it, but on the other hand, don't leave us unjust either. My son, we have no sign of hope, no joy of life other than your number. All the dreams and desires that we see in the world are focused only for you.We thank God thousands of times that you have become like a child of others; although we cannot be as proud of you as a man, we are sure that we will not be embarrassed by you. In particular, your mother's hopes for forgiveness because of the number grew. On this day, your mother will kneel before you, and for your mother's sake, I will intercede and ask you: if you are married in your own way, may your wife be blessed. The wish of your parents, who are in a claim of remembrance, will certainly be no different. At the same time, a person whose reason is your body wants to have a dream in his life through his child ... It is up to you whether you will grant his dream or not ...

Uzbek Oyim liked Haji's words as much as he disappointed Otabek. The pilgrim concluded his exaggerated statement with the following words:

– The one who knows talks by seeking, the one who doesn't by cheating*, as they say, that was all your mother wanted to say. His words are only his threats in defense of his rights, and you know your mother's actions better than I do ... (A.Qodiriy, "Last days")*

Yusufbek Haji, a great example of the image of a father, husband and statesman in Uzbek literature, is described on the basis of the writer's speech, every word and phrase he uses, his behavior - the level of communication culture.It is not the descriptions that give him the opportunity to demonstrate his existence through the culture of communication and speech. In this text, by expressing his views with oriental wisdom, our national mental treasury takes responsibility for "covering up" the half-baked, raw ideas of the "dumb" wife, making effective use of the riches of inja. At the bottom of the bowl, nimkosa acts as a "knows, jokes, does not know, is true" and evaluates his wife's way of expressing his opinion on the basis of a euphemistic proverb, expressing his attitude to her. If the pilgrim had said, "Your mother doesn't know anything, she can't even express her opinion," my Uzbek mother would have been upset, and the situation would have been even more dangerous. The euphemically used proverb saves the family from this situation as the sharp mind and lofty intellect of the pilgrim. Proverb levels can be dysphemical in nature for high otabek. After all, if you go deeper, the expression "speaks" leads to the comparison of the speaker to a dog. This shows the richness of the proverb. However, Yusufbek Haji criticizes his wife and defends her:*that was all your mother wanted to say.All the other words are her threats in defense of her rights ...*

The use of proverbs and the creation of new proverbs depend on the character of the protagonists, however, there are cases when this proverb also seeks to "veil" one's opinion. For example, in Tahir Malik's story "Shaytanat"

[2] Қосимова М.Б. Бадиий нутқ индивидуаллигининг лингвистик хусусиятлари (Тоғай Мурод асарлари асосида): Филол. фанлари номзоди... дисс....автореф. – Т., 2007. – Б.18.

this is obvious. The play reveals the character of different social types, and the writer leaves it to them to "decorate" their speech:

- *"Don't beat around the bush: she's dead, she's gone!" Look at this akahon, the comrade prosecutor, handed over his wives to the surgeon and went to Yalta themselves. Here is a proverb:"**If you have money in your bag, spend it in Yalta**", is that so, hey?*

– Isn't it a sin to rest? I didn't know the weight of the patient, did I? I am anxious too.

*– There is no play. I'm not a fool to start from here. If you sneeze at a tree in Yalta, a thousand slaves will die. There is a proverb in Russian: «**You don't go to Tula with your own samovar** ».*

*– Look, comrade prosecutor, this is what our brother is all about. They even know the Russians. Uzbeks would also have a proverb, you know? What was it "**You are counting the dumplings raw**", right? Brother, I am Tolipov! Behold, if you do not believe me, let the comrade prosecutor say, I will cut you off from where I have been caught. No one has yet taken me to the water and brought me without watering. I'll tell you in two or three days who you went with. If you want, we'll bet: I'll let you play, and you'll ... we'll cut you, shall we?*

– No, we disagreed. I know you bring a slap in the face from the street. (T. Malik, "Shaytanat")

There is a word game in the text. As long as the proverbs take part in a word play, it certainly takes on a euphemistic character, but also serves to individualize the character's speech as the artist's artistic intention. For example,*If you have money in your bag, spend it in Yalta* the occasional proverb was a euphemistic means of conveying the idea that "a man has a lot of money, so he went to Yalta to make a living," by pitching, and at the same time served to show the level, character, and demeanor of the speaker.*You don't go to Tula with your own samovar,*the Russian proverb in the character's speech is euphemized to reflect the Russian character and mentality, to imitate the Russians, and to "wrap up" his earlier statement that "I will not take the souls from here, there are plenty of them over there." *are counting the dumplings raw*, which is mentally contradictory to these articles, to be used as an euphemism for the expression of the opinion "do not draw conclusions yet" while using the proverb to exaggerate the national mental character of the speaker.Expressing his thoughts figuratively, in the next part of the dialogue he used the euphemism of the proverb, that the Uzbek logic served as the tactical superiority of our ancestor in the Uzbek-Indian dialogue. After all, the power of the proverb used in its place is mixed with the level of the speaker, his behavior. In other words, "a linguistic personality is a concrete native speaker who is able to understand, reproduce and create texts; it is a personality expressed in the language and characterized on the basis of an analysis of the texts produced by her in terms of using the systemic means of the language in them to reflect her vision of the surrounding reality."[3]

Conclusion

The place and role of parems, especially proverbs, in ensuring the individuality of personal speech is unique. Euphemisms of proverbs play an important role in ensuring the individuality of personal speech. In works of art, the creative expression of proverbs through the speech of the characters, in which he applies the generality to the specificity, substantiates the personal thought with the general opinion, subordinates it to the tasks of "veiling". In this case, the proverb is euphemized.

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National Question and Television of Uzbekistan under the Conditions of the Crisis of the Total System

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ABSTRACT
The article analyzes the main paradigms of the state of the national question in Uzbekistan under the crisis of the Soviet totalitarian system during the years of perestroika. The features of changes in the work of television and the criteria for the functioning of television journalism under the conditions of "publicity" in the republic are considered.

KEYWORDS: *crisis, national issue, "perestroika", television, television programs, Uzbekistan, language*

I. INTRODUCTION

Since the mid-1980s, there has been a deterioration in the socio-political and economic life of the country, the crisis of the totalitarian, command and administrative system with its complete collapse, on the one hand, and the growth of national consciousness in the republics of the former USSR, the desire to assert national statehood, on the other [4, P.220].

In the crisis of the socio-political and spiritual-moral system that was formed over several decades, an important role was played by the vicious national policy within the USSR, carried out by the Center in relation to the republics. It is known that this policy was laid down in the very idea of Sovietization of national suburbs, including Uzbekistan, total internationalization of all socio-economic life, forced imposition of European thinking and life, values and relations on Eastern Nations and peoples.

II. Results and Discussion

There are quite a lot of comparatively analytical data that, when compared, would indicate, on the one hand, the manipulation of statistical materials and their inconsistency with historical reality, and on the other, the deliberate and purposeful policy of the totalitarian regime to mislead public opinion. In addition, it reveals the fact that it is impossible to apply and apply the European view and assessment to various values and orientations of a local nature. But, despite the existing scientific justifications and evidence that did not coincide with the official ideology, the Center, in order to satisfy its sovereign ambitions, tried, first of all, to alienate the Central Asian peoples from their ancient origins and roots, to discredit their national identity and peculiarities. This process reached its apogee from the mid-1970s to the mid-1980s [6, P. 91].

Under the monopoly of the Central administration, self-development was carried out by strict regulation in a strictly defined direction with restrictive and truncated rights and functions. This was especially true in the language environment of the Republic, where for many decades there was a forced and active introduction of the Russian language into all areas of society's life, which replaced the language of indigenous nationality from the state, industrial, political and social spheres, filling the spaces of work, life, politics and other forms of relations. So, if in the 30s of the XX century. the Russian language was given a total of 400-500 hours for ten years of training, while in the 80's the national school had already planned 1600-1850 hours for a ten-year period of training, which was on average from 14 to 17 percent of the budget of educational time in secondary schools [6, P. 96]. In General, in Uzbekistan, from the 1st grade to the Institute, children of indigenous nationality were given 3670 hours to study Russian language and literature, while their native language was only 1675 hours.6 The primacy of the Russian language was also observed in the information space. Despite the fact that at the end of the Soviet era, only 2.7% of the 14 million Uzbeks were fluent in Russian, 33% of Newspapers and 60% of magazines in Uzbekistan were published in this language [7, P.230]. In 1989, the share of book products by various titles in Russian was 52.6%.

In this situation, each nation or nation was doomed to the position of a vassal, enslaved by legal norms, political stereotypes, and moral dogmas. With regard to intra-national patterns and trends of self-development, they are, in fact, were driven inland, and emerging and spills on the surface of public life sharp and painful contradictions between international and national is carefully disguised and presented to public opinion as always atypical and insignificant, as the costs and consequences of the feudal-Patriarchal relationship that is not flourishing nation, and their gradual extinction and disappearance as a distinct and unique communities, the emasculation of the true national spirit determined their perspective and future [6, P. 92].

The Imperial essence of such a state was carefully camouflaged behind beautiful slogans and appeals, although it was nothing more than a unitary, super-centralized formation of an ideocratic type, where there was no place for self-determination of ethnic groups. "The ingrained habit of governing and teaching," according to the definition of the First President I. A. Karimov, "faith in one's own infallibility can lead to making strategic erroneous decisions, the consequences of which serve as explosive material for the Empire itself" [5, P.55].

For example, Uzbek television carried programs under the headings: "Screen of friendship", "Uzbekistan in a United family", "in friendship – our strength", "Internationalism-in action" [3, P. 72], etc.

In particular, the program "friendship Screen" was a joint program about friendship and labor rivalry of TV studios in

Uzbekistan, Tajikistan, Turkmenistan, Kyrgyzstan and Kazakhstan. Another television program – "Uzbekistan in the United family", which was prepared by all the studios of the USSR, also echoed the" friendship Screen". Its goal is to comprehensively show the international relations of Uzbekistan and other republics.

In all these and many other similar TV shows, it was demonstrated that the more multinational a Republic is, the more international it is. The crowning achievement of the national question was the proclamation of the Soviet people as a new social and international community.

The new generation of leaders of the former Soviet Union, who came to power in 1985, clearly understood the need to implement fundamental socio-economic changes in the country. The main strategic priorities of the new policy were the slogans "publicity" and "restructurings".

The glasnost policy provided for the "softening" of censorship in the activities of television (under supervision from above), as well as the publication of a number of previously banned books and documents. To a certain extent, the use of censorship in publishing, film production, and theatrical performances was restricted, and films that were previously shot but banned from being shown (put on the shelf) were shown. With the development of glasnost, society gained a greater form of freedom of speech. In the end, despite all the efforts made by the party apparatus, with its prevention is not able to cope.

Many TV shows, publications, books, films and documentaries on previously forbidden topics (for example, about Stalinism and repression) related to the restoration of historical truth, contributed to the rethinking of history and modernity, the rejection of historical and social stereotypes, and the search for new landmarks and prospects for the country's development. Unfortunately, the "restructurings" was half-hearted. As a result, stagnation continued to occur in the economic, spiritual and educational spheres, as well as in the activities of television.

Thus, under the conditions of perestroika, most of the broadcasts of the Tashkent city television Studio were conducted in Russian. In addition, the Uzbek television program information and analytical programs "Time" and "Information" were conducted mainly in Russian. Only the program "Information" was broadcast once a day in Uzbek. In particular, if the editorial Board of socio-political programs conducted 70 TV programs in 1985 alone, 58 of them were in Russian.

In the Uzbek language was mainly cultural-educational program "Otalarso'zi – aqlningko'zi" ("the wisdom of the fathers – the mirror of life"), "Ertaklarolamida" (world of tales), "Hayotquvonchlarivatashvishlari" (Joys and concerns of life), and others.

Thus, one of the new programs "Joys and concerns of life" gained wide popularity in Uzbekistan among millions of viewers of various ages, as this program raised acute socio-economic and moral problems in places.

The situation changed in favor of the Uzbek language only after the adoption of the Law of the Republic of Uzbekistan "on the state language" in October 1989 and giving the Uzbek language the status of the State language [1, P.12]. So, in 1990, the number of programs prepared in Uzbek by the editorial office of industry, construction, transport and communications was 70%.

By the end of the 80s of the XX century, TV journalism was at its peak. It was during these years that the first critical TV programs appeared and "round tables" on the history and theory of state construction began to be used. It was then that they first started talking about "white spots", "black holes"and "closed cases". At numerous press conferences held in 1987, historians opened the curtains on forbidden topics with an irresistible fear. But soon the timid breath of glasnost with incredible speed began to turn into a deafening squall, and a departure from dogmatic teaching began. On television, problems were raised, questions were asked that literally stunned the masses. Because of this there was a multiplicity of positions, approaches and assessments to the Soviet national policy, only yesterday seemed unshakable brotherhood of peoples, the principle of a single and indivisible multinational States, the Soviet people as a new community of people, doubt began to be very rosenast national problems.

The media, in particular, television of the perestroika period, trying to understand the essence of national policy, were critical of its wording. Thus, they analyzed such definitions as" nation"," nationalism"," national and interethnic contradictions", "chauvinism". The appeal to these formulations was dictated by the fact that the old approaches to them no longer satisfied society. However, the media in particular, television in Uzbekistan, as well as all public thought, have developed slowly, with a lot of caution, with less freedom and frankness. And yet, even with difficulties, the process of rectification of consciousness was going on.

The developed program "For political and economic sovereignty, spiritual renewal, social justice and decent living conditions of the population of Uzbekistan" played an important role in this, [2] which for the first time revealed the content of the concept of "full independence at the Republican level". This program contained the task of transition to market relations. She advocated independence in foreign economic activity, expanding and strengthening the Republic's position in the world market, creating the necessary conditions for attracting foreign investment and technology, etc. [2].

In this direction, the television of the Republic saw regional self-financing and self-financing as a starting point for the gradual introduction of market relations. Therefore, much space was given to this problem in TV shows. But not all of their materials met the requirements of modern Economics. Numerous discussions on television about regional self-financing and self-financing have largely contributed to the fact that new forms of management rent, contract, cooperation, etc. they have already been introduced into everyday production practice. Of course, they did not develop along a straight, post road, but overcame numerous obstacles of a bureaucratic, economic and psychological order.

The problems of the market, the transition to it, and the correlation between the concepts of "socialism" and "market" caused a violent reaction from almost all segments of society, which was largely fueled by the media. On television there were programs "Discussion platform", "Problems of transition to the market", "Economic reform: theory and experience", "Discussion and discussions", etc., where public figures, government officials, scientists, economists, specialists in various sectors of the national economy spoke. They expressed not only their point of view on any issue, but also offered their vision, their concept of transition to a market economy.

III. CONCLUSION

The term "regulated market" did not leave the materials of TV shows. During these years, such stereotypes as "socialist choice" and "planned economy" were defended on television. Ideological formulations derived from the idea of total equality reinforced these stereotypes. Although it should have been obvious that it is impossible to change the system within the framework of a socialist choice: there is no "socialist" or "capitalist" market, but there is a single and indivisible mechanism developed by a universal civilization.

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The Effect and Significance of Vitamin D on the Course and Effects of Pregnancy

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ABSTRACT

Background. The high prevalence and negative effects of vitamin D deficiency is a problem for a wide range of specialists worldwide. Pregnant and lactating women are at risk for vitamin D deficiency, as evidenced by the results of many epidemiological studies. Vitamin D plays an important role in providing the mother-placenta-fetus system, including implantation, placenta formation, embryogenesis, intra- and postnatal periods. Vitamin D deficiency leads to placental insufficiency, low birth weight, gestational diabetes, premature birth, preeclampsia, and an increase in the inflammatory response.

The purpose of the study: an analytical review of the role and importance of vitamin D during pregnancy in modern scientific literature.

Materials and methods. An analysis of 18 foreign literary sources on this topic was carried out

Conclusion. Vitamin D plays an important role in the system of pregnant women, the placenta and the fetus, especially during implantation, placenta formation, embryogenesis, intra- and postnatal period. According to the literature review: Low level 25 (ON) D has an adverse effect on the course of pregnancy, outcome, fetal development, and infant health. Eliminating vitamin D deficiency has a positive effect on pregnancy outcomes and baby's health, i.e. serious complications during pregnancy - preeclampsia, gestational diabetes, placental insufficiency, chronic infection and other diseases are significantly reduced.

KEYWORDS: *25 (OH) 2D, 1.25 (OH) 2D, vitamin D deficiency, preeclampsia, gestational diabetes*

INTRODUCTION

High prevalence and negative consequences of vitamin D deficiency are a problem for many professionals in the world. Vitamin D deficiency is associated with health risks, including cardiovascular disease, cancer, metabolic syndrome, bone marrow, autism, multiple sclerosis, diabetes and mental health. It is proved that vitamin D deficiency causes infertility, affects the longevity of pregnancy and good health (in the womb and in the late adulthood). [1]

Pregnant and breastfeeding women are exposed to the risk of vitamin D deficiency, which is confirmed by the results of many epidemiological studies. Vitamin D plays an important role in supporting the maternal-placental-fetal system, including implantation, formation of the placenta, embryogenesis, intra and postnatal periods. Deficiency of vitamin D leads to placental insufficiency, birth of children with low body mass, gestational diabetes, preterm birth, preeclampsia, inflammatory reactions. [2]

Materials and methods

An analysis of 18 sources of foreign literature on this topic was carried outInfluence of vitamin D on satellites, especially on trophoblast cells.

The placenta contains all the components of the signaling system of vitamin D (VDR, RXR, CYP27B1 and CYP24A1). Weisman et al. [2]

It was found that detsidualnaya tissue in the placenta is able to synthesize 1,25 (OH) 2D and 24,25 (OH) 2D, which predispose to the formation of cytokines, granulocytes, macrophages 2 (GMCSF-2), stimulating colony a (TNF-). a), suppresses the synthesis of protivovospalitelnogo interleykina-6 (IL-6) and increases the indicators of TsAMF in detsidualnyx cells and cytotrophoblastax [3, 5, 6].

In the case of using vitamin D after exposure to E. coli on the third row of trophoblast cell cultures, a relatively low infection rate was confirmed compared to the case without using vitamin D [6,7]. This indicates a high level of SAMR. It follows that adding vitamin D to the diet with a serum 25 (OH) D level <30 ng / ml (vitamin D deficiency or deficiency) during pregnancy may reduce infectious processes.

Functions of vitamin D during pregnancy

The satellite has been proven to be capable of synthesizing 1.25 (OH) 2D. Placental product - 1.25 (PO) 2D. During pregnancy, against the background of massive synthesis of this vitamin, the rate of entry of this vitamin into the kidneys increases, which leads to the accumulation of ego [7].

Observations have shown that the level of 1.25 (OH) 2D in a recent series in the third trimester of pregnancy was twice as high as in non-pregnant women and in the postpartum period [8, 9]. 1.25 (OH) 2D is a link in the auto- and paracrine immune systems and has been shown to be synthesized during pregnancy [10]. 1.25 (OH) 2D inhibits the release of Th1 cytokines and increases the amount of Th2 (Th2 cytokines predominate during implantation) [10, 11]. This modulation of the immune system prevents the implanted embryo from separating. 1.25 (OH) 2D also promotes the transformation of the endometrium into decidual cells [12, 13]. An important gene for embryonic implantation and myeloid differentiation in early gestational age increases the synthesis of HOXA10 [13, 14]. It was reported that 1,25 (OH) 2D-syncytiotrophoblasts control secretion, secretion and increase the synthesis of steroid hormones in the placenta by human chorionic gonadotropin [4]. It has been shown that calcitriol promotes calcium transport to the placenta, increases the secretion of lactogen in the placenta, and regulates the expression of the HOXA10 gene (a gene that determines genital development) in endometrial stromal cells. As a result of this process, the development of the endometrium and the improvement of the implantation process are ensured [4]. These data confirm that 1.25 (OH) 2D promotes implantation, maintains normal pregnancy, promotes fetal growth through calcium delivery, controls the secretion of non-colonic formulations, and acts on hormones.

Vitamin D deficiency leads to a number of negative complications: secondary hypertension, gestosis [15, 17], an increase in the frequency of caesarean section and spontaneous premature birth, the development of bacterial vaginosis in early pregnancy [19], and an increase in the incidence of diseases such as gestational diabetes. Gestosis is one of the most common obstetric complications and plays an important role in maternal and infant mortality. At the heart of gestosis are mechanisms such as impaired trophoblast invasion, decreased placental perfusion, endothelial dysfunction, and oxidative stress. The presence of vitamin D and its receptors in the placenta, as well as the participation of vitamin D in the processes of immune, inflammatory and vascular resistance justify its role in the pathogenesis of gestosis in pregnant women [14, 16, 17]. In women, high vitamin D levels reduce the incidence of gestosis, and when it occurs, blood pressure readings are lower. The dose of 25 (OH) D below 20 ng / ml during pregnancy is four times higher, and less than 15 ng / ml is five times higher than with the development of severe gestosis. M. Haugen et al. A study of 23,423 women in labor in Norway showed that the risk of developing the disease was 27% lower in the group of women who received 400-600 IU of vitamin D per day than in the group that did not receive it. Lack of vitamin D leads to a deficiency of sex hormones, a violation of the ratio of body fat (prolactin, insulin, cortisol) and fat-breaking factors (somatotropin, catecholamines, sex hormones, thyroid hormones) factors [18].

One large study found an inverse relationship between vitamin D supplementation in a pregnant woman's diet and spontaneous preterm labor. High doses of vitamin D reduced the likelihood of miscarriage [20]

Conclusion

Vitamin D plays an important role in the pregnant woman-placenta-fetus system, especially during implantation, placenta formation, embryogenesis, intra- and postnatal period. Literature review Low levels of 25 (ON) D indicate adverse effects on pregnancy, outcome, fetal development and infant health. Elimination of vitamin D deficiency has a positive effect on the outcome of pregnancy and the health of the baby, that is, on serious complications of pregnancy - preeclampsia, gestational diabetes, placental insufficiency, chronic infection and others. The incidence is significantly reduced.

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Modern Approaches and Strategies for the Implementation of Innovative Processes in Industrial Enterprises on the Example of Uzbekistan

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ABSTRACT
The article describes the modern approaches, strategies and the role of innovation in the development of innovation processes in industrial enterprises of the Republic of Uzbekistan.

KEYWORDS: *industrial enterprises, transnational corporations, economic policy, strategy, import, export potential, innovative activity*

INTRODUCTION

Today, the economy of our country is becoming an integral part of the world economy, as well as the implementation of reforms and programs aimed at further development of the economy, the need to improve economic sectors. Because the competitiveness of our economy is formed due to the successful development of enterprises and industries.

The global financial and economic crisis, which has taken place in the world and is still manifested in one form or another, is testing the level of competitiveness of the economies of most countries in the next 5-6 years. In recent years, the economies of countries such as Japan, Germany and Finland, which have been consistently recognized as the most competitive countries in the global competitiveness rankings, have also shown signs of depression, recession, stagnation or decline in some sectors. This, in turn, requires the rapid development of new sectors of the economy - innovative directions in the industry. In other words, in a country where news and updates are happening more and more widely, these countries are emerging faster from difficult situations, specializing in new areas.

At the current stage of economic reforms in our country, special attention is paid to the further development of industry, which is the "locomotive" of the economy. In particular, the Action Strategy for the five priority areas of development of the Republic of Uzbekistan for 2017-2021, approved by the Decree of the President of the Republic of Uzbekistan No. PF-4947 dated February 7, 2017, provides for the deepening of structural changes, modernization and diversification of key sectors of the national economy. Competitiveness"[1].

Analysis of the literature on the subject

Today the formation and implementation of a highly effective innovation strategy in the economy is one of the main directions of long-term economic policy of the state, which determines the conditions for ensuring a stable position of enterprises in foreign and domestic markets.

Approaches to the concept of innovation are different, so there are different definitions of innovation or innovative activity. For example, one definition states that innovation is innovation in areas such as engineering, technology, management and labor organization, based on scientific and technical achievements and best practices, as well as their application in various fields and activities [2].

Innovation is derived from the English word "innovation", which means innovation and innovation. At the heart of this innovation is the idea that it is necessary to understand a new order, a new habit, a new style [3].Well-known economist N. Tokhliev explains the concept of innovation in connection with the processes of globalization and the specifics of the national economy. According to the scientist, "innovation is a new modern factor in shaping the development strategy of national economies in the process of globalization. Innovation is the end result of scientific, technical, technological and creative activity and represents the appearance of a new or improved product. It also refers to a new or improved technological process used in a practical activity. The difference between innovation and scientific research and traditional production is that it is, first of all, a scientific and technical innovation, which must be applied in practice, ie in industry, agriculture, education, medicine and other fields "[4].

Professor A.V Vakhobov, one of the economists who has studied the experience of foreign countries, focused on the impact of innovation on technological development and economic growth. The positive link between technological development and economic growth has been proven by the model of exogenous technical development, which is one of the factors of neoclassical growth"[5]. New competition can be based on the application of innovations in enterprises. The benefits of innovation will further increase the activity of the enterprise. This benefit was called static benefit by J. Schumpeter (1883-1950).

Research methodology

The research used mainly scientific methods of comparison, abstraction, statistical grouping, etc., the dynamics of basic, modern approaches to the implementation of innovative processes in industrial enterprises, the number of enterprises producing innovative products and the volume and cost of innovative products dynamics were analyzed. Conclusions and proposals have been developed on the widespread use of innovations and the improvement of the sector to further increase the competitiveness of the national economy.

Analysis and results

In the current context of deepening the process of liberalization of the economy, one of the urgent tasks is to increase the innovative activity of industrial enterprises, identify factors to increase its potential, develop the main directions of strengthening the organizational and legal framework. The "Strategy for Innovative Development of the Republic of Uzbekistan for 2019-2021 was adopted. A "road map" for the implementation of the strategy of innovative development of the Republic of Uzbekistan in 2019-2021 has been developed. One of the main directions of strategy is the creation of techno parks, free economic zones, free industrial zones and research and production clusters for the development and introduction of advanced technologies, production of domestic scientific products with foreign partners and its sale in foreign markets strengthening state support for the formation of joint organizations is one of the main directions of the Strategy.

As a result of economic reforms in Uzbekistan, real owners of industrial enterprises are emerging, but the study of innovation processes in enterprises or the widespread use of research is one of the most pressing issues. In particular, the Decree of the President of the Republic of Uzbekistan dated January 10, 2019 "On measures to radically improve the system of implementation of state policy in the field of economic development" is a very important document in terms of accelerating industrial development. By this Decree, the Ministry of Economy of the Republic of Uzbekistan was reorganized into the Ministry of Economy and Industry of the Republic of Uzbekistan. This ministry has been designated as the authorized state body for the development and implementation of state policy in the field of socio-economic and industrial development of the country, as well as the strategy of investment policy of the Republic of Uzbekistan [7].

One of the most important strategic issues facing the Uzbek economy is to increase the capacity of enterprises to apply innovations. This issue prevents the emergence of disruptions in the nodal directions of the formation of a low-industrial technological method of production and the way out of the technological crisis. Taking into account the need to develop the use of innovations in strengthening the competitiveness of all industries and export potential in the country, the formation of modern organizational, economic and management mechanisms for the implementation of this process plays a very important role in addressing these issues. In particular, the creation of investment and innovation departments in industrial enterprises, as well as the creation of all conditions for the development of its activities will bring great economic benefits.

In the world experience, there are three ways of innovative development strategy:

- Raw-based and often smaller rich countries applied strategy (UAE);
- Simulation-flexible or chasing strategy, including from abroad
  more emphasis is placed on the acquisition of patents and licenses (bright experience Japan);
- Innovative development of countries with sufficient financial resources to spend large sums on education, science and technology (USA, Germany, UK)

Researchers have identified different stages in the development of an organizaion's innovative development strategy [8]. The choice of the optimal strategy for innovation activity is an integral part of the effective management of this activity, which increases the share of expected income in production.

The choice of the effectiveness of the innovation strategy is directly related to the types of activities, such as conducting research, creating new products. Based on this strategy, strategic planning consists, first of all, in the rational allocation and efficient use of resources, that is, in the effective use of financial resources, manpower and technologies that make up the resources of the enterprise.

To effectively evaluate innovation activity, researchers A. Ovsyanko and V. Kuganovlar the following 4 groups of indicators that offer a balanced system [9]: innovative entrepreneurship; Hypersensitivity to the scientific progress; the organization or enterprise transformation that is taking place in the market and feel the sense of innovative actions.

Today, the principles of the innovative strategy for the rapid modernization, technical and technological re-equipment of production at industrial enterprises are:

- in achieving a strategic goal, the goal must be clearly and accurately expressed;
- it is necessary to conduct a clear analysis of external factors (existing opportunities, risks, strengths and weaknesses of competitors), and then choose an innovation strategy. Nowadays, it is necessary for enterprises to use modern innovation strategies, ie highly effective offensive, defensive, imitation (similar) strategies.

In an offensive strategy, the entrepreneur is one of the first to master and bring innovative products to market. In this way, the entrepreneur increases the competitiveness of his business and creates opportunities for him to earn a lot of money. Because it will not have a competitor in mastering products based on offensive strategy. Entrepreneurs working in these areas are more engaged in unpopular production on the basis of new approaches. This creates an environment that allows them to be among the first.

Based on an offensive strategy, other manufacturers can be seriously affected. Therefore, before applying innovations in the enterprise, it is possible to conduct "SWOT" analysis. The main task in the implementation of research and development work in the defense strategy is to accelerate the "cost-benefit" ratio, that is, consumers should know in advance the results of innovative activities. Such strategies are implemented by taking into account competitors or taking into account their behavior as well. However, all activities will be subordinated to the interests of the enterprise.

The imitation strategy is used by businesses that are active in using innovations. Such a strategy defines the main consumer feature of innovations brought about by small innovation firms with strong technological and market positions. Depending on the consumption, innovations will be implemented. It is necessary to choose strategic types on the basis of a thorough analysis of the type of purpose, economic potential and financial resources of the enterprise, external factors.

Defining the goal of innovative development - this goal can include: diversification, increase market share, increase the competitiveness of the organization, reduce costs and save resources, increase solvency, strengthen financial stability. The “Expert Assessment” method can be used to create a hierarchy of organizational goals [10]

Today, the most favorable countries in the world for an innovative environment are the United States, Finland and Ireland. We can also single out South Korea, China, Singapore and India among the countries that are rapidly developing innovative economies. The organizational, legal, economic, financial and intellectual resources required for the development of innovative economies in these countries are expanding to a level that complements each other.

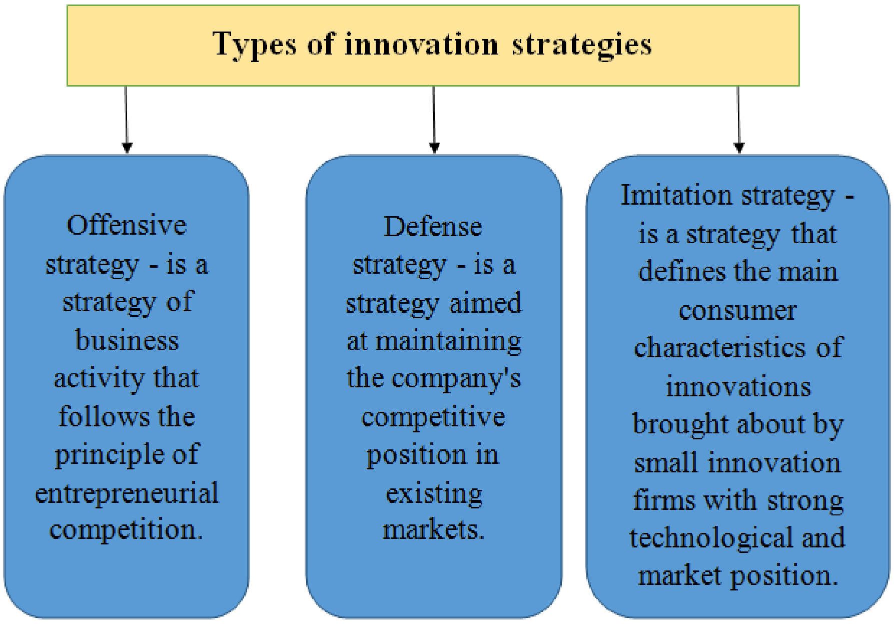

Figure 1 Modern strategy for implementing innovations in the enterprise

Choosing the right and wise strategy will increase the economic efficiency of the enterprise, while increasing the export potential and strengthening its competitiveness. Our country today needs to increase the level of application of innovations in enterprises.

To this end, measures aimed at introducing innovations in public policy are a priority. His motivation for this is well established. Most importantly, the legal, economic and organizational base in our country is constantly improving. Therefore, serious attention is paid to the motivation of innovative activities in enterprises. But in some enterprises it is still possible to talk about the problems of motivation of innovative activity. more precisely, the process of applying innovations to some enterprises is very slow.

Modernization of industrial enterprises on the basis of innovations means increasing the share of high-tech, high-capacity, low-energy products and services in the economy through the widespread application of innovations; it is possible to understand the process of taking it to a new level by making structural changes. The end result of modernization of the enterprise on the basis of innovations is innovation formation of the economy.

Currently, large Korean enterprises such as Posco Daewoo International, Yangguang Corporation, TTJ, Shindong operate in the Republic of Uzbekistan. In 2017, within the framework of trade and economic cooperation, $ 23.4 million worth of textiles and semi-finished products were produced in other industries. The products of the enterprises were exported to the South Korean market. This year, the supply of textile products to Lotte Marte has been successfully launched. Also, with the leaders of the largest Korean textile enterprises Posco Daewoo, Color Paradise, Solsang International Corp., RATEL E&T Co, Ltd, as well as Lotte Marte, the export of textile products in Uzbekistan in 2017-2018. contracts worth $ 70 million were signed. During the meeting with the International Trade Association of the Republic of Korea and the leadership of the National Electronic Trading Platform, mutual agreements on the sale of Uzbek textile products on the electronic trading platform KOREA Trade for 2017-2018 were signed. Now the enterprises of Uzbekistan in the Republic of Korea and the enterprises of Korea importing and transporting are provided with filling in customs documents in electronic form. With the largest Korean textile enterprises - Posco Daewoo, Color Paradise, Solsang International Corp., RATEL E&T Co., Ltd., Lotte Marte, in 2017-2018, Uzbekistan will export 70 million tons of textiles. Contracts in the amount of US dollars were signed [11].

It should be noted that the choice of the country's development strategy is very important in the formation of innovation policy. Based on this, two main models of state innovation policy can be distinguished:

1. The main goal was a priority for the countrym which was to stimulate the development of innovative directions, a model focused on the implementation of scientific and technical programs and projects of national importance.
2. The main goal is to master new technologies, economics a model aimed at disseminating scientific and technical knowledge, which is to expand the technological capabilities of industries and sectors [12].

Conclusions and suggestions

In short, given the need to develop the use of innovations to strengthen the competitiveness of all industries and export potential in the country, the formation of modern strategies, organizational, economic and management mechanisms for the implementation of this process plays a very important role in addressing these issues. In particular, the establishment of investment and innovation departments in industrial enterprises, as well as the creation of all conditions for the development of its activities will bring great economic benefits.

These activities trigger the following economic mechanisms of industrial enterprises, which play an important role in the sustainable development of the economy of the republic:

- Favorable opportunities are created for high modernization of existing technologies at enterprises;
- Manufacturing enterprises are highly economically developed;
- damage to the environment as a result of production activities of industrial enterprises is prevented or reduced;
- Increases the share of exports while reducing the share of imports of industrial sectors in the country. Therefore, the guarantee of the success and competitiveness of the enterprise is to conduct its activities in effective innovative strategic directions.

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Current Issues of Innovative Approach to History Education and Research

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ABSTRACT
The article analyzes current issues of innovative approach to history education and research. To describe the contribution of the Uzbeks to the great victory over the Nazi invaders in World War II on the basis of new data, the study of the heritage of the victims of repression and the devotion of the reformers in the field of enlightenment, the use of the method of oral history in the study of the history of the Motherland and the nation in historical research.

KEYWORDS: *Education, history, innovation, homeland, nation, oral history, repression, war, soviet system, reformers, ideology, science, historical research, a new approach*

1. INTRODUCTION

In the current context of globalization, the modern requirements for the teaching and research of history are becoming more unique. Now the historical works created during the Soviet regime, the information contained in them, do not meet today's requirements. After all, as a result of the class and ideological approach to the science and research of history that existed during the Soviet era, historical events were covered on the basis of a one-sided, Soviet state and Communist ideology. Even to this day, some information in the field of history has come without updating. In his Address to the Oliy Majlis, the President of the Republic of Uzbekistan Shavkat Mirziyoev identified the coverage of history as "………objective and free from various ideological views" as an important task in the teaching of history.

Until now, the contribution of Uzbeks to the great victory over Nazi invaders in World War II has not been sufficiently studied in history textbooks. This was due to the fact that not all archives could be used to collect data, and the limited access to foreign archives and scholars' data hindered the teaching of history and the conduct of scientific research. It is precisely this issue that has given rise to a wide range of innovations in the study of the subject, as a result of which access to the still closed archives and the collection of data, as well as the use of data from foreign archives and scientists. In his speech on the occasion of the 75th anniversary of the great victory over the Nazi invaders, the President of the Republic of Uzbekistan provided new information about the contribution of Uzbeks to the great victory over the Nazi invaders in World War II. This, in turn, serves as conceptual guidelines for an innovative approach to history education and research.

It was also not enough to study the heritage of the victims of repression, to write memoirs about them, and to acquaint the younger generation with their devotion. The decree of the President of the Republic of Uzbekistan Shavkat Mirziyoev "On further study of the heritage of the victims of repressions and additional measures to immortalize their memory" was a bold step to address the shortcomings in this area. It has paved the way for innovations in more in-depth teaching and research on the heritage of victims of repression.

Historical research has also not paid enough attention to the use of oral history, which is the historical source of the homeland and the nation. In order to build a democratic society, to become one of the leading countries in the world, every nation must, first of all, deeply understand its roots, know its history and draw the right conclusions from it. Historical memory, on the other hand, is an expression of the process of preserving and restoring the past of a particular nation or state. Oral memories broaden young people's understanding of the history of Uzbekistan, provide an opportunity to learn about the causes of historical events and increase their credibility. Therefore, the widespread use of oral history in research is also important as an innovative approach.

2. Methods:

An innovative approach to history education and research means covering topics that have been covered so far unilaterally, as well as new methods of analysis and research, abandoning the principle of coding historical research during the Soviet era. Analyzing the contribution of Uzbeks to the great victory over Nazi invaders in World War II through the analytical use of historical research created during the Soviet era, based on new data, study the legacy of victims of repression, tried to present new information about the devotees of the reformer movement and scientifically based views on the use of the method of oral history in the study of the history of the homeland and the nation in historical research on the basis of an innovative approach.

3. Results:

One of the key issues of an innovative approach to history education and research is to highlight the contribution of Uzbeks to the great victory over Nazi invaders in World War II on the basis of new data.

The President of the Republic of Uzbekistan Shavkat Mirziyoev initiated the beginning of a new era in the study of the contribution of the Uzbek people to the great victory over fascism in World War II. In his speeches, the head of state drew the attention of the general public to the fact that the contribution of the people of Uzbekistan to the great victory has not been fully studied. The scientific community, in particular, has encouraged historians to delve deeper into this important issue.

As a result of scientific research conducted on the initiative and conceptual proposals of President Shavkat Mirziyoev, very important new information has been sought about the participation of the people of Uzbekistan in World War II, about our heroic ancestors. The President of the Republic of Uzbekistan Shakvkat Mirziyoev spoke about the achievements and results of research in this area in his speech on may 9, 2020 on the occasion of the 75th anniversary of the great victory over fascism in World War II and the "Day of Remembrance and Honor". In these historic speeches, the head of state cited new information obtained as a result of scientific research, which reflects the contribution of the people of Uzbekistan to the great victory in World War II.

In our opinion, this important research information can be conveyed to the minds and hearts of students and young people using the following table:

№	Data available to date	New data identified as a result of research	Note
1	It was estimated that about 1.5 million Uzbeks took part in the war.	In fact, about 1,951,000 people were mobilized for the war.	The names and destinies of 451,000 of our compatriots are unknown
2	Information on how many of those deported to other countries as "ears" took part in World War II was incomplete.	It was revealed that more than 59,000 of our compatriots deported to other countries were sent to the army.	The fate of more than 59,000 of our compatriots remains unknown.
3	It was estimated that 396,000 Uzbeks had died in the war	In fact, more than 538,000 Uzbek citizens died in the war	The fate of more than 142,000 Uzbek citizens has been neglected
4	The number of Uzbek representatives awarded military orders and medals was estimated at 120,000	In fact, more than 200,000 of our soldiers and officers have been awarded orders and medals	The fame of more than 80,000 soldiers and officers was ignored.
5	It is stated that 280 Uzbeks were awarded the title of Hero of the Soviet Union	In fact, 301 Uzbeks were awarded the title of Hero of the Soviet Union	Information about the fame of 21 Uzbek Heroes of the Soviet Union was ignored
6	It was reported that more than 100 industrial enterprises had been relocated to Uzbekistan from the front lines.	In fact, 151 factories were evacuated from the front lines and Uzbekistan produced products for the needs of the front	The labor of the people of Uzbekistan was not taken into account in the reconstruction and commissioning of 51 factories relocated from the front lines
7	During the war, 1 million people were deported to Uzbekistan, 200,000 of whom were children.	In fact, 1.5 million people, including more than 250,000 children, have been evacuated to Uzbekistan	No information was provided about the 500,000 people and more than 50,000 children who were evacuated. The Uzbeks shared the last loaf of bread with them.

Incorporating this new information on the subject of "History of Uzbekistan" into the content of topics taught in educational institutions will serve to develop an innovative approach to science and education, as well as to instill in the younger generation a sense of patriotism and involvement in the country's destiny.

Another topic that requires an innovative approach in the teaching and research of history is the study of the legacy of those who were persecuted during the Soviet era and the provision of new information about the devotion of the reformers. The Decree of the President of the Republic of Uzbekistan Shavkat Mirziyoev "On further study of the heritage of victims of repression and additional measures to perpetuate their memory" paved the way for innovations in the deeper study of the heritage of victims of repression.

The textbooks of general secondary schools, and even the textbooks and manuals of higher education institutions, do not provide sufficient information about the victims of repression and their legacy. It is no secret that the scientific and spiritual heritage of the country's devotees such as Mahmudkhoja Behbudi, Cholpon, Abdulla Avloni, Usmon Nosir, Munnavvarqori Abdurashidkhonov, Ibrat, Tavallo, Elbek, Haji Muin, Botu has not been fully studied. Only Mahmudhoja Behbudi's work "Kasdi Safar" serves to provide students with new knowledge and expand their worldview. Insufficient examples of articles on important socio-cultural issues in history lessons in Reformer newspapers such as "Sadoy Turkistan", "Fergana", magazines "Country", "Truth", "Education and Teacher". In our opinion, the dissemination of articles from these newspapers and magazines, as well as information about their content to students will help to improve the quality and effectiveness of education. In this way we contribute to the study of the heritage of the victims of repression. As Academician Naim Karimov noted, ".....Only then will we fulfill our duty to the memory and history of our unfortunate ancestors".

The President of the Republic of Uzbekistan Shavkat Mirziyoev gave constructive instructions on conducting research on each of the 100,000 repressed people, going out to meet their relatives, restoring their names, publishing books about their work. Achieving these priorities requires the use of proven data on the heritage of victims of repression in both history education and research. The achievements of our country during the years of independence require it. As the President of the Republic of

Uzbekistan Shavkat Mirziyoev said, "The history of mankind shows that every nation has the right to build its life and future independently only if it is free and free". Therefore, the introduction of radical changes in the education and research of history, which is the spiritual foundation of our country's independence, on the basis of innovative approaches, remains one of the most pressing issues of our time.

We look at historical research as a source for studying the destiny of the homeland and the nation. The role of innovative approaches is also invaluable in creating a history rich in scientific evidence, ending a history free from objective and ideological views.

The Resolution "On measures to organize the activities of the memorial complex Victory Park" signed by the President of the Republic of Uzbekistan Shavkat Mirziyoev on September 9, 2020 also immortalizes the names of participants of World War II and our compatriots who worked selflessly behind the front, to seal their incomparable courage and tenacity in the pages of history, to educate the younger generation in the spirit of love and devotion to the Motherland, in order to scientifically substantiate the great contribution of the people of Uzbekistan to the victory, the following tasks have been set: to conduct targeted, fundamental and applied research and present them to the general public. Based on these goals, it is necessary to study the heritage of the victims of repression and the enlightenment, patriotic ideas of the Reformers on the basis of innovative approaches. In our opinion, the use of the method of oral history, which did not fully use its potential during the Soviet era, is also effective in implementing these goals and objectives. Thousands of people who have witnessed history will have the opportunity to learn about their destinies, ideas, thoughts and hopes through the memories of our compatriots.

Research in history usually relies more on archival materials and written sources. Archival materials and written sources are compared, analyzed and scientific conclusions are drawn. But we should also be well aware that not all documents on the topics studied in the archives are preserved. Oral history (oral history in Western sources) helps us. Oral history is directly related to the historical-biographical method of historical research, which is aimed at creating a psychological portrait of the past individual or social group, reconstructing, describing and analyzing living conditions.

The verbal tradition of passing on information about the past from generation to generation is characterized by the fact that in it a person expresses his memories of the past based on his own feelings created by the present. Oral history is an innovative area of historical research that has emerged as a result of past events not being adequately reflected in archival documents and written sources.

This is done by collecting the memories of the participants of the Second World War and our compatriots who worked behind the front lines, the heritage of the victims of repressions and the memory of the sacrifices of the Reformers. Because over time, the number of our compatriots who witnessed the hard times of World War II and witnessed the fate of the victims of repression and the Reformers is declining year by year.

It would be expedient to give examples from the memory of our compatriots in the textbooks of general secondary schools and higher education institutions. The study of the experience of Germany and Russia in the use of the oral history method in historical research also gives good results. This is because in these countries, the use of the oral history method in research is seen as an effective way to study history. The method of oral history can be widely used in historical research in the study of the history of the period of independence of Uzbekistan. After all, independent Uzbekistan also has its own oral history. In particular, the development of science and education in the new Uzbekistan will serve to lay a solid foundation for the Third Renaissance.

As the President of the Republic of Uzbekistan Shavkat Mirziyoev noted: "......Science, education and upbringing are the cornerstone of development and the force that makes a country strong and a nation great. Our future is closely connected with the bright future of our country, first of all, with the education system and the upbringing of our children".

Indeed, the role of modern methods in education and upbringing of the younger generation is invaluable. From this point of view, another advantage of using an innovative method called oral history is the efficiency of collecting and organizing oral history (memories) as a source of information. It will be possible to involve students and students in data collection. The involvement of the younger generation in the method of oral history not only strengthens in their minds and hearts a sense of involvement in the fate of the country, but also in them to study and appreciate the history of the Motherland with great responsibility, encourages pride in it and independent conclusions, interest in historical research.

4. Discussion:

In historical education and research, the contribution of the Uzbeks to the great victory over the Nazi invaders in World War II has been described mainly on the basis of paradigms established in Soviet historiography. Due to the fact that access to the archives required for the study of the subject was not allowed, it was not possible to fully cover this topic in history education. The legacy of the victims of repression, the enlightenment ideas of the Reformers, are also embodied in the whirlpool of class approaches.

In the process of historical research and in the teaching of history, little attention has been paid to the method of oral history. The article addresses these issues on the basis of credible evidence. The role of textbooks in history education is invaluable. Academician Anatoly Sagdullaev writes that the content of the textbook "Stories from History" for 5th grade teachers does not correspond to his name". Because now the data of the oral history method is scarce. The article highlights the issues of innovative approaches to history education and research, as well as its role in improving the quality and effectiveness of history education and research. Well-known educators R.Ishmuhamedov and M.Yuldashev according to, "In order to solve the problems facing the education system in the current innovative processes, we need individuals who are able to assimilate new information and evaluate the knowledge they have acquired, make the necessary decisions, and think independently and freely". We also agreed with these views on the topical issues of an innovative approach to history education and research.

5. Conclusion:

Innovative approaches to the teaching and research of history serve as one of the important sources in creating a solid foundation of the Third Renaissance in our country. First of all, everyone should understand the high status of a new citizen of Uzbekistan and consciously strive to be worthy of it.

In these processes, it is also effective to be aware of the history of the homeland, especially the historical data presented on the basis of innovative approaches. The contribution of Uzbeks to the great victory over Nazi invaders in World War II in secondary schools and universities, the study of the heritage of the victims of repression and the devotion of the Reformers on the basis of innovative approaches, the use of the method of oral history in historical research will undoubtedly raise the objective approach to our history to a new level. As the President of the Republic of Uzbekistan Shavkat Mirziyoev noted, the inspiring idea "From national revival to national uplift" is penetrating deeper and deeper into our lives. On this basis, we are taking important steps to radically improve the lives of our people, ensure human rights and freedoms, the rule of law and social justice, and innovative development".

If every citizen of the new Uzbekistan, who is taking important steps towards innovative development, learns the history of our country free from objective and ideological views through scientific research based on innovative approaches and effectively uses the results of such research in history education, our good intentions and great goals will lay a solid foundation for the Third Renaissance. would have made a worthy contribution.

"Today, when we talk about our country in the world, the phrase "New Uzbekistan" is used. This is a recognition of the fact that in recent years we have entered a completely new stage of development, of the tremendous achievements we have achieved", said the President of the Republic of Uzbekistan Shavkat Mirziyoev. An innovative approach to history education and research also plays an important role in strengthening students' knowledge of the New Uzbekistan.

Introducing students and young people to new research-based information on the "History of Uzbekistan" to strengthen the integration of science and education, in addition to serving the effective use of cognitive research in science and education, it expands the opportunities for training competitive personnel in our country in accordance with world standards.

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Features of Chronic Pain Syndrome in Radiculopathies

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ABSTRACT
The article deals with the features of chronic pain syndrome in radiculopathies. Causes of radiculopathy is a disease of the peripheral nervous system of a person, which occurs as a result of damage, inflammation or pinching of the roots of the spinal nerves. Radiculopathy symptoms, diagnosis and how radiculopathy can be treated.

KEYWORDS: Radiculopathy, syndrome, diagnosis, osteochondrosis, pathology

INTRODUCTION

Against the background of lumbar osteochondrosis, a disease such as radiculopathy of the lumbosacral spine very often develops. This is a clinical syndrome that occurs due to compression and damage to the nerve roots. Radiculitis is synonymous with radiculopathy.

Radiculopathy is a disease of the peripheral nervous system of a person, which occurs as a result of damage, inflammation or pinching of the roots of the spinal nerves. This is a widespread disease, more than 10% of the population of our planet is over 40-50 years old, and in the last decade sciatica has become younger, occurs in the young age group from 25 to 35 years old, people involved in professional sports, as well as those who are while sitting at a computer or driving a car.

Causes of radiculopathy

The cause of the development of radiculopathy is the pathological processes that occur in the spine, namely:

- Degenerative-dystrophic processes - osteochondrosis and its complications: protrusion and herniated intervertebral discs.
- Malformations of the musculoskeletal system, accompanied by changes in muscle tone.
- Posture disorders, curvature of the spine - scoliosis.
- Incorrect distribution of physical loads on the spinal column during professional human activities (when driving a car, for office workers and loaders - with a long stay in one position, loaders).
- A sedentary lifestyle, in which blood supply to the muscles of the lumbar region is gradually increasing.
- Improper drinking regime throughout the day and for several months.
- Deficiency of vitamins and minerals leads to osteoporosis and trophic lesions of the nerve fiber.
- Tuberculosis, osteomyelitis, chronic syphilis and other types of spinal cord infections.
- Regular injuries of the vertebrae and surrounding soft tissues (impacts, sharp twisting, compression when jumping, sprains of the ligamentous apparatus).
- Overweight with obesity 1-2 degrees and the presence of bad habits such as smoking, abuse of tea, coffee and alcoholic beverages.

Symptoms of radiculopathy

The first manifestation and the main permanent symptoms of radiculopathy of the lumbosacral spine are pain, impaired sensitivity and muscle weakness.

The affected area corresponds to the innervation area. Depending on the affected area, pain can be observed in the lumbar and gluteal regions, posterolateral and front of the thigh, along the antero-outer surface of the lower leg, on the back of the foot, big toe, in the gastrocnemius muscle, in the area of the external ankle and heel.

Lumbosacral radiculopathy is often chronic, with acute relapses. Lumbosacral radiculopathy is characterized by an increase in pain with a sharp change in the body from a horizontal position to a vertical one or vice versa, as well as when engaging in an active lifestyle (sports, walks, fitness classes).

Exacerbation of pain syndrome in radiculopathy of the lumbosacral region is noted when the inter-root nerve is compressed by an intervertebral hernia.

According to the types of radiculopathy of the lumbosacral spine, there are:

- Lumbago (lumbodynia) is an acute pain in the lower back during abrupt physical activity, as well as provoked by overheating or hypothermia of the body. The painful attack itself can last in different ways: from several minutes to several hours or even days. The main reason for this type of radiculopathy is overstrain of the muscles of the lumbar region, intervertebral hernias or displacement of the vertebrae relative to each other.
- Sciatica (sciatica) - in this type of radiculopathy, pain is localized in the buttock, on the back of the thigh and lower leg, and can reach the foot. Sometimes, in addition to pain, muscle weakness is noted. This is due to damage or irritation of the sciatic nerve, the largest nerve in the body. Pain in sciatica - shooting, like an electric shock, burning, tingling, "chills" and numbness are also possible. Pain sensations of varying degrees of intensity are possible: from mild to very intense, such that the patient cannot sleep, sit, stand, walk, bend over or turn.
- Lumboischialgia - back pain radiating to the leg or legs. With this type of radiculopathy, pain spreads mainly along the buttock and along the posterior outer surface of the leg, not reaching the toes, most often it is aching, burning, growing pain.

Diagnostics

For the diagnosis of radiculopathy, the presence of tension symptoms is important. For example, the Lasegue symptom is characteristic - when you try to raise a straight leg while lying on your back, lower back pain increases.

An MRI or CT scan of the lumbosacral spine is important for making the correct diagnosis, because only these studies will allow the attending physician to detect the presence of diseases such as intervertebral hernias or other diseases of the spine (spondylitis, compression fractures, neoplasms).

Treatment of radiculopathy

The modern approach to the treatment of acute and chronic pain in radiculopathy of the lumbosacral spine is to use non-steroidal anti-inflammatory drugs and muscle relaxants. The mechanism of their action: reduction of inflammation, pain intensity, removal of muscle spasm. Also, during the period of remission of the disease, physiotherapeutic treatment is carried out (electrophoresis, amplipulse, darsonvalization).

Radiculopathy resulting from pathological changes in the spine is one of the most severe forms of neurological manifestations of vertebrogenic pathology of the peripheral nervous system. In the case of compression of the spinal root, the duration of disability is significantly increased, and expensive examination and treatment are required. With an inadequate assessment of the existing symptoms of degeneration, permanent disability with a significant neurological deficit can occur. With a high prevalence of low back pain, symptoms of spinal root compression are observed in 3-5% of people in the population. The peak incidence in men is at the age of 40–50 years, in women - 50–60 years [4–7].

The leading mechanism of the pathogenesis of spondylogenicradiculo- and myelopathies is the compression effect on the arterial and venous vessels of the spinal root. Coarser compression leads to mechanical damage to the fibers. This occurs when space is limited at the site of the passage of the spinal root in the intervertebral foramen - at the level of the lateral pocket (in most cases, with a herniated disc). A stenosing effect can also be observed with calcification of the ligamentous apparatus with the formation of osteophytes, hypertrophy of the articular facets, or capsular segmental processes. A combination of these changes is possible, especially with a significant decrease in the height of the intervertebral discs [7, 8].

Radiculopathy is a medical, social and economic problem that not only reduces the quality of life, activity and performance, but also causes disability of patients. The urgency of this problem is due to the prevalence and duration of the disease. The term "radiculopathy" comes from the Latin words "radicula" and "pathia", which means a lesion of the spinal nerve. This is not an independent disease of the peripheral nervous system, but a complex of symptoms of damage to the spinal nerves, a relatively common pathological condition, typical for an average of 10-15% of people over the age of 45. According to statistics, there is no gender difference - men and women get sick equally.

The spinal nerve is formed by the fusion of the anterior axons of peripheral motor neurons that exit through the anterior lateral cleft of the spinal cord, the number of which is equal to the number of spinal cord segments, with the sensory neurons of the spinal cord. After fusion, the spinal nerve (SMN) includes motor, sensory and autonomic fibers and exits the spinal canal through the spinal foramen.

The roots of the spinal cord lie in the subarachnoid space, filled with cerebrospinal fluid, between the arachnoid and pia mater, the latter of which is tightly attached to the spinal cord and fuses with it. SMN can be damaged by osteophyte, protrusion, hernia, surrounding tissues, such as ligaments, muscles, in rare cases by a tumor and other mechanical factors. For the development of radiculopathy, a provoking factor is needed, which can be lifting of weight, violation of a motor stereotype, hypothermia, stress, prolonged stay in a fixed, especially vertical, posture, bending, especially forward [1].

Pain can be caused by irritation or compression of one or, less commonly, several spinal nerves. The most common risk factor for radiculopathy is herniated disc. Hernias at the cervical and lumbar level are quite common. The intervertebral disc undergoes dehydration early enough, cracks, the outer wall of the annulus fibrosus becomes thinner, stretches, the nucleus pulposus shifts from the center to the periphery, which leads to its bulging. This process can lead to localized pain and moderate muscle tension. With the further process, the bulging increases by several millimeters and a protrusion forms. Clinically, this is manifested not only by local pain, but also by a disorder of sensitivity, asymmetry of tendon reflexes. After rupture of the posterior longitudinal ligament, a hernia or extrusion is formed, which, depending on the localization, can compress the SMN. The median hernia practically does not put pressure on the root, paramedian and foraminal (lateral) hernias are significant. Clinically, this is manifested by a pronounced pain syndrome, sensory and motor disorders in the area of localization of the corresponding root. However, the size of the hernia and the severity of the pain syndrome do not have a strict interdependence [1, 2].

At the moment, there is no single point of view regarding the mechanism of development of compression radiculopathy. The direct effect of the compressing agent on the spinal root (SMC), artery or vein, causing the development of an inflammatory reaction with the release of prostaglandin E2, interleukins, tumor necrosis factor, nitric oxide and other substances, is considered as a triggering factor. Venous discirculatory disorders develop. The pathogenesis of pain syndrome is quite complicated, it is not only mechanical compression of the MCS, but also ischemic, since the arteries and veins of the MCS are subjected to compression. Pain in radiculopathy manifests itself sharply, intensely, with lumbago in the extremities and even in the head like cervicocranialgia.

The pain syndrome is of a mixed nature: nociceptive as a result of irritation of peripheral nociceptors of the surrounding tissues, neuropathic - due to damage to the spinal root, psychogenic - with chronic pain. The role of inflammation, reflex ischemia of the root, hemorrhage in the root is also not excluded [3]. Violation of venous blood flow in neurological manifestations of radiculopathy plays a significant role. Even small disc prolapses can cause complete epidural vein block [4]. Indirect confirmation of these data was obtained when examining 9640 patients with back pain or lumboischialgia: 13 (0.13%) patients had radicular symptoms caused not by a herniated disc or stenosis of the spinal canal, but by occlusion of the inferior vena cava leading to the expansion of the epidural veins; 12 of them managed to restore blood flow through the inferior vena cava, which led to the disappearance of radicular symptoms [5, 6].

However, the theory of compression impact cannot explain all cases of radiculopathy with disc herniation, since sometimes the severity of the symptoms of neurological deficit does not correspond to the size of the hernial protrusion. An inflammatory theory in the genesis of radiculopathy caused by herniated discs has found numerous confirmations. It is believed that inflammation can be either autoimmune, triggered by antigens of the nucleus pulposus, or caused by the release of inflammatory mediators directly from the nucleus pulposus. In this case, the mediators of inflammation can be phospholipase A2, cytokines, especially interleukin 1, 6, prostaglandin E2, nitric oxide, immunoglobulins. Phospholipase A2 regulates the release of arachidonic acid from cell membranes and has a direct damaging effect on cell membranes. With a herniated disc, stagnation and thrombosis in local venous vessels with thickening of the basement membrane and fibrosis of the endothelium are found, accompanying severe perineural and endoneural fibrosis and atrophy without signs of inflammation. These pathological deviations occur due to impaired venous outflow. Edema and root damage increase with increasing speed and degree of compression, and sensory fibers may be more vulnerable than motor fibers [7, 8].

Conservative therapy is ineffective only in a small group of patients; in this case, surgical treatment is required [9]. These findings are supported by neurophysiological observations. In a chronic process, there is demyelination of the SMC.

Herniation at several levels is rare, therefore biradicular syndrome in hernias is explained mainly by the compression of two roots at the same time by large hernias. Reactive adhesion phenomena may develop in the roots, epidural tissue, the membranes of the spinal cord, which may be associated with autoimmune inflammation in a herniated disc.

Cervical, thoracic and lumbar radiculopathy is distinguished depending on the level of the lesion - they are equally characterized by certain symptoms:
1. pain of varying intensity and frequency, radiating along the course of the SMN;
2. Violation of sensitivity. With prolonged lesion of SMN, there is a decrease in tone in the surrounding tissues, hypo- or muscle atrophy;
3. With a pronounced lesion of the SMN, peripheral paresis develops.

Conclusion

The currently available evidence of the high efficacy of pregabalin for the treatment of NBS, both in monotherapy and in combination with other drugs, makes it possible to use it as a drug of choice or a first-line agent, including in radiculopathy. The combination of pregabalin with other drugs, in particular NSAIDs, contributes to more effective relief of pain syndrome, reduces the severity of anxiety-depressive disorders, and also improves the quality of life of patients with radiculopathy.

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Medical and Social Rehabilitation of Patients with Vertogenic Cingulate Radiculopathy

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ABSTRACT
The review demonstrates the urgency of the problem of lumbosacral radiculopathy. Epidemiological data, causes, mechanisms of development, clinical picture and methods of pharmacotherapy of neuropathic pain in radiculopathy are presented. An algorithm for instrumental diagnostics and treatment is described. Its clinical efficacy in neuropathic pain syndrome has been studied in a number of clinical randomized trials that demonstrated its analgesic effect, as well as the ability to cause regression of concomitant psychosomatic disorders and insomnia in patients with lumbosacral radiculopathy.

KEYWORDS: *Radiculopathy, syndrome, mechanism, vertebral artery, pain*

INTRODUCTION

An increase in the life expectancy of the population of countries with developed economies, the accumulation of elderly and senile people in the population, physical inactivity are only part of the reasons for the formation of a group of people with chronic pain syndrome, a component of which is neuropathic pain.

The most common type of neuropathic pain syndrome (NBS) is chronic back pain, which occurs in 20-30% of all cases of chronic pain. The pathophysiology of back pain includes a complex of nociceptive and neuropathic mechanisms caused by damage to nerve fibers by degenerative processes in the spine. The destruction of nociceptive fibers of the nerve root by structures of a degenerating disc (local neuropathic pain), mechanical compression or narrowing of the lumen of the spinal canal (mechanical neuropathic radicular pain) or under the influence of inflammatory mediators in systemic diseases without any mechanical compression is the main cause of neuropathic pain in the disease.

The problem becomes even more urgent due to the low efficiency of treatment, despite the abundance of modern pharmacological agents. The disease is chronic, progressive and negatively affects all areas of the patient's life, including sleep, mood, self-esteem, performance, interpersonal relationships, and significantly impairs the quality of life, requiring a significant increase in health care costs.

This review summarizes the current trends in the treatment of NBS of radiculogenic origin, and also analyzes the efficacy of pregabalin, a drug of the latest generation of gabapentinoids.

Evaluation of a patient with radiculopathy includes.

1. a thorough collection of anamnesis of the disease. To exclude the secondary nature of pain, a general physical examination and examination is also required;
2. determination of the localization and provoking factor of pain;
3. characteristics of pain:
   - beginning of appearance,
   - provoking factor,
   - duration,
   - intensity,
   - the nature of the pain.
4. determination of positive and negative sensory disorders: paresthesia (non-painful spontaneous sensations - creeping creeps, etc.), dysesthesia (unpleasant spontaneous or induced sensations), hyperalgesia (increased sensation of pain stimulus) and allodynia (pain irritant);
5. neurological examination, which is carried out according to the generally accepted method and includes:
   - study of cranial innervation,
   - research of motor and sensory spheres;
6. manual diagnostics, revealing functional disorders in the vertebral motor segments, in order to determine the degree of joint mobility of both the craniovertebral junction and the entire spine as a whole;
7. study of the muscle sphere and motor stereotype, muscle spasm and local muscle hypertonicity (trigger points);
8. determination of the characteristics of the psychoemotional state (especially after trauma).

Instrumental diagnostics

To clarify the state of the bone apparatus, an instrumental examination is necessary:

1. Functional radiography (radiation diagnostics) - pictures in frontal and lateral projections in a sitting position, as well as in flexion and extension of the spine.

In most patients with cervical dorsopathy, X-ray examination of the spine reveals degenerative changes in the vertebral motor segments, which are mainly found at the level of CV – CVI, CVI – CVII and CIV – CV. The first spondylographic signs of disc dystrophy are the straightening of the cervical lordosis and the formation of local kyphosis at the level of the affected spinal motion segment. The earliest signs of degenerative changes are uncovertebral arthrosis mainly in the CIV – CV, CV – CVI and CIII – CIV segments. Spondyloarthrosis of the intervertebral joints is radiologically characterized by narrowing and deformation of the joint space, subchondral sclerosis of the articulating surfaces of the articular processes, and marginal bone growths. With the direction of the marginal bone growths anteriorly, their effect on the vertebral arteries is noted. To identify them, posterior images are taken through an open mouth. In arthrosis of the C0 – CI and CI – CII joints, asymmetry of the craniovertebral joints, as well as the CI – CII articular spaces and the crevices of the Cruvellier dentate process, is noted. Arthrosis in the area of these joints is a common cause of compression of the vertebral artery.

Some patients have hypermobility (instability), which is manifested by pseudospondylolisthesis (anterior or, more often, posterior) and excessive movement in the spinal motion segment. The evidence of long-term hypermobility is the slope of the anterior-upper corner of the body of the underlying vertebra and neoarthrosis in the area of contact between the articular process and the arch.

Subluxation of the joint according to Kovacs is characterized on a lateral photograph of the neck by retrospondylolisthesis of the body, a violation of the relationship between the articular processes in the spinal motion segment (deviation of the posterior superior articular process, sliding of the lower downward), as well as axial opening of the articular gap, superposition of the shadow of the underlying upper body of the articular process on the shadow overlying vertebra. All this contributes to the trauma of the vertebral artery when the articular process is close to the deep part of the transverse process.

Neuroimaging study: magnetic resonance imaging (MRI) of the spine, which is the most modern, safe method, is distinguished by the absence of restrictions in the study plane and high image accuracy, which allows you to see in detail on the display screen, and then on X-ray film, sections of the spinal column and spinal cord.

In chronic radiculopathy, demyelination and degeneration of the spinal nerve develop, leading to hypotrophy or atrophy of the innervated muscles and loss of tendon reflexes. The clinical picture depends on the localization of the root involved in the process. The upper cervical roots (CII – CIV), in contrast to the lower ones, are very short, therefore, they are squeezed mainly by an osteophyte or a pathologically altered ligament. Clinically, depending on the affected root, pain and sensory disturbances are noted in the occipital and temporal regions, in the neck or shoulder girdle. There are practically no motor disorders in the upper cervical region. The lower roots are more often affected, since it is the lower part of the cervical spine that experiences a very large load, which creates the preconditions for the formation of intervertebral hernias. Pain and sensory disturbances spread with radiculopathy of the CV root in the shoulder girdle and along the front surface of the proximal part of the shoulder, with radiculopathy of the CVI root - from the neck and scapula to the shoulder girdle along the outer edge of the shoulder, the posterolateral surface of the forearm and lateral surface of the hand to the first or second fingers, with radiculopathy of the CVII root - along the back surface of the forearm to the third and fourth fingers, with radiculopathy CVIII root - along the medial surface of the shoulder, forearm and hand to the third, fourth or fifth fingers. In the thoracic region, pain can radiate along the intercostal nerves.

In the lumbar region, as well as in the cervical region, the lower roots are often affected. With the involvement of the three upper lumbar roots (LI, LII, LIII), pain, paresthesias within the inner and front surfaces of the thigh, groin, lower abdomen, pubis in the external genitalia are noted. With LIV lesion, pain and sensory disturbance are localized along the outer anterior thighs, the anterior surface of the knee joint, and the anterior inner surface of the lower leg. With the defeat of the LV root, pain in the lower back with irradiation to the big toe, decreased sensitivity along the outer surface of the thigh, lower leg, the middle of the back of the foot, in the big toe, and paresis of the extensor of the big toe are noted. Compression of the S1 root leads to pain, decreased sensitivity in the area of the outer surface of the thigh, lower leg and foot to the little toe and fourth toe, loss of the plantar and Achilles reflexes.

Treatment algorithm
1. relief of pain;
2. removal of the inflammatory process;
3. strengthening of metabolic processes;
4. prevention of chronic pain syndrome;
5. carrying out a full course of rehabilitation measures;
6. prevention of relapse of exacerbations.

Since radiculopathy has a nociceptive component of pain, prescription of non-steroidal anti-inflammatory drugs (NSAIDs) and muscle relaxants, which are widely used in clinical practice, is pathogenetically justified. Taking into account the presence of a neuropathic component of pain in radiculopathy, symptom-modifying drugs with delayed action, anticonvulsants or antidepressants from the group of selective inhibitors of serotonin and norepinephrine reuptake are also recommended [10, 11].

When prescribing NSAIDs, there is a high risk of developing side symptoms, and primarily gastropathy. Patients at risk receive omeprazole. In order to identify safe ways to solve this problem, numerous clinical studies have been carried out both in Russia and abroad. It has been proven that in order to reduce the dose and duration of therapy with NSAIDs and anticonvulsants, it is justified to include in the course of treatment B vitamins, which are called neurotropic ones, since they regulate the metabolism of the main neurotransmitters and amino acids, stimulate protein synthesis and create conditions for more successful nerve regeneration.

Since the pathogenetic mechanisms are edema, inflammation, ischemia, root demyelination and degeneration, the drug L-lysine escinate is recommended for decongestant purposes (active ingredient: escinalysinate, 1 ml of concentrated solution contains 1 mg of L-lysine escinate). The drug is produced in the form of a concentrated solution intended for intravenous administration in ampoules of 5 ml No. 10. L-lysine escinate is able to suppress the activity of lysosomal hydrolases, which leads to a decrease in the rate of degradation of mucopolysaccharides in the connective tissue of the walls of small capillaries. L-lysine escinate has an analgesic effect, has a decongestant (antiexudative) effect. Against the background of treatment, the tone of the veins increases, the vascular-tissue permeability decreases, which helps to reduce edema. The daily dose of the drug for adults is 5-10 ml, which are diluted in 50-100 ml of sodium chloride, 0.9% solution for injection, and administered intravenously. In the absence of the possibility of drip introduction of L-lysine, escinat can be administered intravenously in a stream very slowly, 5 ml per 15 ml of saline. The maximum daily dose for adults is 20 ml. The duration of the drug use is 2–8 days, depending on the effectiveness of therapy.

Non-drug therapy includes:
- physiotherapy - hardware procedures based on the use of physical factors for treatment and improvement: infrared radiation, ultrasound, magnetic fields, light, heat, etc .;
- acupuncture (acupuncture, reflexology) - the oldest practice of point impact on the human body in order to relieve symptoms and, ideally, eliminate the causes of the disease;
- massage is a gentle but highly effective health-improving procedure that increases muscle and skin tone, improves blood flow and thus helps the body to recover.

Conclusion

The currently available evidence of the high efficacy of pregabalin for the treatment of NBS, both in monotherapy and in combination with other drugs, allows the use of non-drug therapy, including for radiculopathy. The combination of pregabalin with other drugs, in particular NSAIDs, contributes to more effective relief of pain syndrome, reduces the severity of anxiety-depressive disorders, and also improves the quality of life of patients with radiculopathy.

Thus, the development of pathogenetically grounded principles of treatment for radiculopathy is a complex problem, the solution of which can be achieved by attracting a wide range of specialists and an integrated approach to therapeutic measures, including not only pharmacotherapy, but also psychotherapy, as well as an orthopedic regimen.

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Theoretical Basis, Methods and Methods of Formation and Determination of Potential in the Educational System

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ABSTRACT
Information Technology to adequately study and formulate their thinking skills in this field. Because, as the day goes by, Information Systems, which are fundamental for information technology, are constantly developing and being enriched with various modes, technologies. This requires repeated study and a certain amount of time, if the potential for knowledge and skills learned in the school is not formed.

KEYWORDS: *information technology, virtual laboratory, workshop, modeling packages, innovation, information, educational and methodical material, learning tools, multimedia*

Аннотация
Информационные технологии позволяют адекватно изучить и сформулировать свои навыки мышления в этой области. Потому что с каждым днем информационные системы, которые являются фундаментальными для информационных технологий, постоянно развиваются и обогащаются различными способами, технологиями. Это требует многократного изучения и определенного количества времени, если потенциал знаний и умений, полученных в школе, не сформирован.

Ключевые слова:
информационные технологии, виртуальная лаборатория, практикум, модельные пакеты, инновация, информация, учебно-методические материалы, средства обучения, мультимедиа.

Annotatsiya:
Axborottexnologiyalaribusohadao'zfikrlashqobiliyatlariniyet arlidarajadao'rganishvashakllantirish. Chunki, kunsayinaxborottexnologiyalariuchunasosiybo'lganaxborotti zimlaridoimorivojlanib, turlirejimlar, texnologiyalarbilanboyibbormoqda. Buninguchunmaktabdao'rganilganbilimvamalakalarsalohiya tishakllanmaganbo'lsa,takrorano'rganishvama'lumvaqttalab etiladi.

Kalitso'zlar:
axborottexnologiyalari, virtual laboratoriya, seminar, modellashtirishpaketlari, innovatsiya, axborot, o'quv-uslubiy material, o'quvvositalari, multimedia.

I. Introduction

One of the main factors of the educational system and process is the expression from which the reader develops their thinking along with providing fundamental knowledge to the youth. Today, in the world, we can meet a huge number of, sinful resources on the formation and identification of potential in a classified form. For example, testometrika.com, globalintelligentsia.com web portals can be accessed. These portals contain 11 types of testing issues, the most common method of testing is IQ testing. IQ (intelligence quotient), which means the stage of intelligence, the factor of the development of the mind, or intellektual potential[5].The study of the issues of radical reform of the education system, especially effective organization of educational processes in secondary schools and expansion of thinking skills of students in our republic are considered one of the important issues. Also in the world, knowledge of the IT industry, the electronic government system, the computer systems and services of society, the full-blooded and rational use of State interactive services are considered important indicators. For this purpose, it is one of the pressing issues in our republic that awaits the solution of the general secondary school students in the education of Information Technology to adequately study and formulate their thinking skills in this field. Because, as the day goes by, Information Systems, which are fundamental for information technology, are constantly developing and being enriched with various modes, technologies. This requires repeated study and a certain amount of time, if the potential for knowledge and skills learned in the school is not formed.

In information technology, there are a number of net methods for performing a certain specific task. For example, there are 7 different ways to launch a simple text editor. The question arises, Should students be taught these 7 methods in Information Technology Education in general secondary education system? Or do you want to launch a text editor with intellektual potential based on a specific knowledge and skills? Of course, the teaching of 7 methods in this matter limits the knowledge and opportunity of the student, and when changes in the Information System occur, it seems that knowledge and skills are not enough. If, on the basis of a certain knowledge and skill, the student is taught to perform this task by employing intellektual capacity, then in the future he will never stop.

One of the most complex processes in the educational system is the lesson. If we compare the lesson to the sun, the planets around it-these are the methods and means of teaching[3]. Similarly, there are also subjects and objects of the lesson, namely participants, tools, methods and methods of teaching, forms of teaching. Information Technology Education in general secondary education, that is, the subject of Computer Science and information technology, as well as other subjects, we cite the above-mentioned elements.

Computer Engineering is introduced into the spectrum of participants in the subject of Informatics and Information Technology, which means that there is an effect of the element in the subject. Computer technology can also be used in other subjects, but in it this technique enters the spectrum of tools. In this regard, the subject of Information Technology Education in secondary schools in general should take into account the position of computer technology in the teaching of Informatics and Information Technology. This can be the most necessary participant in the formation and determination of the intellektual potential of the developing learner.

II. Literature review

In the educational system, a lot of scientific and methodological research is being carried out on the formation of potential. These are done mainly due to the fact that each school subject and each subject has its own characteristics. The subjects and objects of the above lesson, that is, participants, supplies, as well as affect the choice of methods and methods.

The theory of Kettell-Horn-Carol is widely used in the world and is one of its own theories for the emergence of the psychosocial andididor of young people, the formation ofualual potential[7]. This theory gives a broader interpretation of the psychological theory of the structure of cognitive abilities of students, and at the same time it is aimed at developing the intellektual potential of the learner by combining the theory of three major theorists Raymond Kettell, John Horn and John Carols[10]. This theory has been proven to be important for people engaged in self-education based on the results of numerous methodological studies over the last years of the 20th century[8].

Kettell-Horn-Carol's theory is two, Kettell-Horn's theory of flexibility and cognitive detection intelligence is Carol's theory of three levels of Cognitive Ability[2]. Both theories have close similarities, which helped to combine these theories among themselves. Method for the formation of multi-intellectual capacity based on the analysis of scientific and applied works, the definition of flexibility and knowledge intellekt is divided into:

Flexible intelligence includes the following abilities and qualities:

1. To learn.
2. Mavhum (abstract) thinking ability.
3. Ability to interact, find and identify laws, systematize information obtained, analyze and process new knowledge.
4. Ability to adapt to new conditions, flexibility.
5. Deductive and inductive thinking ability.
6. Ability to solve problems encountered for the first time
7. Use new approaches to solving problems that were previously obvious.
8. Ability to remember. In most cases, flexibility is important for Intel's level of development.

The period of development of most of these skills and qualities rises to the highest peak of school age in general secondary education. After that, its level begins to gradually decrease[5].

Intelligence of knowledge detection (BAI) is a method and method of determining the previously accumulated knowledge and skills, ability to apply. BAI is responsible for the knowledge and skills that remain in the long-term memory that engages flexible intelligence and uses it in practice. It includes the following:

1. Words related to the sphere (dictionary).
2. Ability to solve problems by methods previously known and tested in the experiment.
3. The basis of general knowledge (interdependence of subjects and fundamental subjects), knowledge of the field.

According to scientists, the level of BAI in different and different areas is different. For example, taking the use of Information Technology, a programmer, a system administrator, can be useful.

Bai's commitment to flexibility is that the faster it learns, the more knowledge and knowledge it can be acquired, the more knowledge capacity andualual capacity it will have.

The Nobel Prize winner, James Heckman, professor at the University of Chicago (James Heckman), argues that economic systems are related to human abilities and skills (human skills) [4]. According to the scientist, any large economy is based on the development of skills, knowledge, abilities and skills of citizens. According to the scientist's account, at least 13 percent of the costs incurred for early education will “return to society”in the future. The development of social skills in children from an early age along with cognitive abilities leads to the emergence of citizens who will benefit society in the future.

According to Uzbek scientists, the socio-psychological factors of the formation of independent thinking, creative abilities in the students form and determine the peculiarities of intellectual potential through independent thinking, formation of creative thinking through interactive educational methods that motivate independent thinking, as well as cognitive approaches in the educational process[3]. Based on the above, it is necessary to pay great attention to cognitive abilities in secondary schools in general. Especially today, within the framework of e-government, every graduate of the school is in a certain sense a requirement for a period of determining flexibility and knowledge within the framework of Information Technology Education, focusing on the content and process of education on cognitive abilities.

Igor Boltovnin believes that the levels of cognitive abilities are different, and Carroll put forward the idea of three cognitive stages [2]:

III. Analysis

First level: limited abilities. This is the exact capabilities of the cognitive phase and its basis and the main component.

1. Speed of speech, knowledge of grammar and vocabulary, ability to learn foreign languages, ability to listen and communicate.
2. The speed of reading, the ability to understand and master what has been read, the speed of writing and the ability to decrypt.
3. Mathematical knowledge.

4. The ability to deduce and inductively think, to correctly build a logical sequence of thoughts.
5. Speed of memory and the ability to remember.
6. Speed of thinking and finding quick rules, originality
7. Ability to recall heard information, ability to recognize and localize algorithm execution for an event, event.
8. Ability to see visually, the level of development of visual memory, the ability to think and think based on visual objects.

Second level: extensive skills. These include:
1. Cognitive achievements: prior experience, ability to think based on results, ability to practice prior knowledge.
2. Ability to read and write.
3. Ability to master quantitative concepts and perform actions with numbers
4. Ability to explain.
5. Fast memory and long storage life of esga.
6. Long-term memory and the ability to retrieve information from it.
7. Ability to process, understand and perceive in the process of hearing.
8. Visual processing capability.
9. Ability to perform some tasks automatically.

Third level:
general intelligence. General intellektual ability is the level of interrelation between broad abilities.A lot of scientific and methodological research has been carried out in the world aimed at shaping and developing potential, and they are based on various theories. There are also many ways to develop intelligence and thinking in the world community. Today, in monitoring the development of the world in this direction, it is possible to find trainings, seminars, training programs, Online Courses by foreign specialists in the global networks of the internet. There are more known methods in these systems - solving logical problems and puzzles, finding tests, playing chess and so on. But the market of services in the field of intelligence is developing rapidly and is complemented by innovative technologies. For example, after the Second World hit, Japan in the fast pictures with its most effective approach was among the developed countries. One of the main reasons for this is the result of a wide opening to scientific, methodological research devoted to the formation and determination of intellektual potential among schoolchildren, students, young people. This method is called the Japanese intellekt system of development. The system was proposed by a Japanese scientist - Professor, Doctor of Medical Sciences and a tomography specialist named Ruta Kavashima. They have been studying the stimulation of the human brain for more than twenty years, and in 2003 year "train the mind. He published scientific works" Japanese system for the development of intelligence and memory"," Japanese system for the development of intelligence". These scientists first determined how effectively the person's mind works at the moment, and secondly, a lot of simple exercises for the development and development of thinking, intelligence and memory in it, in the third. he put forward an idea that included special methods to evaluate the ability from time to time.

Ryuta Kavashima in his studies concluded that when a person solves arithmetic problems and solves them for a while, the brain demonstrates maximum activity. He also determined that reading aloud would give good results. However, he decides to pay special attention to mathematical problems, as a result of which his research results and scientific Monographs are created, which offer a lot of arithmetic assignments, exercises.

IV. Discussion
The approach of kavashima consists of two stages:
1. Encourages the reader to pass the main tests. This allows you to determine the initial starting point – the current level of knowledge. During this test, it is required to perform several exercises. Among them, for example, a loud counting test from 1 to 120, a word memorization test in two minutes, and so on . After completing the tasks, the results are recorded.
2. The reader goes to the theoretical and practical source and begins to solve the main arithmetic problems. It is necessary to study every day, having completed all the assignments that are set.

This method exists today not only in Japan, but also throughout the world and has its own methods, for example, there are theories developed on the basis of Kores, Chinese, American, European, Russian approaches.

In addition to such approach theories, there are game technologies, theories, methods and methods that are based on logic, focusing on the formation and determination of intellekt.

Games on logic and thought have been used for a long time in pedagogy for the purpose of teaching, for example, role-playing in historical sciences, in Computer Science and Information Technology F.It is reflected in the works of murodova. Tirishga develop useful skills through the game based on their results and developed separate lessons and even training cards based on the full. In contrast to these, logical games can be accessed from ancient chess to modern flexible platforms that students will like, with applications that include a variety of functions, head-strings and puzzles. Their undoubted advantage is that sometimes they are equal in appearance, usefulness, introversion and excitement with famous people. Today, even without leaving home, every reader connected to the Internet can formulate and determine their own intellektual potential by solving several puzzles in their spare time or by finding several puzzles.

V. Conclusion
However, it is necessary to have such a goal, that is, educational games, with the help of which students should be able to study the theoretical, practical knowledge and skills of the corresponding subject and sharpen the mind. In general, logical games are an excellent educational strategy that will help to encourage reading. To them it is possible to add the following games:

The term gamification (gamification) was translated from English into Russian in 2019 year and is a theory of games having its place in world society. In order to increase the level of participation in the Bunda and solve tasks, it is aimed at the use of game modes and playing style in non-game situations . Gamification methods seek to influence a person's natural predisposition to competition, achievements and self-expression. The principle is that games are common in marketing and online shopping centers to attract and retain customers. Gamification of the educational process is also a progressive direction in the education of the XXI century. It covers not only classical education, but also educational programs and online courses. For example, Microsoft has released Ribbon Hero 2 as an assistant product for its office suite. The game was created to help users learn how to use MS Office applications effectively and has become one of the most popular Microsoft Labs projects. The well-known MOOC educational portal HanAcademy is also implementing a wide range of games in its programs. The New York Department of Education is successfully implementing the idea of the Quest to learn School, where the entire learning process passes through the games.

It can be argued that logical ,ualual and other games are not only important in the process of teaching students. They are widely used in training for adults to improve skills and efficiency, in seminars, because they allow them to see the practical benefits of the knowledge gained immediately. Even schoolchildren are often checked for resumes under certain conditions, and in order to know if there are any specified analytical abilities, the HR-manager is assigned the task of finding a riddle or puzzle.

It's hard to believe, but adults often can not do what the child can do in a few minutes. Therefore, not only for professional development, but also for self-development in general, the solution of the simplest tasks on logic and reasoning plays an important role. It helps to form useful skills such as memory, attention, verbal counting and develop creative abilities .tirishga

Online games are a set of logical games that offer some games, tasks and tasks that are performed as online flash applications, and in addition to being convenient, they also teach different ages and different skills. For example, the puzzle" six frogs " - the basis of this program is a mathematical puzzle about six very well-known frogs. This online flash game may seem simple and easy to read, but when they try to fulfill the condition, they usually change their mind. According to the analysis, a person with an average IQ (100-110 points) should find the answer in 3 minutes. Its goal is to develop intellectual capacity, logical thinking, verbal counting skills, which can be counted in many such online games.

In addition to computer-oriented game technologies, there are some games dedicated to finding puzzles, they can also be used in traditional ways. Despite the information age, many logical and puzzle games are effective and interesting for fans. This is due to the fact that some of them did not receive high-quality analogues in the form of computer programs, while others are much more interesting and pleasant to play, communicate and experience "live".

In order to increase and determine the potential of students, it is necessary to pay attention mainly to the content of science taught in the school, as well as to choose IQ instruments based on this content. Therefore, it is necessary to study the content and current state of Information Technology Education in secondary schools on the basis of analytical and critical, modern requirements.

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Transfering of Meaning in the Modern Uzbek Poetry: Metaphors and Synecdoche

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Annotation
Metaphor is actually one of the common types of meaning migration in the artistic literature, something is a kind of migration, based on the similarity between phenomena. The meaning of the metaphor in the artistic text is extremely vivid, because it, together with other words that have entered into a relationship, forms a meaningful whole, thanks to the concepts that are formed in contact with them, can be attributed to the width of the meaning kengaytiradi. And the scale of artistic metaphor is much wider than the meaning of the term it acts as a context kengaytiradi and estetitk in the influence of the meanings of other words in the text. In the process of studying the types of transportations, we will directly encounter the method of synecdoche, since the method of synecdoche covers all types of transportations by its side. In general, as we have seen above, synecdoche is also based on a meaningful connectionadorlik. If the connection between the lines of meaning is interrupted, then the word moving in meaning becomes a simple lexical concept. Brief first conclusions about the archipelago synecdoche, whose name has not yet been worked anywhere, attract us to understand the poetry of the past and today. The construction and structure of the archipelago synechia is formed by a specific fund of "States of plot and plot", from which they move from the poem to the poem, from the period to the period.

Metaphor is actually one of the common types of meaning migration in the artistic literature, something is a kind of migration, based on the similarity between phenomena. The metaphor is a hidden analogy in the essence of poetry, in which the analogy is not mentioned in the poetry Egyptians, but continues to be loaded into something similar in its meaning (that is, the word that expresses it). Through it, the creator achieves a number of goals, such as playing the word and thinking the reader. In fact, the whole beauty of poetry is manifested in this way. Of course, the creator is not required in this place-the exact similarity of events, but two things-one of the characters inherent in the event is taken for the basis.An interesting paradox is a beautiful poem with puzzles, magic words. A poem written in a metaphorical spirit can be found either as a mathematical example, or as a riddle. Suppose "golden autumn", "golden period" for the basis of analogy in the first of the compounds "color", in the second - "expensive". The meaning of the metaphor in the artistic text is extremely vivid, because it, together with other words that have entered into a relationship, forms a meaningful whole, thanks to the concepts that are formed in contact with them, can be attributed to the width of the meaning kengaytiradi. For example, the meaning of the combination "Suv sindi (water broken)", separating it from the text, is very pale, it requires a mind strain in order to perceive it as a metaphor. In general, no meaning can be understood from the word "Suv sindi (water broken)". The power of poetry is manifested here in such a way that it is possible to extract any word in this genre to the level of the image and form wonderful masterpieces. Rauf Parfi said:

Сув остида ятирайди тош
Харасангларда синади сувлар
(Suv osti yaltiraydi tosh
Xarsanglarda sinadi suvlar)

The combination in the artistic text in the strings manifests bright in meaning. So how did this happen?!. At first glance, in order for the "water to break", it is necessary that it is like a mirror, but in the poem the water is not like a mirror. Nevertheless, on the basis of similar connections, we can make as much clear water as it looks like a mirror "polished stone under it", and therefore its "fracture" will look natural. So we can see the migration of meaning in the following lines of the poet. Here the poet makes an artistic transition by creating a new image by means of an artistic interpretation of the word.

Деразамга урилади қор
Жаранглайди жарангсиз кумуш
(Derazamga uriladi qor
Jaranglaydi jarangsiz kumush)

In lines, the literal properties of the metaphor are more broadly manifested. In Uzbek poetry, from the XV century on the basis of color similarity, Snow-Silver similarity is widely used in our poetry. In order to satisfy the demanding reader in today's period, new poems are required in the context. Of course, it is impossible to update the word, it will not be necessary to find a new word. However, it is possible to create new images and new concepts by using words in a portable sense (in a metaphorical way). Of course, as already mentioned above, the analogy of snowflakes with silver exists from the very beginning, but for Rauf Parfi this concept is just a base point, from which other additional meanings are evoked by motivation: at first glance, the words "resonate, resonate" on a metonymic basis, the words "Silver Coin" are imagined. If we take a closer look at these concepts, it turns out that the snowfall is similar to the "sprinkling of silver coins". That is, in the eyes of the lyrical hero, the fur will realize a feeling that someone will donate a coin to charity. It is necessary to perceive the millennial tradition of nature as a solo human being. It should be noted that the lyrical hero is a representative of the people who know that “snowfall is a sign of fullness, baroque”, he will feel his experiences at the same time. The chain of concepts that taste the occurrence of metaphors in this place can be expressed in a Manabu way: silver (snow, color similarity)- resonant (on the basis of coin, relationship)- “coin scattering” (saxovat(kindness))- snowflake (creator's soul, blessing). It should also be noted that the lyrical hero here does not mean money-He means languages when he says donation, but understands an apparent concept that shares a special kindness, happiness, joy. This means that the meaning of lexical metaphors can be understood within the framework of one word, and it performs a normative (Atash(call)) task.

And the scale of artistic metaphor is much wider than the meaning of the term it acts as a context enlarges esthetic in the influence of the meanings of other words in the text. For example, as a lexical metaphor, “spring” - can be used in the meanings of youth, “autumn” maturity, autumn old age, that is, even without three of them, the metaphor calls one stage of human life in another word, as it should be. And artistic literature, using these words with an image, creates a new layer of creativity. It creates a number of other meanings so that we can understand in itself a number of poems. For example, the proof of our thoughts above Iqbal Mirzo's “spring, which pleased my autumn "This can be seen in the example. If we study this Egypt separately, then the integrity of meaning is lost, so the metaphors in Egypt are important in their totality, and not in a separate case: they represent the evenings of the one who indulges in the beauty of maturity, creating an image. In such cases, the arc is spoken of a metaphor, that is, the image of a case within the framework of a whole-headed sentence or a twenty-part of the text is implied. Of course, the metaphor in this place can no longer be called a movable type, it is more correct to look at it as an image of objectivity.

In the process of studying the types of transportations, we will directly encounter the method of synecdoche, since the method of synecdoche covers all types of transportations by its side. Synecdoche is a kind of metonymy, appearance, meaning migration, based on the whole part connection. Here the thought promoted by the poet is not fully revealed, but is expressed in a certain part. The reader will understand the idol from this part. This process, in fact, will not be difficult, but the reader will quickly understand the main image, which was put forward in the text. Through it, the poet can give an idea that instead of a word that does not fall into some kind of rhyme, the power of an image and influence is wide. Take for example the Egyptians below in the poem “my wedding without my mother passed” by Bobur Bobomurod.

Қариндошлар жам бўлди,
Ёру дўст ҳамдам бўлди.
Юраккинам кам бўлди –
Онамсиз тўйим ўтди.[2]
Qarindoshlar jam bo’ldi,
Yoru do’st hamdam bo’ldi.
Yurakkinam kam bo’ldi –
Onamsiz to’yim o’tdi.

Here, the lyrical hero is looking for his mother from among friends and relatives who are flaming around, but it was clear that his mother could not attend the wedding. The poet could use a few words in this place, but the poet creates an artistic-aesthetic skill by choosing the word” my heart". The heart is a body member of a person in medical terms, but artistry denies this. Even if the heart is a piece of the human body, the most beloved man of the lyrical hero on the line is ravaged in the image of his mother.

In general, as we have seen above, synecdoche is also based on a meaningful connection. If the connection between the lines of meaning is interrupted, then the word moving in meaning becomes a simple lexical concept. And at this time we can look at this word in the sense of its own designation. As a result, this word seems to be a word that has nothing to do with poetry at all. Therefore, it is considered to him as a kind of metonymy (its quantitative appearance). But this does not mean that synecdoche and metonymy, that is, it does not serve us to take as one thing. If we look at it in simple peasant language, then in metonymy one of the two words, which served to mean a saving word, is dropped and its burden is also transferred to the remaining word. In the same way the word philosophy in metonymy comes from another way, meaning comes from a different view. And in the synecdoche, it turns out that if we make one concept clearer with another name, then the word is interpreted with another concept. As a result, a new poem is created on the basis of Music, Folk oral creativity. For example, the first paragraph in the poem “Love of pottery” of the Khurshid period

Саҳардан то оқшомга қадар,
Кўкда порлар ёнмагунча ой.
Эртак сўйлар сархуш бармоқлар,
Эртак тинглар қизил рангли лой...
(Sahardan to oqshomga qadar,
Ko’kda porlar yonmaguncha oy.
Ertak so’ylar sarkhush barmoqlar,
Ertak tinglar qizil rangli loy…..)

When saying “fairy tales” here, potter refers to magical moments of creativity, which are given to his work with all his love, the Lamb of the heart. Fairy-tale slaughter fingers-part, it means the one main-potter. The unity of the synecdoche with the metaphor ensures that the expression is beautiful and expressive: the fur, like a large-planned film dial, heals from the touch of magic fingers and brings the clay in a beautiful form to the poetic eye. Or M.Joseph's:

Фақат шу ер яқин юракка
Фақат шунда қувонар кўзлар[3]
(Faqat shu yer yaqin yurakka
Faqat shunda quvonar ko’zlar)

Here tells how much the poet loves his homeland. The poet directly expresses these thoughts in an figurative way, avoiding what I say. If the poet said that I was in this place, the reader knew that all feelings were lyrical heroes. Therefore, the poet uses the word” eyes". Through this, all students will be able to feel this state of mind. The fact that in the Egyptians the “eye” is used in the meaning of man is

[2] Б. Бобомурод “Умр баҳори” Тошкент “Ўқитувчи” - 2004

[3] М. Юсуф “Сайланма” Тошкент “Шарқ” - 2007

also an example of a synecdoche. By the name of the singular, it is also considered to be a common denominator. In one poem of Sh. Rahman raises a completely new look of synecdoche. Here mavhum(monkey) represents a whole nation through concepts. Only one grandfather refers to a whole people by his own soul.

Қадимда мевалар йетилган пайтда
Савоб деб яшаган комил аждодим.
Мусофир чанқоғиғин боссин деб атай,
Бузиб қўяр экан боғлар деворин.
(Qadimda mevalar yetilgan paytda
Savob deb yashagan komil ajdodim.
Musofir chanqog'ig'in bossin deb atay,
Buzib qo'yar ekan bog'lar devorin.)

When author writes, "under the combination of my ancient ancestors" refers to ancestors, the whole people. Similarly, the Uzbek people are considered when they say" Let There Be One world left for the Children of Karakoz(blackeyes) of Uzbekistan". In the works of art, the application of the patronymic nouns in the meaning of the genus horse is also considered to be a kind of appearance of the synecdoche. Above we talked about the Nomads, which inextricably linked the fields of linguistics and literary studies of artistic nomads. These transports cover both directions separately. Poetic speech is certainly renewed, changed. Coexistence with the Times is the basis of not only poetry, but also literature as a whole. The images also update the sides of the same meaning. For example, if in the XV century the tree was used to represent the beauty of the yor(lover), then this image became a much more versatile image in the XXI century. For example, in the poem "Loyalty" by E.Vohidov, we can witness that this image expresses in itself the loyalty inherent in a person. Or in our classical poetry, when the image of the moon is used as a symbol of yor's(lover's) longing, we can also witness that it served to describe the spiritual state of a woman without a child in the creativity of a veteran. So it turns out that the images always prevail.
But there are some such images, which serve to call exactly the same meaning since its creation. We study this in the artistic literature with the concept of archetype. In the course of our research, we have witnessed that archetype images in any case serve to form a synecdoche method of meaning migration. For example, the poet B.Bobomurod takes as an example the poem "Fate" by grandfather

Пешонангга ёзилганин,
Кафтларингда чизилганин –
Ўқиб бўлмас чигал берар,
Насиб этса тугал берар....[4]
(Peshonangga yozilganin,
Kaftlaringga chizilganin –
O'qib bo'lmas chigal berar,
Nasib etsa tugal berar……)

Here, paying attention to the fact that the so-called "forehead" refers to a person, we can get it as a bony synecdoche. At the same time, we can see this lexeme on the example of archaic words, taking into account that "written on the forehead" is used in the sense of fate in all periods. That is, a stagnant "scheme", characteristic of human thinking, creative imagination, the construction of thought and patterns of motives and their construction is called an archive. Since the earliest times of human society, the archipelago synecdoche lives in the memory of mankind as a "general unconsciousness" and manifests itself in various forms in the process of creation. That is, the archipelago synecdoche has a universal character and we can see their traces from the most ancient times, to the present-day literature. Brief first conclusions about the archipelago synecdoche, whose name has not yet been worked anywhere, attract us to understand the poetry of the past and today. The construction and structure of the archipelago synecdoche is formed by a specific fund of "states of plot and main idea", from which they move from the poem to the poem, from the period to the period. In addition to emigration, it differs from other types of landings in that it expresses a constant concept. As an alternative, the archipelago synecdoche is primarily a phenomenon of form, which is enriched by its vital experience and acquires a certain meaning when it awakens in the minds of the creator living in a certain period. The images of the period when this type of landslide was used in poetry, all has the first existing basis from ancient times - the synagogues of the archipelago, and this first foundation receives different views in connection with the features of the specific period.

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Principles of Compiling Zoonyms Dictionary in English, Russian and Uzbek Languages

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ABSTRACT
The given article deals with the principles of compiling the dictionary of animal names in English, Russian and Uzbek languages. There are given different groups or sub-groups of animal names in analyzed languages.

KEYWORDS: *trilingual dictionary, home animals, wild animals, reptiles, rodents, mammals, animal groups*

Studying related and different system languages is one of the urgent problems of modern linguistic science. In connection with this, an important interest presents the study of the native language in comparison and contrast with other languages. Nowadays, market industry based on strong and unrelenting competence demands to bring up people who business person, having creative thought, forming national spirit, in addition, thinking individually solving problems in any difficult situations. Spirit, intelligence and language are closely connected with one another. Human being has to learn mother tongue as well as foreign languages to form their individual intelligence. It is known that there are two means to study mother tongue and foreign languages essential conceptual bases at secondary school education: textbook and dictionaries.

Hundreds of dictionaries have been created in different fields until now (from kindergarten to university), even near to thirty dictionaries for Russian schools but there is only "Orthography dictionary" for Uzbek schools. It is so important to create explanation dictionary, synonymic words, antonymic words dictionaries, degree words, old words dictionaries, phrases, dialects, homonyms, pronunciation words dictionaries for children.

It is impossible to improve creative thinking unless essential dictionaries for children are created. Current textbooks are not sufficient to improve oral and writing speech.[1.P.5]Therefore, according to these thoughts we decide to create a useful dictionary for children. The dictionary includes the names of animals in English, Russian and Uzbek languages; they will be given with pictures.

Moreover, this dictionary will take valuable proverbs, phrases that used the names of animals in English and their translations, equivalents into Russian and Uzbek languages. Studying of pet names in English, Russian and Uzbek languages is undertaken for the first time. In addition, we can learn the names of animals by dividing them into groups. For example, Home animals, wild animals, mammals, aquatic animals, reptiles, rodents and others.

Home animals - farm animals (in American English are called livestock).Farm animals or domestic animals, which are tamed to aid in the work.

Cattle – Крупный рогатый скот –mol. Included in this group are:a bull – бык –ho'kiz, a cow –корова–sigir, a calf – телёнок – buzoq

Poultry - a collective noun, which is used to refer to the birds, which are grown on the farm for meat and eggs. These animals include: a chicken – курица-tovuq, a rooster – петух–xo'roz, a chick – цыплёнок –jo'ja.

Brood word used to describe a large family of children of the same mother (usually with many children):a mother with a brood of daughters – ko'p polaponli ona, a duck – утка-o'rdak, a duckling – утёнок –o'rdakcha, a goose – гусь-g'oz a turkey – индейка –kurka,feminine turkey in English sounds like a hen, and the masculine –tom; poultry– young turkey. Note:The English word is also called turkey or film foolish man, which was unsuccessful.

The next group of animals in English: donkey – осёл,ослица –eshak.Note that the name of the pet in English female and masculine is different:a jackass – осёл (самец)–erkak eshak, a jenny – самка животного –urg'ochi, a colt / foal – ослёнок–kurra. Note: jackass – it is also a slang word that means fool, idiot:damned jackass – проклятый осёл – ahmoq, lanati eshak, stupid jackass – тупой осёл –anqov eshak, Goat – козёл –echki.

The name of the pet masculine – a buck or billy (a billy goat), and feminine - a nanny (a nanny goat), young – a kid (like humans).Idioms with the word goat:to get somebody's goat – раздражать, сердить, злитького-либо–kimnidir jahlini chiqarish, to play / act the (giddy) goat – проказничать, валять дурака–kalakaqilmoq. Horse – лошадь–ot, Masculine Horse in English is called a stallion – жеребец-ayg'irot, ayg'ir. If the horse is used for divorce offspring, it is called a stud –племенной жеребец–urchitish uchun saqlanadigan ot.

A female called mare–biya, baytal, baby – a foal–toy, toychoq.Pig – свинья –cho'chqa, a boar – хряк–erkak cho'chqa, a sow – свинья (самка)-urg'ochi cho'chqa, a piglet – поросенок-cho'chqacha. A popular English expression contains the word pig:when pigs fly – после дожд ичкав четверг, когда рак на горесвистнет–tuyani dumi yerga tekkanda.Sheep – овечка-qo'y, a buck / ram – самец–qo'chqor, an ewe – овца (самка)–sovliq qo'y, a lamb – ягненок–qo'zichoq, a flock – стадо –poda. Note:In American culture, counting sheep is considered a good remedy for insomnia.Word of sheep in the English language also describe a timid, shy, non-self man: to follow somebody. like sheep –слепоследовать за кем-л–qo'yday ergashish.

This concludes the topic of pets in the English language, and in the next article, we consider the animal names in English that do not belong to the house. The names of animals in English, which are listed below, can be divided into the following categories: mammals –млекопитающие the class of higher vertebrates, females that feed cubs with milk. This class is divided into several sub-groups (below are the names of animals in English): The common name of this sub-group of animals in English - Hoofed mammals (ungulates mammals):pony – пони–poni oti, horse – лошадь-ot, foal – жеребёнок; ослёнок –toychoq, donkey – осёл –eshak, deer – олень-bug'u, fawn – молодой олень –bug'u bolasi, camel – верблюд –tuya.

Next is the name of the subgroup of animals Pouched, Toothless, or Flying Mammals – сумчатые, toothless or flying mammals:koala – коала –koala, armadillo – броненосец–bronenosets, kangaroo – кенгуру –kenguru, bat – летучая мышь–ko'rshapalak, anteater – муравьед – chumolixo'r.

English Names of rodents (названия грызунов) read as follows: chipmunk – бурундук –burunduq, rat – крыса–kalamush, gopher – суслик–yumronqoziq, mouse –мышь – sichqon, squirrel – белка–olmaxon, porcupine – дикобраз–jayra, beaver – бобёр –qunduz.

The names of animals in English (the family cat –Felidae): leopard – леопард–qoplon, tiger – тигр –yo'lbars, lion – лев –sher,jaguar – ягуар –Amerikaqoploni.

That completes familiarity with names of animals in English, which are mammals, and go to the following classes of the animal world. By wild animals in English also include birds whose names are presented below:

Birds –птицы–qushlar, pigeon – голубь–kabutar, ummingbird – колибри–kolibri, sea gull–морская чайка–dengiz chaykasi, eagle – орел–burgut, owl – ова–boyqush, hawk – сокол- qirg'iy, robin – малиновка- tog'chumchuq, sparrow–воробей–chumchuq, cardinal–кардинал–kardinal, ostrich–страус–tuyaqush, canary–канарейка–kanareyka, parakeet – длинно хвостый попугай–uzun dumli to'ti, parrot–попугай–to'tiqush, woodpecker–дятел–qizilishton, peacock–павлин–tovus, pheasant – фазан–qirg'ovul, tustovuq, rooster – петух–xo'roz, pelican – пеликан-saqoqush, birqozon, penguin – пингвин–pingvin, swan – лебедь–oqqush, Flaming–фламинго–flamingo, stork–аист–laylak.

Names in English insect read as follows: Insects – насекомые–hashoratlar.

Wasp – оса–qovoqari, Bee – пчела–asalari, Ladybug – божьякоровка–xonqizi, Mosquito – комар–chivin, Moth – ночная бабочка–kuya, parvona, Butterfly – бабочка–kapalak, Dragonfly – стрекоза–chigirtka, Cockroach – таракан–suvarak, caterpillar – гусеница–kapalakqurti, snail – улитка–shilliqurt, grasshopper – кузнечик–beshik tebratar, spider – паук–o'rgimchak, ant – муравей–chumoli, fly – муха–pashsha, beetle – жук–qo'ng'iz, firefly – светлячок–yonar qo'ng'iz.

Now we go to the names of the inhabitants of the watery world in English (aquatic animals – водные животные):sea lion – морской котик –dengiz arsloni, whale – кит –kit, shrimp – креветка–krivetka, mayda qisqichbaqa, walrus – морж –morj, octopus – осьминог –sakkizoyoq, clam – двустворчатый моллюск –ikki pallali molyuska, mussels – мидии –qo'shtabaqali chig'anoq, sea turtle – морская черепаха –dengiz toshbaqasi, lobster – лобстер –omar, starfish – морская звезда–dengiz yulduzi, jellyfish – медуза –medusa, seahorse – морской конек–dengiz oti, otter – выдра–suvsar, walrus – морж –morj, seal – тюлень–tyulen, dolphin – дельфин –delfin.

Many of the names of animals in English, which were presented in this article, is not commonly used in everyday speech. We specially learned these animal names to write a useful handbook (dictionary) for children. By this way, they may learn the names of animals in three languages. Today, most dictionaries includes common everyday activities, simple words and others. All of them are described in a book. However, in our dictionary will be described the names of animals, animal stories, fables, proverbs in three languages. So, it is a new way or method to teach children foreign language.

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Cotton Sucking Pests and Measures to Combat with Them

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ABSTRACT
This article describes the morphology, biology and pest control methods of cotton sucking pests.

KEYWORDS: *Tetranychus urticae Koch, UzFEN-20% e.mc., Dalamectin 1.8% e.mc., control*

INTRODUCTION
There are many agricultural crops pests, and some pests species affect plants only at certain development stages.

One of the factors that reduces the agricultural crops yield is pests. Therefore, the plants protection from disease and pests is one of the most pressing issues.

The unique natural climatic conditions of Uzbekistan, as well as the favorable air temperature during the plants growing season allow many pests development. That is why thousands of insects, canals, diseases develop in agricultural crops, which negatively affects the crops quantity and quality.

Spider mite (Tetranychus urticae Koch) is a fierce and persistent cotton pest. Spiders mite are found in 248 plants species, including 173 weeds species, 38 trees species and shrubs, and 37 cultivated crops species. The mite mainly settles on the back of its leaves, damaging it. The leaf is wrapped with very thin gray spider webs. His name is also named after him. The spider mite enters the cell cavity of the oral apparatus, absorbs the nutrients in it, and feeds on it. On the affected leaves upper side there are light-colored spots, and in severely damaged areas there are brown and reddish spots. Strongly damaged leaves fall off, the plant is stripped and becomes very clumsy.

Spider mite is a class of spiders, belonging to the canals family, with small arthropods, some species. The body is oval, 0.3-0.6 mm in height. Its spring-summer offspring are bluish-yellow, and those that overwinter are orange-red. The two dark spots on his body sides are clearly visible. The female undergoes egg, larva, pronymph, deuteonymph and imago stages in its development. The eggs are round and spherical. The larval, pronymphage, and deuteonympha forms differ in size from the imago. The larva has three pairs of legs, the nymph and four pairs of legs in the imago.

The spider mite develops in 8-12 days in summer (June, July, August), 15-20 days in May, and 25-30 days in March-April. It produces 12 to 20 generations per year, depending on geographical location, weather conditions and the cotton type, from which 8-12 generations are produced in June-August.

Research materials and methods. Our experience was carried out in the following scheme on the 7-hectare field area of "Turtkul Abdurashid" farm cluster "Sokhib omad baraka" in Izbaskan district of Andijan region.

1. **Variant. Control: No control was used against cotton spiders mite.**
2. **Variant. Template: UzFEN-20% e.mc.against cotton spider mites**.
3. **Variant. Experiment: Dalamectin against cotton spider mites 1.8% e.mc 0.4 l/ha**

Experiment 3 variant consists of 4 turns, the seeds are sown in the scheme 90x10x1 cotton Andijan-35 variety. The experimental plots are 50 meters long and 7.2 meters wide. The total plots area was 360 m^2. The total experiment area was 1440 m^2. 100 plants were selected for calculation from each variant, and phenological observations were made from this plant every 10 days.

The developmental dynamics and harmful properties of the spider mite were observed every 10 days in selected plants.

Research results. In our experimental field, UzFen 20% e.mc.0.75 l/ha in the standard variant of antifungal chemicals and in our experimental variant, Dalamectin was 1.8% e.mc.using 0.4 l/ha, during our experiments, the cotton the farm yield was as follows.

In the control variant 26.7 s/ha, in the standard variant 28.6 s/ha, in the control variant 1.9 s/ha, in the experimental variant 32.1 s/ha, in the control variant 5.4 s/ha were obtained.

UzFen, which is included in the plant list protection products approved for use in the Republic of Uzbekistan against spider mites, contains 20% e.mc. 0.75 l/ha and Dalapectin 1.8% e.mc.using chemicals at 0.4 l/ha, we achieved a higher and additional yield than the control.

UzFEN 20% e.mc.against spiders acaricidal use was 71.3%, Dalamectin 1.8% e.mc.when applied insectoacaricide, gave 88.3% biological effect.

In the standard version you can get a net profit of 0.73 kopeck for 1 sum, in the experimental option you can get a net profit of 1.30 kopeck for 1 sum.

In summary, the Dalamectin application against spider mites at 0.8 liters per hectare of 1.8% e.mc.is biologically effective.

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Formation of Self-Management Skills in Foreign Language Teaching

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ABSTRACT
Teachers should remember to always try to involve those parents who are unable to be actively involved in the classroom throughout the class day. A positive classroom environment is an important tool for establishing a successful and effective class year. There are numerous factors that may have an influence on positive classroom environments. However, it is critical that teachers create a positive classroom environment to encourage the students' growth. A positive classroom environment enhances the students' ability to learn and to be productive in and out of the classroom.

KEYWORDS: *skills, methods, ability, group works, language, teacher thinks, motivate, factor*

INTRODUCTION
One of the most important skills teachers can give their students, especially those with disabilities, is to empower them to advocate for themselves. Students need to be able to make their needs and wants known. For example, preclass students need to be able to tell others when they need to use the bathroom. As students get older they need to understand and be able to describe their strengths and weaknesses to their classroom teachers and other people with whom they work. Identified five steps to empower students and help them become self-advocates, takes a different point of view concentrating more specifically on problems in groups based on her research suggesting that there are three potential sources for group problems naming teacher-group conflict, intra-group conflict, and the 'indigestible' group member. To help treating these problems she suggests using interactive games and other affectively aimed activities from her book.

It seems useful to emphasize here that the individual study does not apply only to a part of a lesson either but according to Harmer should be incorporated to the course of the week and the whole year. He reminds teachers not to forget the importance of individual study in their enthusiasm for pair and group work and make the use of learning centres or individual computer terminals. Hadfield further points out that during the year or in the middle of a term a class may experience a sort of stagnation, when learners may feel bored with the routine and low on motivation, sometimes referred to as a mid-term slump. For this time it seems useful to take a break from the usual learning and incorporate some relaxing activities as taking the class to a theatre to see an English play or do something else completely different from the usual routine as working on a special project for example using drama, creating a video or going to the cinema together. These activities can give learners a sense of solidarity and achievement. At the end of a week you can as well take some time to reflect on it and discus goals for the upcoming week.

Learners' expectations of what they want to learn and why are closely connected to their learning styles and as young students may not be explicitly aware of their own styles or expectations it is very useful to incorporate activities which will help them to define their expectations their goals and think about their learning strategies? These activities may prevent possible tension that can rise from a lack of recognition of students' own objectives and strategies or lack of tolerance towards aims and styles of others. that some students want to learn grammar because they feel it helps them to improve their English, others feel that grammar is boring and it distracts them from what they really want to express by using the language as some students learn analytically some prefer intuitive learning others are visual types or have better auditory memory.

To this she If each category thinks that its style is the only way to learn, then you have potential for resentment and conflict, unless you help learners to understand how aims, attitudes, and learning styles may differ and also encourage them to start thinking about how they as a group can reconcile and what may be conflicting aims and interests The classroom should be inviting by using bright, and bold colours on the walls. It is stated that no one wants to learn in a dull environment.

The teachers should also encourage academic engagement by incorporating the use of word walls and thematic units in the classroom. The word walls and thematic units may serve as motivational tools for the students. These areas should always be organized, neat, and clean. Keeping bulletin boards up-to-date in the classroom encourages students to perform to the best of their ability. Undeniably, the appearance of a classroom leads to a positive classroom environment and a productive class year.

Moreover, allowing and encouraging parents to be involved within the classroom can aid in creating a positive environment. Parental involvement in the classroom and in their child's education are two factors that play a crucial role in having a successful class year as well as having a positive classroom environment. States that, when parents are involved in the classroom, it sends the message that what is happening in the classroom is important. Parents may actively get involved by chaperoning on field trips and taking part in special events that take place at the class and out of class.

METHOD AND MATERIALS:

According to be having a sense of direction and a common purpose is essential for a group to work successfully. However, it is one of the most difficult tasks to set and agree on common goals as a class with each student having different priorities, different learning style and strategies or prefers different approaches to learning languages. While defining and agreeing with students on common aims a teacher has to respect these individual aims and needs for everyone to feel satisfied with the way they learn and be motivated. It is good for students to realize and clarify their own goals and the fact that learning inside a group can help them achieve them even though it will require certain compromises. He recommends using a variety of activities that would help students to think about their individual as well as group aims

Confidence

The feeling of trust and confidence in an English lesson is essential for students to be able to learn and practice speaking the language. I agree with this as according to my experience if there is a lack of trust and much insecurity in the group students will be afraid to express their opinions, open-up and use English in front of others simply out of fear of being laughed at or judged for their views or mistakes. If this kind of atmosphere is present in a classroom it will be very difficult for a teacher to work with such group as well as for the learners to learn. It is very important to remind again that the attitude of a teacher is vital in terms of establishing trust and helping students to feel confident using the language by being reassuring, encouraging and comforting however it is perhaps even more important to feel acceptance and support from the group as a whole. According to who wrote an introduction to The Confidence Book, a teacher should incorporate activities which would help build up students language confidence leading them to a greater awareness of just how much they can achieve, even when they think they know very little and allowing them to enjoy and draw on their own strength, feelings and experience his Teaching Foreign Languages in Classs reflects on this topic saying that: “Every student knows more than they think they know. Every student knows much more than the teacher thinks they know.

However even with individually motivated learners the classroom atmosphere may be lacking the feeling of group achievement which may lead to a rise of tension among learners not feeling motivated to work together and to cooperate because they may not be aware of the benefits learning from each other can bring them. For students to realize these incorporating group product-oriented activities into English lessons on regular bases, which provide the group with common purpose leading to a recognizable, tangible achievement. She further explains that these group activities do not have to end with a written product; students may for example make a video film together, create a dramatic play, a magazine, a short book or complete some short term tasks which can fit into one lesson as creating for example a group song, a poem, a poster, a scrapbook or writing a letter together. The commonality of purpose demands support from group members for each other, and the fact that there is an end-product gives the group a feeling of satisfaction and a sense of pride in them as a group.

She also points out that pair work or small group work can be modified to contribute more to the sense of group achievement as well instead of just finishing open-ended as it often does. By making pairs come back to the whole group and share their reflections and receive feedback from others brings the pair or small group work to a definite conclusion. This can be done by for example various pyramid discussions or presentations. A macro view of the social context of teaching and learning requires that we look at how the classroom relates to the world outside. Indeed, there are many ways in which what happens within the classroom reflects this world outside. As Bowers suggests, the classroom is a microcosm which for all its universal magisterial conventions, reflects in fundamental social terms the world that lies outside the window. This realization from within English language education is supported by discussions already taking place elsewhere, which place the classroom, as a culture, within a wider complex of cultures, between which there are many complex channels of influence.

The way in which the classroom mirrors the world outside can also be seen in the interest taken in it by a variety of disciplines: sociology, anthropology social psychology, communicative ethnography suggests that the classroom possesses special features which crystallize the social world, such a routines and scripts, which occur in a controlled context, and which make it particularly attractive to researchers. I shall deal with the question of the classroom as a culture in Chapters 2 and 3, and with its relationship with cultures outside the classroom in Part B. Here, by way of introduction, I shall describe briefly how the complex interconnection between the classroom and the world outside looks on the surface.

RESULT AND DISCUSSION:

In American English is it usual to use the structure "He/She has (long hair)" when describing, however in British English the most common structure is "He/She has got (long hair)" which is usually contracted to "He/She's got (long hair)". In this lesson plan we provide American English structures first, followed by the British English version, shown as (GB: ...). The worksheets, song and reader accompanying this lesson plan come in both American and British English versions.

Lesson Overview:

Warm Up and Maintenance:
1. See our "Warm up & Wrap Up" lesson sheet.

New Learning and Practice:
1. Introduce the descriptions of the vocabulary
2. Do "Funny Body" drawings
3. Play the "Describe Your Friend" song and do the active listening worksheets
4. Do the "Describe Your Friend Class Survey"
5. Read classroom reader "The Clever Prince"
6. Play “Guess Who?”

Wrap Up:
1. Set Homework: "Describe Your Family" worksheet
2. See our "Warm up & Wrap Up" lesson sheet.

Lesson Procedure:

Warm Up and Maintenance:

See our "Warm up & Wrap Up" lesson sheet.

New Learning and Practice:

1. Introduce the descriptions vocabulary

For this lesson you are going to use your artistic drawing skills. Use a whiteboard or blackboard to draw the following:

- At the top of the board draw 2 circles (these will be the heads). Elicit «circles".
- On each head draw a nose, ears and a mouth. Elicit each as you draw them. Then ask "What's missing?".
- Elicit "eyes". Ask "What color are they?" and give the students the options of the colors of markers / chalk you have. Then draw the eyes in the chosen colors with different colors for each set of eyes (NB: it's ok to have strange colors, such as yellow, more the eyes – this will just make it more fun).
- Elicit "hair" and again ask "What color is it? » On one head draw long hair in one color (for the girl) and on the other draw short hair (for the boy) in a different color. Teach / Elicit "long / short hair".
- Finally, you'll need to draw 2 bodies. But rather than you draw them you are going to ask for 2 volunteers to do the drawings. For the girl, draw some shoes quite near the head (so that she will be short) and for the boy draw some shoes right down at the bottom of the board (so he will be tall). Have the students draw the bodies so that they join the heads with the shoes.

Now it should end up looking something like this:

- Now that the completed pictures are on the board, chorus 3 times the following sentences and point to the pictures as you do:
- He is tall.
- He has short hair. (GB: He's got short hair.)
- He has (blue) eyes. (GB: He's got (blue) eyes.)
- He has (orange) hair. (GB: He's got (orange) hair.)
- She is short
- She has long hair. (GB: She's got long hair.)
- She has (green) eyes. (GB: She's got (green) eyes.)
- She has (brown) hair. (GB: She's got (brown) hair

2. Do "Funny Body" drawings

Give a piece of A4 paper to each student and yourself.

On your piece of paper, model drawing a head with eyes, nose, ears, mouth, teeth and hair. Make it a really funny picture. Then tell everyone to draw their funny head. Make sure they use colors for the eyes and hair.

Next show them how to fold the paper so only the neck shows (so the head is folded behind). Then get everyone to pass their paper to a different student.

Now model drawing the body starting from the neck and going down to ankles –make it either a really short or long body and make it as funny as you can. Now have your students draw their bodies.

Again, shows everyone how to fold the paper so only the ankles are showing and have everyone pass their paper to another student.

Finally, model drawing funny feet and get everyone to draw feet on the heir pictures. Then get everyone to fold up their papers and return each piece to the person who drew the head.

Let everyone open up their paper and have a good laugh at the pictures. Now asks everyone to "present" their person in the drawing to the rest of the class – you model first (e.g. "This is Tom. He is short. He has pink hair (GB: He's got pink hair), etc.").

Play the "Describe Your Friend" song and do the active listening worksheet

Tell the class that they are going to listen to a song about a boy and a girl. Give out either "Describe your Friend Worksheet 1" or "Describe your Friend Worksheet 2" (worksheet 2 is better if you cannot print out colored worksheets).

Read the instructions to the class and then play the song. As they song is playing students should do the worksheet activity. Play the song again if required. Finally, go through the song one more time stopping to check answers.

If everyone enjoyed the song, you can play it again and have everyone sing along (especially as it's such a catchy tune!).

CONCLUSION

During my teaching I realized how important English classroom atmosphere is for both learners and teachers. Learners need to feel comfortable in order to be able to learn and develop positive attitude towards the English language as well as teachers need to feel good in the classroom in order to be able to use and keep developing their teaching skills. Realizing this I decided to address this topic in this in learning more about the factors that influence classroom atmosphere and the ways teachers can improve it.

All these factors, mentioned in the last chapter of the theoretical part of this thesis, take part in creating the classroom atmosphere specifically in English lessons and can be influenced by activities teachers can incorporate into their lessons regularly as it are one thing to create a good classroom atmosphere and another to maintain it throughout the existence of a group of learners.

Language lessons also provide great opportunities for incorporating interactive activities improving classroom atmosphere and not being too worried about the time loss and being behind in terms of the syllabus as these activities can be created to have both didactic as well as psychological function.

In order to have a good cooperation in a group it is important for the members to contribute and participate somewhat equally so everyone has a chance to practice their language skills and therefore improve. According to Hadfield equal participation also plays a significant role in learner's individual motivation to cooperate and be active during lessons as well as in the process of maintaining or establishing a cohesive group.

Some group members differ a lot in terms of their participation in the lesson usually due to their personality, their temper and communicativeness or due to their level of language confidence.

To encourage shy students to participate more or overly active students to realize they should give other people a chance to express themselves a teacher should choose activities which wouldn't cause active students to loose enthusiasm and shy students feel too much pressure. To mention an example of such an activity the well know taking turns by passing or throwing of a soft ball during discussions is according on my experience rather effective.

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The Importance of Distance Education for Adult Students in Uzbekistan

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ABSTRACT

In this article, we review the results of a study aimed at comparing the shortcomings and achievements of distance learning in technical higher education institutions, a survey of older students on the experience. The survey was conducted using a 10-question questionnaire via telegram messenger.

KEYWORDS: *respondent, adult students, advantages and disadvantages of distance learning, e-learning*

Some employers are reluctant to allow their employees to be trained during working hours, even though they are required to have higher education or developing of skills. One way to resolve this problem is through a form of distance learning that is gaining popularity around the world. The distance learning form allows older students to study without attending the full-time form of education. There are many examples of this category of students, such as women with young children, pregnant women, single mothers, people with disabilities, day shift workers, and so on.

Distance learning is a comfortable shape of education for people who for some reason do not have the opportunity to study in full-time departments of educational institutions, for example, those who do not obtain good health, intend to change their profession or are older and aim to improve their skills on distance learning .

Distance learning uses a variety of information and communication technologies, meaning that each technology depends on the purpose and nature of the problem. For example, while traditional print-based teaching aids (textbooks, manuals) are based on introducing students to new material, interactive audio and video conferences allows them to communicate with each other over a period of time. And e-mail is designed to provide with sending and receiving messages. Pre-taped video lectures allow students to listen and watch lectures, while facsimile communication, messages, and the rapid exchange of assignments over the network allow students to teach through adverse communication.

To date, "scholars from a number of distance learning institutions in foreign countries have conducted research and expressed differing views on distance learning.

The United States Distance Learning Association (USDLA) defines distance learning as the means by which a learner and tutor are in different geographic locations to organize the learning process.

One of the foreign experts in the field of distance learning points to the two main features of the distance learning process in explaining the term "distance education": whether the training is in print and video or audio-written, as well as, emphasizes that the organization of communication is remote communication with various modern technical means.

Also, the concept of distance learning and other related terms have been widely analyzed by scientists and leading specialists of the CIS countries:are A. A. Andreyev, Ye. S. Polat, A. M. Bershadsky, V. A. Slastenin, V. P. Tikhomirov, I. K. Shalayev, A. V. Khutorsky, M. V. Moiseyeva and from Uzbekistan A. A. Abdukadirov, A. X. Pardaev, A. Parpiyev, A. Marahimov, R. Hamdamov, U. Begimkulov, M. Bekmurodov, N. Taylakov.

Ye. S. Polat teaches distance learning to all components specific to the learning process, in which the interaction of tutors and learners with each other is carried out remotely and through special tools specific to the Internet or other interactive technologies. (goals, content, methods, organizational forms, teaching aids).

A. A. Andreyev analyzes the various definitions and argues that distance learning takes place in a specific special didactic system in which the interaction of teachers and learners and their interaction with educational tools is invariant to their location in space and time. It is a goal-oriented, organized process of interactive activities."

During the teaching semester, there are two or three meetings between students and teachers at the university, and the next lessons are held online. The planned physical meetings of students and teachers have the following form and purpose. At the first meeting before the start of the course, students learn what to expect from them. During the introductory meeting, students will be introduced to the online environment. In addition, another meeting will be held throughout the semester to re-motivate students and address their learning challenges. Finally, the final meeting serves as an assessment of the course.

The quality of the research depends on the purpose, so our goal was to understand the students, listen to their opinions, and summarize. Great attention was paid to the interpretation of the event by the participants themselves.

A total of 45 cases were examined as part of the study. All respondents (respondents or respondents) belong to the middle-aged adult group, ranging in age from 25 to 35 years. Of the respondents, 22 were employed, 4 were pregnant women, 15 were respondents with young children, and 4 were respondents with disabilities. All respondents studied in the traditional form of reading, so they can compare both forms of study.

The main method of data collection was in the form of short test questions via telegram channel. Students took part in two surveys conducted at different times. In collecting and refining the data, we have in some cases also used online conversations using electronic means of communication. All data is saved and archived on a computer. This survey is constantly being analyzed.

In summarizing the result of the study, we have summarized the points that are close to each other. Because our research is based on a qualitative approach, we take into account its methodological boundaries; basically, the findings cannot be generalized to cover the entire population because of being only interviewed older students.

Based on the results of the research, we can formulate several recommendations for practice: The distance form of education is mostly positively evaluated by students. Adult students find this form of study less demanding in terms of time spent. This form of training is not considered to be as problematic when it comes to family, work, and academic performance. We therefore recommend the development of distance learning for older students. We recommend expanding the form of distance education, as well as other forms of education, by increasing the coverage of young people in higher education. As the study shows, distance learning is a truly appropriate form of education for older students who often have to deal with the issue of reconciling family, work, and study responsibilities. It is also very suitable for students who work in shifts, who face difficulties in reconciling work and study tasks when learning a combined form of work. Distance learning is also suitable for parents of young children, mothers on maternity leave, who are limited by the study of family responsibilities. The form of distance learning is sufficient for them to be able to complete their study tasks at a time that suits them, and they should not waste time going to an educational institution. According to the study, the fact that distance learning is also suitable for students with disabilities solves the problems associated with travel difficulties for them.

Many respondents in the survey indicated the following problem because they felt problems of social isolation and social distance. Students reported a low level of communication with the teacher, missing classic lectures, and frequent personal consultations. We recommend that you solve this problem by creating a virtual audience and organizing video lectures using zoom, telegram messenger. There should be an introductory meeting to introduce students and teachers to the content ofindividual subjects and the requirements for their successful completion. Chat on the platform, which is used for personal consultations on possible problems and misunderstandings, is resolved through forums. In addition to meetings and virtual lessons from participants, we encourage students to contact teachers frequently via email, phone, or telegram messenger.

The virtual audience will be a worthy substitute for the lecture, as this interactive web tool is for people who can communicate with each other and read the lecture remotely with the interactive information of the speaker listeners. allows you to arrange a meeting without. It is then possible to download the entire course for self-study.

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Solution of Problems on Conservation Laws of Baryon and Lepton Charges

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ABSTRACT

This article is devoted to the conservation laws of Elementary Particle Physics, those have a universal and approximate nature, that is, some of them are enforced in all possible interactions and have a universal character, and some of them is enforced in some interactions only and violated in others, mainly to the conservation laws of baryons and leptons.

KEYWORDS: *elementary particle physics, the principle of intersubject interdisciplinary, baryonic and leptonic conservation laws*

I. INTRODUCTION

Extensive research is being carried out to improve the efficiency of student's development of Elementary Particle Physics on the basis of the principle of interdisciplinary communication [1-3]. For this, aspects of the conservation laws of Elementary Particle Physics were studied in relation to the application of other sections of physics and chemistry [2] and the role of this section in relation to other disciplines from the point of view of the object of research [3]. It is known that, unlike other branches of physics, the conservation laws in Elementary Particle Physics have a universal and approximate nature, that is, some of them are enforced in all kinds of interactions and have a universal character. some are preserved in some interactions, while in others they are violated, that is, they are approximate [4]. In this study, the laws of conservation of baryon and lepton charges, their great importance are described. Universal conservation laws are fulfilled in all basic interactions, and in approximate laws - only in some.

Laws of conservation of energy, momentum, and angular momentum are universal conservation laws. The conservation laws of all charges also universal conservation laws (we will discuss them below) [5].

The need to introduce charges (other than electricity) was compared with experimental data, which could only explain the existence of charges of a non-electrical nature. Each of these charges describes a certain intrinsic property of the particle.

II. MATERIAL AND METHODS

For elementary particles, much more conservation laws are satisfied than for macroscopic processes. All these laws are subdivided into exact and approximate ones. Exact conservation laws are fulfilled in all fundamental interactions, and approximate ones - only in some.

The laws of conservation of energy, momentum and angular momentum are exact. The laws of conservation of all charges are also exact (we will talk about them below).

The need for the introduction of charges (other than electric) was dictated by experimental facts, which could be explained only under the condition that there are charges of a non-electric nature, which are also conserved. Each of these charges characterizes some internal property of the particle.

Five charges are established: electric Q, baryonic B, and three lepton ones L_e, L_μ, L_r. For all elementary particles, these charges have only integer values (Q charge is the number of units of elementary charge e).

Baryon charge. If baryons and anti baryons are assigned a baryon charge such that

$$B=\begin{cases}+1 \text{ for baryons (nucleons and hyperons)}\\ -1 \text{ for antibaryons}\end{cases},$$

and all other particles have a baryon charge $B=0$, then for all processes involving baryons and antibaryons the total baryon charge will be conserved. This is called the baryonic charge conservation law.

For example, this conservation law determines the stability of the lightest of baryons - the proton, inhibiting the process

$$p \to e^+ + \gamma$$

which would ultimately lead to the annihilation of atoms, since the resulting positrons would annihilate with the electrons of the atomic shells.

It follows from the same law that an antibaryon can be born only in a pair with its own baryon. For example, an antiproton is born in the reaction

$$p+p \to p+p+p+\bar{p}$$

The law of conservation of electric charge determines the stability of the lightest charged particle - an electron, forbidding, for example, the process

$$e^- \to \gamma+\gamma+\nu$$

although it is permitted by all other conservation laws.

Lepton charges (numbers). There are three types of lepton charges: electronic L_e (for e and ν_e), muon (μ for and ν_μ) and tau L_τ (τ for and ν_τ). Here ν_e, ν_μ, ν_τ - electron, muon and tau neutrino, respectively. It follows from the experiment that these are different neutrinos.

We agreed to consider that

$$L_e = L_\mu = L_\tau = \begin{cases} +1 \text{ for leptons} \\ -1 \text{ for antileptons} \end{cases}$$

For all other elementary particles, lepton charges are taken to be zero.

The law of conservation of the lepton charge requires that during neutron decay

$$n \to p + e^- + \tilde{\nu}_e$$

together with the electron, an electron antineutrino was born, since the total lepton charge of these two particles is zero.

The law of conservation of lepton charge explains the impossibility of the following processes:

$$\nu_e + p \nrightarrow e^+ + n, \qquad \nu_\mu + p \nrightarrow \mu^+ + n$$

although they are permitted by other conservation laws. The processes

$$\tilde{\nu}_e + p \to e^+ + n, \quad \tilde{\nu}_\mu + p \to \mu^+ + n,$$

satisfying the lepton charge conservation law were observed experimentally. After it was experimentally established that ν_e and ν_μ are different particles, different lepton charges L_e and L_μ were introduced. Similarly, the situation was with the introduction of the tau lepton charge L_τ [6-7].

III. RESULTS

We consider some problems below.

Example1: Baryon number conservation.

Based on the law of conservation of baryon number, which of the following reactions can occur?

$a)\ \pi^- + p \to \pi^0 + n + \pi^- + \pi^+$

$b)\ p + \overline{p} \to p + p + \overline{p}$

Strategy

Determine the total baryon number for the reactants and products, and require that this value does not change in the reaction.

Solution

For reaction (a), the net baryon number of the two reactants is $0+1=1$ and the net baryon number of the four products is $0+1+0+0=1$.

Since the net baryon numbers of the reactants and products are equal, this reaction is allowed on the basis of the baryon number conservation law.

For reaction (b), the net baryon number of the reactants is $1+(-1)=0$ and the net baryon number of the proposed products is $1+1+(-1)=1$. Since the net baryon numbers of the reactants and proposed products are not equal, this reaction cannot occur.

Significance

Baryon number is conserved in the first reaction, but not in the second. Baryon number conservation constrains what reactions can and cannot occur in nature.

Example2: Lepton number conservation

Based on the law of conservation of lepton number, which of the following decays can occur?

$a)\ n \to p + e^- + \overline{\nu}_e$

$b)\ \pi^- \to \mu^- + \nu_\mu + \overline{\nu}_\mu$

Strategy

Determine the total lepton number for the reactants and products, and require that this value does not change in the reaction.

Solution

For decay (a), the electron-lepton number of the neutron is 0, and the net electron-lepton number of the decay products is $0+1+(-1)=0$.

Since the net electron-lepton numbers before and after the decay are the same, the decay is possible on the basis of the law of conservation of electron-lepton number. Also, since there are no muons or tau-leptons involved in this decay, the muon-lepton and tau-lepton numbers are conserved.

For decay (b), the muon-lepton number of the π^- is 0, and the net muon-lepton number of the proposed decay products is $1+1+(-1)=1$.

Thus, on the basis of the law of conservation of muon-lepton number, this decay cannot occur.

Significance

Lepton number is conserved in the first reaction, but not in the second. Lepton number conservation constrains what reactions can and cannot occur in nature.

IV. CONCLUSION

Like the law of conservation of momentum, based on the isotropic nature of our ordinary space, a particular momentum-spin is conserved in all interactions. These conservation laws are fulfilled in all processes occurring with particles, and have the property of controlling all processes in the world of particles. When studying the physics of elementary particles, the analysis of the fulfillment of these conservation laws by the example of specific processes will undoubtedly help to increase the efficiency development of this field. To this end, the next task in studying the fundamentals of elementary particle physics is to create a database that unites various processes involving particles and provides interdisciplinary developments, control questions for their amplification, reflecting the mass, spin and other characteristics of particles. Viewed as

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An Analysis of the Known Properties of Some Medicinal Plants

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ABSTRACT

The bounties of Mother Nature, the bounty of Mother Nature, are of great importance to the lives of mankind and all living beings. Fruit trees, vegetables, berries, melons and many herbs contain all the essential nutrients for human life, including protein, carbohydrates, fats, mineral salts, vitamins, physiologically active substances and many other health benefits. have Previously, the healing properties of the plant were discovered by chance, but later, after repeated and repeated vital tests and observations, it began to be used in folk medicine.

KEYWORDS: *xalq tabobati, dorivor usimlik, zamonaviy tibbiyot, kasallik, bezgak,dori-darmonlar, isiriq, dulana*

INTRODUCTION

At present, the measures used in folk medicine are taken into account by modern medicine, and some of them are used in business.

Many scientists have contributed to the fact that information about medicinal plants has survived to the present day. It is impossible not to dwell on the universal activity of our compatriot Abu Ali ibn Sina, one of the most famous scientists of Central Asia.

Abu Ali ibn Sina created more than 450 valuable works. However, over time, many of your works have not reached us.

Of the 240 works of Ibn Sina that have come down to us, 40 are related to medicine. Abu Ali ibn Sina in his book "Al-Qanun" gives information about the healing properties of about 900 plants and ways to use them. On the study of alkaloids in plants, our famous academicians O. Sodikov and S. Yu. Yunusovs have significant contributions. One of the scientists who has conducted extensive research on drugs and medicinal plants. Sakhobiddinov, Honored Scientist of Uzbekistan, Professor, Doctor of Pharmaceutical Sciences H. Kholmatov has great merits. About 40% of the drugs used in modern medicine are herbal products.

MATERIAL AND METHODS:

According to a number of scientists, drugs derived from natural resources have advantages over chemically-derived drugs. Because medicines made from plants donated by nature are considered almost uncomplicated.

Therefore, the industrial production of medicinal plants in our country is growing every year. Let's take a brief look at some of them:

Hawthorn (Crataegus pontica)

It belongs to the family of hawthorns and belongs to the family of trees or shrubs. The plant can grow up to 10 meters in height. The large leaves are blue-green, hairless, the upper and lower sides are sparsely hairy. The height and width of the leaves are almost the same size. The base is broad, ponasimon, divided into 5–7 pieces. Hawthorn flowers are arrow-shaped, pink, often in calconium-like complex inflorescences.

The fruits are red, yellow, fragrant and delicious, depending on the type. Hawthorn blooms in June and ripens in September. The diameter of the fruit is 15-18 mm, the diameter of the fruit of some hawthorn species can be up to 3 cm. The fruit has two or three seeds.

There are about 100 species of hawthorn. It is found in most parts of the globe. There are five species of hawthorn in our republic, which are solitary, in groups, or in hawthorns in almost all mountainous areas of the country, on small gravelly cliffs at an altitude of 1000-2000 m above sea level. (M.Nabiev. 1969)

Hawthorn berries contain 20% sugar, 8% fat, flavonoids, phytosterols, choline, acetylcholine, nutrients, carotene, vitamin C, organic acids, crategin. Some species of hawthorn growing in Uzbekistan contain vitamins V1, V2, RR, C, E.

Incense- (Peganum harmala)

a perennial herbaceous plant belonging to the family of ostriches, reaching 20-70 cm in height. The stem is several, branched. The leaves are slender, divided into several segments, gray-green in color. They are located along the stem and are unoccupied. The root is much deeper into the ground. The flowers are ok, up to 4 cm in diameter. The fruit consists of a multi-seeded, three-bowl pod.

The incense blooms in May-June, the fruits ripen in July-August. Incense is found in the southern region of Europe, the Caucasus and many parts of Central Asia, including our republic. Incense grows in the sandy loam steppes, sometimes in large forests and abandoned areas, near human settlements, in desert valleys. All organs of this plant are poisonous.

All parts of the incense contain from 1.5% to 6%, the seeds contain from 14.3% to 10% toxic alkaloids, garmin, garmalin.

In folk medicine, the decoction of incense is used in rheumatism, arthritis and other skin diseases, decoction of the herb in colds, malaria, neurasthenia, rabies, as well as in the prevention of hypothermia, toothache, asthma, influenza, headaches, gastrointestinal tract, It is widely used as a sedative and analgesic, as well as a sedative.

Incense is also used to prevent headaches and to disinfect the bed of patients with infectious diseases and to prevent the disease from spreading to other healthy people. Because its smoke can kill germs that spread various diseases.

Kiyik ut (Zizhora peadicellata). It belongs to the family of annual or perennial herbaceous plants belonging to the family of lizards. The plant can grow up to 60 cm in height, the leaves are small, linear, flat, short, the leaves are banded, hairy or less hairy.

The stems are thin gray. The flowers are spherical-round in three parts of the branches and form inflorescences. The petals are 7–8 mm, light purple. Kiyikot blooms in June-July, the seeds ripen in July-August. It grows on gravelly and rocky, brown soils in the north-south, south-west, slopes of the Kiyikot Mountains and at altitudes up to 2400 m above sea level.

There are more than 30 species of kiikot in Central Asia, West Asia and the Mediterranean, including 7 species in Uzbekistan. Kiyikot is used by the locals as a spice, medicine. The leaves, stems, and inflorescences of the plant contain about 2.5% of essential oils, including menthol, pulogon, pinene, and menthol. Kiyikut also contains vitamins, organic acids, trace elements and other substances. Kiyikut has been widely used in folk medicine since ancient times. In particular, the use of kiikot is recommended as a sedative for sore throat, gastric disorders, nausea, heartburn, restlessness. Infusions made from it are consumed in ulcers, diarrhea, inflammation of the colon.

RESULT AND DISCUSSION

Due to the large-scale production of wild onions and blackberries in Uzbekistan, their stocks (quantities) at the place of natural growth have significantly decreased. That is why these plants are now included in the Red Data Book of Uzbekistan. Therefore, the preparation of their natural raw materials at the place of growth has been stopped and they are being grown in farm fields as well as in places where they grow in the wild. There are many such examples. As a result of the constant increase in demand for medicinal plant products and its unsatisfaction at the expense of wild-growing plants, these plants have to be grown in irrigated areas. Sometimes the demand for rare medicinal plants is high, but they are widespread in the wild, in places inconvenient to collect (for example, belladonna growing in the mountainous regions of the Caucasus and Crimea, etc.) or in small quantities, scattered in large areas (eg in the European part of Russia)., but the rare medicinal valerian, etc.) grows, the preparation of the product of these medicinal plants is more expensive than growing on irrigated lands. Therefore, it is advisable to grow such plants in the fields of farms. The difficulty of preparing large quantities of raw materials for wild-growing medicinal plants, the complexity of using agricultural machinery to harvest it.

The product of medicinal plants grown in the plantation can be harvested under favorable conditions and during the period of accumulation of a large number of effective chemically biologically active substances using various mechanisms. If a valuable, much-needed medicinal product for medicine is made from plants that grow in tropical or subtropical climates, which are not found in our country, it is advisable to grow these plants in our country, if possible. Medicinal plants grown in irrigated areas are very different from wild-grown medicinal plants, i.e. there is no mixture of foreign plants in the medicinal plant product grown. Medicinal plants grown on the basis of agro-technical rules are fertile and rich in biologically active substances.

It is possible to increase the productivity of medicinal plants and the amount of biologically active chemical compounds in them by selecting high-yielding varieties of medicinal plants, mixing them or obtaining polyploid (increasing the number of chromosomes).

In Uzbekistan, medicinal plants are grown mainly on farms of the Ministry of Agriculture and Water Resources, located in different soil climatic zones. At present, special farms for growing medicinal plants have been established in Bukhara, Kashkadarya, Samarkand, Surkhandarya and Tashkent regions. In almost all regions of the country under the production associations "Pharmacy" there are areas for growing medicinal plants, where the relevant plants are grown at the request of regional pharmacies.

CONCLUSION

In short, you need to know how to use every plant and herb properly. Otherwise, the misuse or lack of information about plants that we consider medicinal can also lead to harmful consequences. Nowadays, stocks of naturally growing medicinal plants are declining under human influence. In order to compensate for this and meet the needs of our people, it would be expedient to increase the number of medicinal plants and plant them in irrigated areas, taking into account the soil and climatic conditions of Uzbekistan. In order to provide the pharmaceutical industry in Uzbekistan with raw materials for medicinal plants, it would be expedient to establish and increase the number of farms and specialized farms growing medicinal plants in the coming years.

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Spiritual, Political and Spiritual Training of Civil Defence Personnel and the Population

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ABSTRACT

It is known that natural disasters and other types of emergencies, accidents at enterprises and other emergencies can cause great damage to the national economy and to a certain extent endanger people. It is in such situations that the involvement of the civil defense organization in reducing casualties, preventing and mitigating the consequences of emergencies is of great importance. That is why all citizens should consider civil protection as a public affair, and the performance of civil protection duties should be understood as a patriotic duty of every citizen.

KEYWORDS: *civil, defense, peace, fear, anxiety, fatigue, situation, condition, spiritual preparation, emergency, Richter scale, mountainous territory*

INTRODUCTION

The Civil Protection (CP) of the Republic of Uzbekistan prepares its forces and equipment to protect the population, first of all, from emergencies that may occur in peacetime. It is no secret that our country is located in seismically dangerous areas of the world, ie the magnitude of earthquakes can reach 9 on the Richter scale, in addition, in the foothills - rapid earthquakes, floods in the valleys, accidents at industrial enterprises. In people who are exposed to this type of situation, it requires them to use all their strength and abilities in a state of extreme tension, which in turn leads to the appearance of various forms of mental stress. In such situations, qualities such as insecurity, fear, anxiety, fatigue, and restlessness appear, preventing people from carrying out certain tasks.

MATERIAL AND METHODS:

Civil defense in our country is a system of protection measures carried out in peacetime and in emergencies in order to protect the population, material resources, economic facilities, nuclear, chemical and bacteriological and other weapons. Civil defense structures are involved in the elimination of natural disasters in peacetime, as well as major industrial accidents. In the event of an emergency or in the event of an enemy attack, the Civil Defense organizations carry out urgent rescue operations in various poisoned areas and eliminate the consequences of the destruction in the republic, the country, regions, cities, districts and all sectors of the economy. services will be created.

Spiritual, political and spiritual training of civil defense personnel and the population.

Missiles - nuclear weapons and other types of weapons of mass destruction - affect people not only physically, but also spiritually. As a result of such weapons, unprepared people become discouraged, frightened, mentally and emotionally damaged. they are required to be able to hold their own, not to give in to excessive emotions, and to act with courage to overcome all obstacles. Because real life experience shows that only well-prepared citizens, who are spiritually, politically and spiritually prepared, can act with courage and determination in such emergencies.

In the case of armed struggle, especially the use of nuclear and other types of weapons of mass destruction, a radical change in the fate and methods of warfare will greatly increase the importance of the moral factor. The personnel of all categories of the population, especially the non-militarized Civil Defense organizations, and its moral, political and spiritual training are becoming more important and necessary than ever.

Spirituality refers to the character of human beings, which is formed on the basis of their inner feelings and perceptions of the heart, and is reflected in their attitudes towards other people. In general, it forms the Spiritual factor in the society - it is the spiritual wealth of the country, which reflects the intellectual potential of the population, which in turn serves as a factor in the realization of social, economic and defense goals.

It is known that natural disasters and other emergencies, industrial accidents and other emergencies can cause serious damage to the economy and to some extent endanger people. It is in such situations that the involvement of the civil defense organization in reducing casualties, preventing and mitigating the consequences of emergencies is of great importance. Therefore, all citizens should consider civil protection as a national cause, and the performance of civil protection duties should be understood as a patriotic duty of every citizen. The Civil Defense (CD) of the Republic of Uzbekistan prepares its forces and equipment to protect the population, first of all, from emergencies that may occur in peacetime. It is no secret that our country is located in a seismically dangerous region of the globe, where the magnitude of the earthquake can reach 9 on the Richter scale costs. In people who are faced with this type of situation, it requires them to use all their strength and abilities in a state of extreme tension, which in turn leads to the appearance of various forms of mental stress. In such situations, traits such as insecurity, fear, anxiety, fatigue, and instability develop, preventing people from accomplishing certain tasks.

RESULT AND DISCUSSION

Spiritual-political preparation refers to the fact that the units of the Civil Defense, with a single purpose for the personnel and the entire population, explain the nature of the government's policy, the interests of the state, the nature and purpose of the war to defend the motherland. it is understood to teach them to hold their faces in the most difficult conditions that may occur if they dare to ignite the flames of a new war.

As a result of spiritual and political training, the Uzbek people must embody such qualities as ideological maturity, political consciousness, high discipline, constant vigilance, devotion to the defense of the homeland and selflessness in situations where it is necessary.

Spiritual training refers to the mental qualities that strengthen the most necessary qualities in the population, and especially in the personnel of non-military units, including the ability to walk in the most extreme and dangerous conditions of modern warfare, to act boldly in accordance with moral principles. , to develop and improve the human spirit to withstand the hardships of war, all kinds of spiritual and physical hardships, to show perseverance, courage, activism and initiative, not to lose oneself even in the most difficult times.

It is accepted to divide the concept of "fear" that can occur in humans in emergencies into controlled and uncontrolled types. In the control variant, the person acquires a certain understanding of the danger and tries to avoid these situations. The uncontrollability, according to experts, is characterized by panic attacks and a lack of control.

According to E. Bishon, uncontrolled fear "can put a physically fit athlete in a very dangerous situation." In the same way, the opposite of this situation, that is, "despite his physical weakness, he can become a hero due to his spiritual maturity." It was found that the basis of the behavior of certain groups of the population in emergencies depends on the behavior of a particular individual in the group. At the same time, the solution of the problem of emergency response by a certain team depends on the behavior of a certain group.

Spiritual, political, and spiritual preparation are interconnected and interdependent processes. He is a man whose spiritual, political and psychological qualities are manifested in his objective activity; Its purpose is to influence the human mind and psyche, to educate highly intelligent and courageous defenders of the Motherland. In this single process, the spiritual and political readiness of the population is a decisive factor.

Spirituality is the most important aspect of political and spiritual preparation.

One of the ways is to protect against mass weapons. It is important to make sure that every citizen, including the community, can get out of any dangerous situation with as few casualties as possible.

The enormous damage caused by nuclear weapons and the need to be aware of their consequences, as well as the potential damage to the population if defense facilities and equipment are used efficiently and rationally, are greatly reduced. If there is enough propaganda among the population, that is, to properly assess the harmful effects of nuclear weapons, to avoid the notion of neglect, to assume a dangerous situation, the whole population will not panic, and every citizen will be able to fulfill his duties. it must incorporate the necessary behaviors in the right approach. It should be borne in mind that the negative consequences of modern warfare, especially the damaging factors of nuclear, chemical and bacteriological weapons, are extremely dangerous, while at the same time sufficiently substantiating the dangers of such weapons.

CONCLUSION:

Another important aspect of spiritual, political and spiritual training is one of the rich traditions of the Uzbek people - the belief that it can strike at any enemy and drive them out of the borders of our country, to frighten them, that is, our citizens. helps to nurture spirits such as not panicking. If a citizen is in a state of panic or fear, then such people will not be able to act depending on the situation, and it is very difficult to think about self-defense. Of course, the role of practical exercises in the formation of features such as self-protection among the population is enormous. , his cases of mental anguish disappear.

Involvement of the population in practical training can be achieved only if there is a relevant educational and material base for the successful solution of the task of spiritual and psychological preparation. The basis of such a base is often a training camp, natural plots of land for work and houses belonging to various objects. These types of facilities are similar to wartime training facilities: fireplaces, smoky areas, dilapidated buildings and occupied areas, fake explosions, various flashbacks, and a variety of other incidents.

Another component of the spiritual, political and psychological training of the population is the task of propagating civic knowledge to the population. Also, this type of organizational work is widespread and all available means and methods are used for this purpose.

It should be noted that the process of high moral, political and psychological training of the population and its importance will contribute to the successful solution of the task of protecting the population from various emergencies, including increasing its reliability and effectiveness.

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Development of Creative Ability of Students in the System of Continuous Education (On the Example of Technological Training)

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ABSTRACT
At the present stage of deep economic and social changes in the development of our society, one of the main tasks of modern pedagogy remains the search for ways and means to improve the quality of students' education.

KEYWORDS: *innovative technologies, personal creativity, pedagogical technologies, multimedia, non-traditional education, vocational education, thesaurus, hobby, maevitics, master class*

INTRODUCTION
The development of the world is constantly being supplemented by human discoveries. This is an objective fact. Regardless of the content, essence, and name of the stages of development in the history of mankind, the human factor, its education and upbringing remain the social order of society's development. Because the harmoniously developed person is the basis of the development of society.

Methods and results:
Today, in the education of the younger generation, the inculcation of the main directions of the national idea in the minds of students, the effective use of artistic education, the formation of spiritual and political worldviews of students, as well as the development of creative abilities. "How to cultivate creativity in a person?" The problem is not that today. The issue of developing human creative abilities, which has always been the beginning of creativity, is of interest to both educators and researchers directly involved in the education of children. Education and upbringing, the formation of personality, the development of skills are still the most pressing issues of modern pedagogy. As it is being studied, many psychologists have conducted and continue to conduct research on the subject of what abilities mean in the broadest sense and artistic creativity in particular. Among them are B. M. Teplov, R. S. Nemov, S. L. Rubinstein, B. G. Ananev, L. S. Vigotsky. The work of A. N. Leontev V. S. Kuzins can be especially noted. Their research explores content, essence, and the concept of ability. BM Teplov writes that ability is a special mental trait of a person, a trait that is related to the successful performance of any activity, previously developed by man and does not lead to any results. . S. L. Rubinstein believes that abilities are attached to a generalized system of mental activities in an individual, and that the difference between abilities and skills is not the result of consolidating modes of action, but mental processes of actions controlled by actions. **[8, C. 11]** V. S. Kuzin thinks about abilities as follows: “abilities are the qualities and characteristics of a person that serve to perform a certain type of activity at a high level. ” According to this definition, any ability is the result of some activity, includes quality and features that meet the requirements of the activity and are necessary for itself. Skills are divided into general and special skills. The visible abilities to one degree or another in all human activities are called general abilities. Special abilities are seen only in certain types of human activities (creative, pedagogical, etc.). In addition to the two groups of abilities, A. Kovalev will have a third group - abilities in relation to practical activities. These include technical-constructive, organizational and pedagogical skills. At the heart of this diversity are three different types of activities that place their demands on human abilities: science, art, and practice. This diversity of abilities is the knowledge corresponding to the understanding of abilities, which was previously based on the three types of activities by B. G. Ananev, which include:
- ➢ communication skills related to the exchange of ideas;
- ➢ ability to work related to work;
- ➢ professional suitability

V. I. Kireenko, A. G. Kovalev3, N. N. Volkov, V. S. Kuzin were engaged in the study of artistic abilities related to creative activities. V. I. Kireenko distinguishes the following from artistic abilities.
A. perception;
B. assessment of deviations from vertical and horizontal lines;
C. evaluation of light ratios;
D. evaluation of mutual ratios;
E. assessment of prospective reductions;
F. visual memory

In turn, in the system of creative abilities can be mentioned more basic and auxiliary qualities. According to V. S. Kuzin, additional features of artistic abilities include:
1. high level of natural vision (line, shape, proportion, color perception) that develops during the process of activity;
2. the property of hand movement, which allows you to quickly master new techniques. **[4, C. 43]**

The features listed above are interrelated and their membership is crucial for the development of artistic creativity. Factors in the formation of students 'skills and abilities in the workplace include the need to not only create items in technology classes, but also to explain the elements of nature and thereby develop students' interest in nature, observation. Based on the results of her research, PN Nikonorova emphasizes that working on tasks in various materials and techniques in the workplace is an important condition for the development of children's creative initiative, imagination and imagination.

The great changes taking place in the society put before the school the task of solving problems related to the formation of a creative student's personality in all spheres of educational activity. The development of creative abilities is one of the key factors in finding solutions to these problems. **[6, C. 27]**

The educational process is in step with the times and requires new innovative technologies. Important elements of the innovative pedagogical process are individual self-management and self-mobilization. One of its most important directions is the development of students 'cognitive activity, which leads to the activation of students' academic work and the activation of professional specialization. Given the new conditions of our lives, the use of computer tools and information technology in the educational process can be explained by the increase in the volume of information, communication, scientific and technological development in society. Innovative technology, which provides a step-by-step pedagogical activity, is a process of mastering and developing modern innovations aimed at the formation of an active, creative person who can independently build and make adjustments to the vital learning activities of the future specialist. Pedagogical innovation aims to improve the quality of the educational process and change the quality and quantity of pedagogical practice. **[1, C. 5]** Modern education cannot be imagined without multimedia technologies that increase the ability to use text, graphics, vi-deo and animation and thus the computer in the learning process. Along with seeing the proposed image, the student's thoughtful thinking helps the material to be perceived as a whole. They will have the opportunity to combine theoretical and visual materials. When visual information is used, the formation of imagination is on average 5-6 times faster than verbal expression. Human exposure to visual information is much higher than to verbal information. In most cases, he will miss the last one. Repetition of visual information is easier and more accurate. A person's trust in visual information is higher than verbal information. It is no coincidence, therefore, that it is better to see once than to hear a hundred times. **[3, C. 41]** In order to strengthen the knowledge and develop thinking on the topic of training in the process of technological science, innovative educational technologies (projects), interactive methods, effective use of graphic organizers can be used. The use of various non-standard tests aimed at determining the level of intelligence, professional competence of students is carried out through computer tools. In this case, the test tasks are not only the expression of words, but also in the form of animated sheets. The use of computer technology is very interesting, it is welcomed by them, students are involved in serious creative activities that nurture their personal qualities. Visual artistic ornaments create a positive emotional environment, and gradually certain cultural and moral features begin to appear in students, broadening their worldview. The tendency to share information on the computer creates opportunities to reconstruct it from the organization of a traditional lesson. Lessons will be more effective if they are based on:

- thesaurus - a system of concepts that provides teachers and students with the same meaningful explanations;
- fascination - the attractiveness of the presented material increases the interest in the subject;
- Mayevtika - develops the principle of joint creativity of teachers and students, the acquisition of in-depth knowledge, understanding of the process of making and understanding the process of creation and the ability to apply the information in practice;
- Conducting classes with multimedia presentations, such as stories, presentations, demonstrations of new material in the form of reproductions;
- Preparation for lessons using the classroom, library or personal computer at home, homework - collecting information, working on the text, creating multimedia;
- The organization of computer-based tasks and independent work of students in the classroom, in small groups; this allows for a high level of implementation of a private approach to education;
- selection of the optimal option of the educational process, increase its efficiency, elimination of overload in teachers and students; it is an interdisciplinary interdependence.

With the help of innovative technologies, more attention will be paid to classes that allow for a broader and holistic understanding of works of applied art. Analysis of works of applied art through computers, the use of various audio texts, music, animation in the organization of virtual tours of museums, practical testing of the interdependence of fine arts, literature, music and artistic creativity, innovative technologies serve to invigorate students in the classroom. The interdependence of education increases students 'interest in learning and the arts. Under the influence of material content and new teaching methods, the student develops the skills of thinking, research, discovery, substantiation, application of innovations, communication as a means of learning on the computer, the experience of independent creativity increases. When the new generation is actively engaged in multimedia technologies, students' perception of works of art is formed faster. The active use of innovative technologies in the teaching of technology helps to develop students' ability to perceive works of art, to develop the ability to work with computer programs, to increase the spiritual value of knowledge and skills.

Today, computer technology is a key tool for imparting knowledge in accordance with the new content of education and personal development. This tool allows the reader to read with interest, find sources of information, independence in the acquisition of new knowledge and fosters a sense of responsibility, develops intellectual discipline. The use of new pedagogical innovative technologies in the teaching process in order to increase the efficiency of the educational process, the formation of strong theoretical knowledge, skills and abilities of students, the development of their creative activities, their professional development is a matter of urgency and social necessity. The application of these technologies in the educational process provides a qualitative change in the content of the overall process aimed at training. The educational process, organized on the basis of the ideas of the theory of new pedagogical technologies, will contribute to the quality of the implementation of the social order in the education of a well-rounded person and a qualified specialist. The development of the activities of a mature person and qualified professionals in the process of social production leads to the acceleration of social development. Realizing this, many educators are making effective use of computer tools in the application of innovative technologies in technology lessons. They use these tools as a "master class" on the subject, a trip to world museums, great use of video demonstrations, graphic organizers, non-standard tests, consisting of analysis of works of art.

The following general conclusions have been drawn about the possibilities of using them in technology lessons:
1. The computer has a convenient and wide range of opportunities to achieve a positive result in improving teacher-student communication.
2. Ensures that the use of visual aids and reproductive methods in education rises to a new and qualitative level.
3. The use of information and communication technologies in the classroom is a form of education, serves to expand the scope of knowledge of students, concentrates, increases the creative potential of the individual.
4. The use of projectors for working with texts, facilitates the demonstration of educational videos, increases visibility, saves time.
5. Get acquainted with electronic encyclopedias, organize virtual tours of museums and exhibition halls around the world.
6. The use of computer technology develops students' ability to work independently, such as searching for, finding, selecting, and gathering information over the Internet.
7. The use of tests not only saves time, reduces the consumption of materials, but also allows you to objectively assess their knowledge and capabilities.
8. The use of computer technology in the classroom leads to an increase in students' interest in technology and the quality of education.
9. Observation of patterns, drawings, tables in bright and interesting forms, viewing objects by means of photos and videos, clear perception of the material on this or that subject, helps to describe the selected material in an interesting way.

Conclusion:

Thus, the use of innovative technologies in the classroom and outside the classroom saves time, develops personal creativity, allows you to properly organize educational activities on the basis of psychological and pedagogical knowledge. In addition, the use of innovative pedagogical technologies in technology lessons:
- Develops students' cognitive activity and activates the learning process;
- a large amount of work is done in a short time;
- Accelerates the process of testing students' theoretical knowledge;
- strengthens knowledge and skills;
- leads students to active creative activity outside of class hours.

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"Methods for the Study of Digestion in the Oral Cavity" The use of Multimedia Technologies in the Study of the Topic

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ABSTRACT
The use of alternative methods in the study of the physiology of the digestive system in the modern education system, information and pedagogical teaching technologies plays a rather large role. Increasingly, multimedia technologies are being used in training, which enrich the learning process and make it more effective by involving most of the sensory components of the student in the process of perceiving educational information. Multimedia technologies make it possible to programmatically combine text, graphic, and animated slides with the simulation results of the processes under study.

KEYWORDS: *multimedia technologies, mastikaciography, Biopac, amylolytic activity, salivary amylase*

INTRODUCTION

Currently, one of the promising areas for improving the educational process is the use of multimedia (MM) technologies. The use of MM technologies opens up new opportunities in organizing the educational process, as well as in developing the creative abilities of students [1,4]. The advantage of using multimedia technologies is the operational use of information, the combination of audio and visual material, animations, etc. This makes it possible to implement the classical principle of didactics - the principle of clarity - at a new, qualitatively higher level. Multimedia technologies enrich the learning process, make learning more effective, involving most of the student's sensory components in the process of perceiving educational information. Thanks to multimedia technologies, oral speech has changed from static to dynamic, that is, it became possible to track the studied processes over time. Multimedia technologies can be used both for individual distance learning with interactive properties of control of acquired knowledge, and for group. They activate educational information, make it more visual for perception and easier to assimilate.

Methods

A multifunctional complex for electrophysiological studies Biopac Student Lab is used to record a mastikaciogram. The complete set of the equipment allows to conduct demonstration practical classes on all topics of human physiology presented in the curriculum. This complex contains a whole range of classical and modern clinical methods for studying the functional state of the human body. Among which there are 9 basic and 11 additional methods. Mastikaciography (face electromyography) refers to additional methods.

Results

As an example, we give one lesson on the topic "Methods for the study of digestion in the oral cavity." In this lesson, the following work is performed:

1. Mastikaciography. MM program "Biopac student lab".
2. Observation of the amylolytic activity of saliva. MM program "Practical Physiology".

Mastikaciographyis a method of studying the chewing movements of the lower jaw. The graphic study of the chewing movements of the lower jaw makes it possible to establish the sequence of cycles of the chewing process, the ratio of the duration of the individual phases of the chewing period and the nature of the chewing movements, which differ in individual characteristics. With the help of mastikaciography, it is possible to determine the time of the chewing cycle before swallowing and the duration of its individual phases, the number of chewing movements, the magnitude of the amplitude of mouth opening. The quality of the chewing process affects the digestion and absorption of food, stimulates the reflex activity of all parts of the digestive tract and is of great importance for the study of digestion in the oral cavity in health and disease [1].

In order to optimize the experiment, a modern Biopac apparatus with a multimedia program "Biopac student lab" is used to study the functional characteristics of the chewing process.

Calibration:
1. The subject should sit in a relaxed state, breathing normally with his mouth closed.
2. An imitation of one cycle of chewing movement is made (2 sec.).
3. One oscillating movement of the curve is noted on the monitor.
4. The whole process of calibration during registration takes 8 seconds.

Check in:
1. Turn on to Record - record.
2. Introduce food into the mouth and begin the chewing recording process.
3. Chewing is registered on the monitor with a time stamp on the lower scale and a mark of the amplitude of jaw movement on a vertical scale.
4. At the end of the recording, the Done mode is entered.
5. The sensor is removed from the patient.
6. The description of the steps of data analysis is made.

On the curve of the mastikaciogram, the chewing phases are sequentially recorded (within 18 seconds):
1. rest phase
2. The phase of introducing food into the oral cavity
3. Trial chewing
4. Main phase of chewing
5. Formation of the food lump

The proposed method allows you to make a high-quality record of the chewing process with step-by-step registration, carrying out the necessary stages of analysis and obtaining a printout of the graphic results of the experiment.

To determine the amylolytic activity of saliva, the multimedia program "Practical Physiology" is used. The program "Practical Physiology" contains materials for 8 sections: heart, nervous, muscular, respiratory, endocrine, digestive systems, excretion, central nervous system. Each section includes from 4 to 6 experiments with descriptions of the theory, technology for conducting experiments using a virtual 3-dimensional image. This program allows a great depth of experience, the student can work in an individual time mode, repeat parts of the exercises, use theoretical material, learn technologies for conducting experiments, bringing the experience to confidence in the correct results [1].

Each lesson has theoretical material on the topic with graphics, animation, explanations, the possibility of individual manipulation and a practical part describing the implementation. This program is used as a teaching system for the entire physiology course.

In the experiment, the substrate specificity of salivary amylase is determined. Principle of action:

Saliva amylase is mixed alternately with three carbohydrates (starch, sucrose, cellulose), which have a different structure. Add 10% NaOH and CuSO4 solution

To identify monosaccharides, the Trommer reaction is used, and the red color that appears at the end of the reaction proves that only starch is broken down by this enzyme. Salivary amylase is a glycolytic enzyme, the main substrates of which are starch and glycogen [2]. The activity of this enzyme is enhanced by Cl^- ions. The most effective amylase is at a temperature of 37-38 ° C and in a slightly alkaline medium (pH = 7.5-8.0). Enzymes, being biologically active catalysts, have the so-called substrate specificity, which means the ability of an enzyme to identify a certain substrate and interact only with it (absolute substrate specificity) or to identify 2-3 substrates and interact only with them (relative substrate specificity) [3]. After the theoretical part of the topic, a technology is provided for step-by-step work:

1. Add starch and saliva amylase to the test tube;
2. Press the "Start" button on the thermostat;
3. After the incubation period has elapsed, add a few drops of NaOH to the test tube;
4. Add a 10% CuSO4 solution to the test tube;
5. Press the "HEAT SAMPLE" button. The contents of the test tube boil;
6. Determine the color obtained as a result of the experiment;
7. We repeat this experiment with sucrose and cellulose.

In a test tube with starch, at the end of the reaction, a red color appears, therefore, in the oral cavity, of the proposed carbohydrates, only starch is broken down.

Conclusion

The use of such technologies significantly activates educational information, makes it more visual for perception and easier to learn, improves the quality of teaching the subject, and reduces financial costs for animals.Multimedia computer technologies give the teacher the opportunity to quickly combine various means that contribute to a deeper and more conscious assimilation of the studied material, save lesson time, and saturate it with information.

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Avicenna`s Great Contribution to Mathematics

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ABSTRACT
This article is dedicated to the 1040th anniversary of the birth of the great scientist of Central Asia named Avicenna (Abu Ali Ibn Sina). The authors begin information about how Avicenna received knowledge from his mentors in childhood and clarify mathematical materials issued from books called "The Book of Knowledge" and "The Book of Healing", which are of great importance among the scientific works of the scientist. These works describe the tasks of squaring numbers and their division, as well as information regarding elementary geometry, which must be given in sequential order. Along with this, it is said that Avicenna was also engaged in the proof of the fifth postulate of Euclid.

KEYWORDS: *arithmetic, geometry, straight line, plane, perpendicular, Euclidean geometry, book of knowledge, book of healing, proportion, postulate, axiom, square, cube, remainder*

Avicenna was born on August 16, 980 in the village of Afshona, near Bukhara. Avicenna`s real name Hussein. As it was known from history, his father, Abdullah was a noble man of his time. After the Abdullah`s family moved to Bukhara in 985, Avicenna began to study the concept of mathematics (arithmetic, geometry, algebra) with his first mentor Mahmoud Massakh. So far there hasn not been clear information about how long the boy took lessons from Mahmoud and how far he advanced in mathematics.

During the childhood and adolescence of Hussein, Bukhara was one of the most important cultural centers of the East. There were schools, libraries, hospitals at that time. Many officials, lawyers, scientists, philosophers, architects and doctors lived in the city.

An important stage in the Avicenna`s teachings came when the philosopher Abu Abdallah Natili arrived in Bukhara. Avicenna`s father took advantage of this circumstance, invited a visitor to his house so that he could study philosophy, logic, mathematics and other sciences with his son. Under his leadership, Avicenna worked on a number of the most important books "Eisagogue" on logic, "Elements of Geometry" by Euclid and "Almagest" by Ptolemy on mathematics. The boy soon surpassed his mentor. Whatever questions Natili posed, the student penetrated the essence much better than the mentor himself. In geometry and astronomy, Natili was insufficiently prepared. He taught the boy the first few theorems of Euclid, and the rest of the theorems must be comprehended by the boy himself. Astronomy classes were conducted according to Ptolemy's "Almagest". After the introductory part of this work was explained, and it was necessary to learn the formulas. Natili made the student learn instructions and the theorems independently in the same. Then the boy showed him the ready-made results of his work. Continuing independently study geometry according to Euclid and astronomy according to Ptolemy, the boy was able to master the material well and understand the most difficult questions of these sciences. To the credit of the teacher, it should be noted that he was able to assess the abilities of his student and was sick with his soul for his future. Therefore, Natili convinced Father Hussein not to interrupt his son's teachings in any way.

Avicenna was only 15 or 16 years old when he began to study independently, quickly mastering the achievements of all the sciences known then, by the age of 17-18 Ibn Sina had already developed as a fully mature scientist. Among other facts, it was evidenced by his correspondence with Abu Raikhan Beruni in 997.

In the scientific works of Avicenna "The Book of Knowledge", "The Book of Healing", opinions related to mathematics are given.

I. "The Book of Knowledge" is the greatest work of 1924-1937 by the great scientist of Central Asia Ibn Sina. This work comprises parts of philosophy, logic, physics and mathematics. According to the recollections of Avicenna's student Abu Ubaydo Juzjan, parts of the mathematics of the book "The Book of Knowledge" were lost.

This part of mathematics was restored by Juzdzhana from treatises written by Avicenna on the basis of geometry and astronomy.

The part of mathematics given in the book "The Book of Knowledge" was devoted to geometry and consists of 12 sections. Here we can see that the relative positions of straight lines in space and plane are stated. Along with the concepts with the given definitions, he skillfully used the proof of the theorem, constantly compared them with the methods of proofs of Euclid. These materials were based on the book "Inception" and were given data in school geometry courses. For example, in this section, the statement is considered, if two lines intersect on a plane, and the third line falls perpendicularly to the point of intersection of these lines, then this third line is perpendicular to any line drawn through the point of intersection on this plane.

Therefore, the materials in this section can be fully used by students studying the basics of geometry.

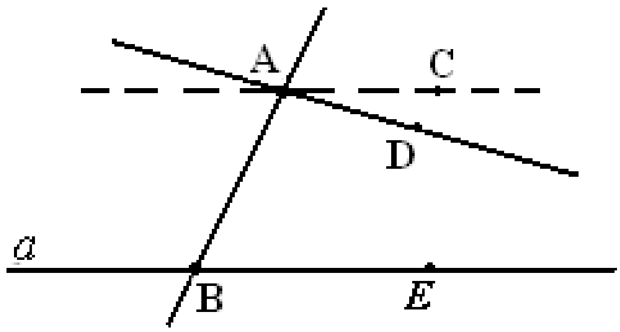
The second part of mathematics of the book "The Book of Knowledge" is devoted to arithmetic and consists of seven sections. The first section describes the types and general properties of numbers. Here are given the divisions of numbers into even and odd numbers and their properties. The second section deals with even numbers. It describes about even-even numbers, about even-odd and about the properties of these numbers. The third section talks about odd numbers and the fact that they come in three forms, as well as their properties. They are composed of prime, compound and reciprocal prime numbers. The fourth section talks about "imperfect" and "perfect" numbers. It describes the characteristics of division and the properties of numbers into three types based on the equality or inequality of the sum of divisions of these numbers. The fifth section talks about "excess" and "insufficient" relationships and their properties. The sixth section is devoted to "complex" relationships and statements over numerical examples. The seventh section describes the types and properties of proportions.

II. Ibn Sina's book "The Book of Healing" is one of the valuable works in his life. This work is similar to the book "The Book of Knowledge" and is divided into large books called "Logic", "Physics", "Mathematics" and "Metaphysics". The book "Mathematics" of his works consists of the sections "Abbreviated Euclid" or the foundations of geometry, "Abbreviated Almagest" and "Arithmetic". The "Abridged Euclid" section of this book is divided into 15 sections, and the information on the basics of geometry is presented in a similarity to the book "Inception" of Euclid. In this part, the concepts of geometric figures in plane and space are given and their properties are considered. It is also worth noting here that these geometrical materials are not a direct translation of the book "Beginning", because the required materials of mathematics in kration, expressed by their opinion, enriched this part with accurate information. For example, besides the 5 postulates, Euclid gives the following postulates:

VI. Two straight lines contain no space.

VII. A straight line does not coincide in its direction with two straight lines at the same time.

Here you can see that the V postulate and the 9-axiom of Euclid are the same. At the same time, in this book, as well as in "The Book of Knowledge", scientific researchers were done to prove the V postulate of Euclid in the form of a theorem. The V postulate of Euclid is more complicated than the other four postulates, i.e. this postulate is presented in the following form: "If a straight line falling on two straight lines forms internal and on one side angles, in total less than two straight lines, then these two extended straight lines will meet indefinitely on the side where this sum is less than two straight lines." By virtue of this postulate, at most one straight line passing through A and not intersecting a can be drawn through point A outside the straight line a in the plane defined by point A and straight line a (in Fig. 1, the angles ABE and BAD are in total less than two straight lines and AD and BE intersect, the angles BAC and ABE are equal to two straight lines and the lines AC and BE are parallel). Here, this postulate was treated with suspicion, because people experienced the correctness of other Euclid's postulates on a daily basis in practice.



Picture 1 Euclid`s V postulate

Avicenna proved the fifth postulate by accepting without evidence the statement that "Two lines located on the same plane and not intersecting with each other are located from each other at the same distance." But this statement is equivalent to the fifth postulate.

The fifth postulate of Euclid plays a significant role in geometry. After Euclid Notable scientists of the world have been conducting research on the way to prove this postulate for several centuries. As a result of this, by the arrival of the 19th century, non-Euclidean geometry named after Lobachevsky appeared.

The "Arithmetic" part of the "Book of Healing" provides information on the methods of operations with numbers. Here are the rules for checking the validity of methods for raising numbers using the number 9 to the values of a square and a cube. After that, Ibn Sino designated the Indian method test using the number 9 squares with the following rules:

- If a digit is divided by 9, and the remainder is 1 or 8, then the square of this number is divided by 9, the remainder is 1.
- If a digit is divisible by 9 and the remainder is 2 or 7, then the square of that number is divided by 9 and the remainder is always 4.
- If a digit is divided by 9, and the remainder is 4 or 5, then the square of this number is divided by 9, the remainder is 7.
- If a digit is divided by 9, and the remainder is 3 or 6, then the square of this number is divided by 9, and the remainder is 9.

As we know, in his era, Avicenna, along with the spread of the mathematical work of Euclid and Ptolemy to Central Asia, developed and enriched them, and also had the talent to masterfully use them at the right time. Therefore, in awakening students' interest in mathematics and in educating them with the right people in society, it is important to familiarize them with the contribution of our great scientists to science.

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Interdisciplinary Connection of Foreign Language Teaching

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ABSTRACT
The main difference between language and speech is that language consists of a system of means, and speech is the process and result of using this system. Speech is a social phenomenon. The difference between speech and language is that speech is simultaneously an individual mental phenomenon, while language as a system is a social phenomenon. Speech is a evolving, changing, situational, and random event. Language, on the other hand, is an integrated system of internal relations, which, by its very nature, is a constant, fixed, unchanging phenomenon.

KEYWORDS: *methodology, scientific conclusion, psychology, sciences, society, process, language, similar phenomena*

INTRODUCTION
Methods of teaching foreign languages are in contact with a number of disciplines, such as philosophy, pedagogy, psychology, linguistics, methods of teaching the native language and Russian, and with their help develop scientific methods.

Methods of teaching foreign languages are directly related to the fields of pedagogy, didactics, educational theory, pedagogical psychology, speech psychology, youth psychology, neuropsychology, and linguistics, such as sociolinguistics, statistical linguistics, paralinguistics, text linguistics and psycholinguistics.

Methods of teaching a foreign language shape the worldview of students through the science of philosophy. These disciplines are divided into groups.
1. Linguistic sciences:
2. Psychological sciences:
3. Didactic-based sciences.

The difference between language and speech is its significance for methodology. The goals and conditions of foreign language teaching determine the size and nature of the language material. Depending on the facts of general and specific linguistics, the complexity of the linguistics of difficulties associated with the phenomenon of interlingual and linguistic interference is determined, and the selection and organization of educational material is carried out.

The solution of this whole set of problems is connected with the notion of linguistics as a science, the concept of sign language, language and speech, the functions of their interaction, language contacts.

Linguistics or linguistics studies languages as systems of signs (codes) that are accepted in a particular society and serve such societies in order to carry out the processes of communication. Recently, a new branch of linguistics, along with psycholinguistics, has begun to focus on speech activity as a process of transmitting and receiving information using language codes. The methodology examines the problems of language teaching, the problems of speech development in students, that is, the phenomena of linguistics. The existence of a serious connection between linguistics and methodology is determined by this. These connections are also characterized by the fact that the methodology, using the basic concepts and laws of linguistics, determines the specifics of the object of teaching. It is known that in modern linguistic literature there is no universally recognized idea of the relationship between language and speech.

Material and methods:
A group of linguists believe that the distinction between language and speech is legitimate and effective for linguistic theory. Other linguists believe that such differences do not lead to the perfect elaboration of general linguistic problems and do not correspond to the basic ideas of language development. The third group of linguists recognizes that language and speech can be distinguished and are useful, and that language and speech should not be opposed to each other, because language and speech are two sides of the same phenomenon. It is more difficult to agree with the latter opinion, because the unity of language and speech cannot be considered as events of the same nature.

Well-known linguist YA Shcherba shows that in language there are 3 aspects of speech activity, language system and text. According to him, speech activity consists of the processes of speaking and comprehension of speech, language system, dictionaries and grammars of languages, and language material consists of text.

Linguistic units are divided into systems according to the formal-semantic aspect. In speech, language units perform their function on the basis of communicative content. Distinguishing the concept of language and speech is very important for methodology. In modern linguistics, language is understood as a communicative code of social significance and rules for the use of this code, which is ingrained in the minds of people in a society. In other words, language consists of a system of language tools and rules of their use. Speech, on the other hand, involves the clarification of the language system in certain speech movements, that is, the process of communication, as well as the texts that are the product of this process. Taking such a difference into account is important for the methodology.

Result and discussion:
As Academician Shcherba. YA. B points out, literal knowledge of a language only provides knowledge of the language system, but it does not lead to the use of this system as a problem tool. In order to use language and practice, that is,

to master speech, it is necessary not only to know the means of language and the rules of their use, but also to be able to apply them automatically in speech. From the above, it can be concluded that the teaching process should take into account not only the strengthening of the skills of memorization and use of language tools, but also the practice of the problem, that is, the implementation of speech movements.

Language and speech units are distinguished based on the distinction between language and speech concepts. Units such as phonemes, morphemes, words and sentences are language units. Text linguistics, a new branch of linguistics, accepted text as a unit of speech, not speech. A sentence or sentence is considered a special form of the text.

Academician Shcherba YA.V considered the syntagm to be the smallest unit of speech. It is necessary to distinguish such units of language and speech and to know their peculiarities. Such material is taken from linguistics.

Recently, in connection with the development of structural linguistics, much attention has been paid to modeling. The development of models in linguistics has also been of great importance for the methodology of teaching foreign languages. Statistical models help to determine the specific features of texts in different forms of book writing style. This means that such models provide students with the material to create learning texts that gradually lead to the original texts. Such models define a set of language tools that can be installed to master reading, and the extent to which unfamiliar material can be introduced has been determined. Basic materials are even more valuable for methodology, because an infinite number of real statements are formed from basic models. Basic models consist of abstract features that characterize the final structures at the speech stage. Basic models are usually represented by the following symbols: S-subject, P-predicate, O-object, or N-noun, V-verb, A-adjective, Adv-form, and so on. In the practice of learning a foreign language, concrete sentences are used, not models in the form of abstract diagrams of sentence structure.

For example: The S-P-O structure may be consistent with the following original statements. I have written a letter.

Such statements, which reflect this or that model, are called tiskovoy sentences or speech patterns, because they act as a pattern or template. A large number of 3-element sentences with different lexical and grammatical forms can be formed accordingly. The appropriateness of the use of such patterns in the teaching of artificial speech is also confirmed by the psychological facts about the mechanism of speech. For example: NI Jinkin sufficiently substantiates his hypothesis about the preservation of syntactic patterns in the human mind. The statements are made in accordance with these diagrams. Therefore, on the basis of speech patterns in the minds of students suddenly remain a certain trace of structural syntactic drawing. With the development of structural linguistics, the separation of speech patterns or typical sentences has a solid linguistic basis, and the speech pattern itself has become the basic unit for teaching oral speech.

Speech activity in foreign language teaching skills is formed in the presence of a built-in native language system, in addition, the national school student is in the period of formation of the Russian language system. Therefore, in the organization of the process of effective teaching of foreign languages, it is necessary to take into account the evidence of general and specific linguistics and, in part, the language contacts, which is its special field. Special royalist and methodological research shows that the mother tongue and the language studied in the trilingual environment at school also have a negative impact on the teaching of a second foreign language.

Conclusion

The positive effect of poorly taught is that a number of skills in the native language are transferred to the acquisition of a foreign language. For example, the acquisition of reading skills, that is, the reading aloud of a graphically formed text, poses a great challenge to literate students learning a foreign language at an early age. Knowledge of the mother tongue system in learning a foreign language helps students, especially when there are sleep phenomena in the mother tongue and the languages being studied. Such a positive effect is called migration, because skills and abilities are transferred from the native language to a foreign language. At the same time, the mother tongue has a negative effect on the acquisition of a foreign language.

Its essence is that the student translates the usual norms of his native language into a foreign language. For example, students pronounce the sounds of a foreign language in the same way as the sounds of their mother tongue, introduce the norm of relatively free word order in the native language into Western European languages, explain the meanings of similar phenomena in the native language. incorrectly applies to language events.

Linguistic research shows that in the last period of the bilingual system, system 3 appeared, and its structure is characterized by errors.

Such a system is formed in the mind of the person learning the language. Errors are indicators of interference. It is necessary to develop the organization of the educational process, taking into account the peculiarities of the methodology, the comparison of the studied foreign language with the native language, taking into account the phenomena of interference and migration that occur during the contact of 2 language systems. The methodology should organize the learning process so that the phenomenon of displacement is widely used and the phenomenon of interference is prevented.

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Peculiarities of Neuromyographic Indicators in Adolescent Musicians with Pain Syndrome of the Cervicothoracic Spine

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ABSTRACT

The article deals with the clinical manifestations of juvenile spinal osteochondrosis. The main causes of the development of the disease. Pain syndrome, a typical symptom of adult patients, is rare in adolescents. Discomfort and quick fatigue of the back is often noted, which disappears after rest and does not hold the parents' attention. Neurological disorders: adolescents complain of headache, dizziness, increased general fatigue. Reflected pain and numbness of the limbs are almost never encountered. And what is the approach to treatment.

KEYWORDS: *Syndrome, symptom, spine, osteochondrosis, nerve roots*

INTRODUCTION

Juvenile osteochondrosis of the spine is not such a rarity in our time, and after all, thirty - forty years ago, the disease was considered purely "adult".

Osteochondrosis is a complex of dystrophic disorders in the articular cartilage.

It becomes clear if you look around: people move little, consume synthetic food and drinks, breathe conditioned air, live under the influence of a high level of electromagnetic and other radiation.

All this affects the metabolism in the body, the level of immunity, provokes the development of diseases, in particular, early osteochondrosis of the spine.

Clinical manifestations of juvenile osteochondrosis of the spine have their own characteristics. Pain syndrome, a typical symptom of adult patients, is rare in adolescents. Discomfort and quick fatigue of the back is often noted, which disappears after rest and does not hold the parents' attention. Neurological disorders are usually present: adolescents complain of headache, dizziness, increased general fatigue. Reflected pain and numbness of the limbs are almost never encountered. Hence a different approach to treatment is needed.

How to cure osteochondrosis of the spine in a teenager, parents will learn from a doctor (neurologist or orthopedist) after a medical examination, having received individual recommendations. Treatment of osteochondrosis and its complications is carried out using conservative methods aimed at eliminating pain syndrome, dysfunction of the spinal roots and preventing the progress of degenerative changes in the structures of the spine.

In children and adolescents, drugs of the NSAID group are rarely used, only with severe pain and a short course. The treatment is based on vitamins, physiotherapy, acupuncture, massage and exercise therapy. Swimming is useful. It is important to adhere to the daily regimen and proper nutrition for osteochondrosis of the spine. Adequate sleep and lack of anxiety will help strengthen the nervous system, and a balanced diet containing proteins, fats, carbohydrates, vitamins and minerals will support a good metabolism, including in the vertebral discs, bone structures, muscles and ligaments. Nutrition for osteochondrosis of the spine is enriched with foods rich in B vitamins, calcium, phosphorus, in particular - cereals, dairy products, fish, eggs, vegetables.

Physiotherapy exercises and regular outdoor games, walks in the fresh air activate blood circulation, increase vascular tone. The body is saturated with oxygen, cell respiration improves. Harmonious living conditions allow the young body to overcome all health disorders and recover.

Diagnosis - pain in the thoracic spine

The diagnosis always begins with a personal conversation between the patient and the doctor. In this conversation, in order to collect anamnesis, the patient tells the doctor his medical history, describes his life circumstances, gives instructions on the type and location of pain.

At the second stage, the doctor probes the spine, looks at possible distortion, pays attention to the symmetry of the upper body, changes or injuries. Are there inflammatory processes? These questions are usually answered by a blood test. If the doctor suspects something more than HOP syndrome behind the complaints, for example, a possible latent heart attack, he prescribes an electrocardiogram (ECG). Last but not least, imaging techniques such as X-rays, chest MRI scans, CT scans or scintigraphy.

Syndromes and symptoms of osteochondrosis

- Stenosis (syndrome of narrowing of the spinal canal): compression of the vessels of the spinal cord by herniated intervertebral discs, osteophytes (growths of bone tissue) or a thickened vertebral ligament. As a result, blood circulation in the affected area is disrupted. The person begins to feel constrained, feels a noticeable pain in the cervical spine. Numbness and tingling are found in the upper and lower extremities
- Radicular syndrome: compression of the nerve roots by the intervertebral disc. This leads to headaches, expressed in aching, burning or throbbing impulses, sometimes the sensations are similar to those of hypertension. With this syndrome, speech defects and olfactory disorders, hypertrophy of the facial muscles, damage to the sensitivity of the lingual muscles, a feeling of “clogged” throat with lumps can occur. Breathing becomes intermittent, a person suffers from snoring, his nose is often, seemingly for no reason, "stuffy".

- Vertebral artery syndrome: forms when the vertebral artery is compressed (compressed). Its main companion is throbbing pain. Attacks can involve the parietal lobe, the superciliary region, the temporal and occipital lobes.
- Cardiac syndrome: resembles attacks of angina pectoris, but their duration is much longer. The pains are reflected in the diaphragm. This phenomenon in some individual cases is accompanied by high blood pressure, arrhythmia.

The main causes of the development of the disease

- Disruptions in metabolism;
- Lifestyle with low physical activity;
- Hereditary predisposition;
- Age-related ossification;
- Clamps in the muscles, as a result of which posture changes;
- Lack of fluid and vitamins in the daily diet;
- Prolonged stay in an uncomfortable position that increases pressure on the discs and spine;
- Overweight or overload on the spine due to wearing heels;
- All kinds of postponed spinal injuries;
- Regular lifting of weights;
- Autoimmune diseases (the process of self-destruction of the immune system), which lead to degeneration of cartilage tissue;
- Stress, which leads to muscle spasms and impaired blood flow to the intervertebral discs;
- Hypothermia.

Massage for osteochondrosis of the cervical spine

The massage is performed with the aim of strengthening muscle tone and relieving pain. Depending on the stage of development of the disease, different massage techniques are performed. The classic massage techniques include:

- stroking - this technique consists in affecting the surface layers of the skin. The massage begins from the collar area and continues to the collarbones and armpits. squeezing - in this case, the effect during the massage occurs on the deeper layers of the skin. Across the neck, thumb and forefinger perform movements to grasp the skin, which resemble squeezing. rubbing - performed with the aim of warming up and relaxing the skin in order to improve blood flow in the neck area of the cervical spine.
- kneading - has special limitations, as it affects deep tissue. If performed incorrectly, this technique can harm the patient.
- In cases where the patient feels pain on only one side, the massage should be started from the healthy part of the neck, gradually moving to that part of the cervical region where pain appears.

The massage can be performed both at home and in a medical facility. However, in the course of its implementation, one should be very careful not to provoke an exacerbation of the disease or not make it worse.

Epidemiological evidence suggests that low back pain is significant in both adults and children and adolescents. According to studies conducted in different countries, there are significant deviations in the prevalence of back pain in healthy children and adolescents: in Finland - 20%, Sweden - 29%, Switzerland - 51%, Canada - 33%. Such a spread is probably associated not only with the ethnic and age heterogeneity of the studied samples, but also with the lack of a common terminology and unified diagnostic criteria. So, in the same regional group at the age of 11, this figure is up to 11%, and upon reaching the age of 15 it reaches 50%.

Methods

It was found that in children with high growth and asymmetry of the trunk, as well as reduced mobility of the joints of the lower extremities, the frequency of back pain is higher. Potential risk factors for back pain include smoking, malnutrition, physical activity levels, psychosocial factors, muscle elasticity, and joint mobility. The external factors that most often provoke the development of back pain in students include overload. At the same time, the etiopathogenesis of back pain in children and adolescents can be caused by inflammatory, tumor, post-traumatic and stress-overload processes that arise as a result of practicing such sports that are associated with extreme physical exertion, sudden movements, falls and injuries.

Symptoms of cervical osteochondrosis of the spine

The manifestations of cervical osteochondrosis differ from symptoms in other parts of the spine. This is due to the fact that the cervical vertebrae have a different structure and are located very close. Therefore, any displacement is manifested by severe pain. In addition, nerve bundles and arteries are often pinched in the cervical spine.

Cervical osteochondrosis of the spine is manifested by the following symptoms:

- Feelings of pain - pain can be felt in different parts of the body. This is due to the fact that the nerve endings and muscles of the corresponding part of the body are pinched.
- Weakness in the upper limbs - manifested due to pinching of the nerve endings responsible for motor activity.
- Difficulty turning the head, the appearance of crunching of the vertebrae in the cervical spine - occur due to changes in the structure of the intervertebral disc, the appearance of bone formations.
- Low hand sensitivity.
- Weakness and dizziness are caused by a pinched artery that supplies blood
- and nutrition to the brain.
- Decreased hearing and vision - appears at the last stage of the disease, when blood circulation to the cerebellum is impaired.

Signs of the cervical spine of osteochondrosis

- Radicular syndrome - characterized by pinching of the nerve bundle in the neck. It is manifested by severe pain that can be felt in the shoulders, scapula.
- Vertebral syndrome - manifested by severe headaches, pain in the temples and back of the head.
- Reflex syndrome - characterized by severe pain in the cervical spine, which can worsen with any movement of the head. The pain can travel to the shoulder and chest.
- Cardinal syndrome - resembles an attack of angina pectoris, which is extremely difficult to determine.

Degrees of development of cervical osteochondrosis of the spine

As the disease progresses, it goes through several stages. Each stage has its own characteristics and is characterized by certain features.

- 1 stage. The bone and cartilage tissue of the vertebrae gradually begins to deteriorate. Symptoms of the disease are subtle. And very often patients simply do not notice them, but associate fatigue and pain with overwork and stress.
- 2 stage. The disc begins to decrease in height, and cracks appear on it. The patient experiences constant pain, weakness, facial numbness.
- 3 stage. Herniated discs begin to form, and cervical vessels and muscles are damaged. There are complaints of dizziness, pain in the back of the head.
- 4 stage. The bone tissue, which protects the vertebrae from unnecessary stress, begins to grow, as a result of which the nerve endings are pinched. Stiffness arises in movements, adjacent joints are damaged.

Dangers of cervical osteochondrosis

The cervical region contains a large number of nerves and arteries that provide nutrition to the brain. In the event of a malfunction, the brain will not receive sufficient nutrition for normal functioning. This situation can disrupt human motor activity, cause pain in the limbs, as well as loss of coordination.

In the advanced stage of osteochondrosis, ischemia, stroke and many other diseases that are life-threatening can develop,

Therefore, it is recommended that you seek medical attention if you develop any symptoms associated with this disease.

Diagnostics of the cervical spine

The following types of diagnostics are used to examine diseases of the spine:
an x-ray is an ineffective way to diagnose this disease,
MRI (magnetic resonance imaging) shows bone structures, disc herniation and their size
CT (computed tomography) is ineffective compared to MRI, since it is difficult to determine the size of hernias using this diagnostic method,

Duplex ultrasound scanning is used when general blood flow is impaired. This examination shows the existing blood flow velocity, as well as the presence of barriers in its path.

Treatment of cervical osteochondrosis of the spine

Treatment of cervical osteochondrosis of the spine should be carried out in combination, depending on the situation. A positive effect can be achieved thanks to a comprehensive and individual approach, which includes medicinal treatment, physical procedures, physiotherapy exercises, massage, and traditional medicine is also used.

During the period of exacerbation, the treatment of cervical osteochondrosis of the spine is aimed at increasing blood circulation, at getting rid of muscle spasms. In this case, agents are prescribed that improve blood flow, anti-inflammatory and analgesic drugs, and a vitamin complex.

Physiotherapy exercises for osteochondrosis of the cervical spine

Remedial gymnastics gives visible results and is less dangerous at the stage of recovery. The principle of action of physiotherapy exercises is to restore blood flow to damaged parts of the body. Performing exercise therapy exercises, the patient should not feel pain and discomfort.

A set of exercises for the cervical spine is designed to strengthen the muscles of the neck, and also acts as a prophylaxis for the development of cervical osteochondrosis.

Massage for osteochondrosis of the cervical spine

The massage is performed with the aim of strengthening muscle tone and relieving pain. Depending on the stage of development of the disease, different massage techniques are performed. The classic massage techniques include:

- stroking - this technique consists in affecting the surface layers of the skin. The massage begins from the collar area and continues to the collarbones and armpits.
- squeezing - in this case, the effect during the massage occurs on the deeper layers of the skin. Across the neck, thumb and forefinger perform movements to grasp the skin, which resemble squeezing.
- rubbing - performed with the aim of warming up and relaxing the skin in order to improve blood flow in the neck area of the cervical spine.
- kneading - has special limitations, as it affects deep tissue. If performed incorrectly, this technique can harm the patient.

In cases where the patient feels pain on only one side, the massage should be started from the healthy part of the neck, gradually moving to that part of the cervical region where pain appears.

The massage can be performed both at home and in a medical facility. However, in the course of its implementation, one should be very careful not to provoke an exacerbation of the disease or not make it worse.

Prevention of cervical osteochondrosis

To prevent the onset and development of the disease, it is recommended to follow simple rules:

- lead a healthy lifestyle, exercise, regularly visit the pool;
- diversify the diet with foods rich in magnesium and calcium;
- In the case of sedentary work, it is necessary to warm up several times a day;
- for sleeping you should choose an orthopedic mattress and a comfortable pillow.

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Use of Distance Learning Technology in the Study of Foreign Languages

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ABSTRACT
Teaching English in the education system of the Republic of Uzbekistan is rising to a new level of quality on the basis of a scientific approach, the introduction of new information - communication and pedagogical technologies that can meet the requirements of the time. As the study of foreign languages is a modern requirement, it is important for scientists and specialists to develop new methods of language learning for the younger generation, based on the "National Training Program" and recommend them to the learning process. The organization of distance learning in Uzbekistan is very effective. This type of education should be widely used today. Significant work is being done in our country to form an information society, to introduce the most advanced information and communication technologies in all areas. In particular, the capabilities of interactive services in this process are highly valued.

KEYWORDS: *education, distance learning, information, technology, communication, knowledge, skills, competencies, didactic methods*

INTRODUCTION
Distance learning is learning, in which all or most of the training is based on telecommunications and modern information technology.

The following educational technologies can be used in the distance learning system:
- video lectures;
- multimedia lectures and laboratory practices;
- electronic and multimedia textbooks;
- computer test systems; imitation models and computer simulators;
- consultations and tests using telecommunications facilities;
- video conferencing.

Storage, reuse, delivery of information to the listener, interactive communication between the teacher and the listener is carried out through hardware-software based on the use of computer technology. These are information technologies. Distance learning system technologies are developed on the basis of pedagogical technologies and must meet the following additional requirements: Adaptation is the adaptation of the educational process to the personality of the student, living conditions, financial conditions, psychological and physiological characteristics. This is very important in the process of educating the listener individually, using computers and telecommunications.

Economic adequacy - compliance with this requirement is due to the limited funding of the education system.

Variability is the rapid and continuous updating of the quality and content of education, the modernization of teaching materials and textbooks. This need arises in accordance with the requirements of the acceleration of scientific and technological progress.

Method and materials:
The use of interactive methods in distance learning, as well as in distance learning of foreign languages is one of the important factors that ensure positive results. The use of interactive teaching methods creates a comfortable environment for students to better organize the learning process. Students will be given the opportunity to exchange ideas. Conditions will be created for mutual information exchange. They discuss and resolve issues that need to be resolved together. They find a solution together to get out of the situation. They demonstrate their knowledge to each other based on the information they receive. Inspired by each other, they create spiritual satisfaction. They understand each other, but they become interested and don't know that time has passed. They will be able to fully master the content of education.

The production activity of a specialist involves the performance of a number of production tasks. They, in turn, consist of production operations (steps of work) performed in a defined sequence. In order to perform the activities that are part of the production task, the worker must have a certain level of theoretical knowledge and practical skills. This is achieved through the mastery of the developed teaching modules by the students. MTP programs are developed for a specific specialty of the vocational education system. This concept of modular training is very suitable for vocational training in professional colleges. This, first of all, requires students studying "Vocational Education" to master the technology of modular teaching based on a systematic approach.

These programs can also be used in the training of students majoring in "Vocational Education". The subject "Professional Skills" is included in the curriculum for specialization in higher education. Therefore, it is expedient to organize the study of this subject by students on the technology of modular teaching based on a systematic approach to activity.

The didactic system of distance learning includes:
The purpose of training is formed on the basis of state educational standards and includes a system of knowledge, skills and competencies. It is in a hierarchical system: the purpose of teaching, the purpose of the subject, the subject of the subject, the basic concepts of the subject are formed from the object of study.

It is not possible to train foreign languages in all specialties in Distance Learning. The list of areas where this type of training is prohibited is approved by law, and the use of this system in these areas is prohibited.

Learners: The naming of learners in the distance learning system has not yet been determined. Sometimes they are called listeners. The distance learning system requires adequate training of students and technical support of jobs.

Teachers: These teachers, mainly the effectiveness of the organization of the educational process will depend on them. However, the features of the didactic system of distance learning require different types of Roman functions, versatility, and diversity of roles in the activities that teachers perform.

Result and Duscussion:

The main purpose of the use of interactive methods in distance learning of foreign languages is to involve students in the process of active learning, to help them develop knowledge and research skills. Interactive methods are based on the active relationship between teacher and student, full understanding of each other. The ultimate goal of the introduction of interactive methods in the learning process is to organize the interaction of the teacher and the student in the classroom, regardless of the form of the lesson. The teacher needs to engage the students in the problems of the lesson, activate their movement and teach them to master as a result.

The interactive method of distance learning is becoming the most necessary method in today's world. For example, I express my opinion on a certain topic. I am interested in the attitude of others, the opinion of others in such a situation, it is interesting to share ideas online, not only from acquaintances, but also from other users who are familiar or unfamiliar with the Internet. Representatives of different nationalities may express different opinions. That's when the general conclusion can be drawn. The interactive method can also help to make the topic more understandable. Feedback is the choice of a specific topic. A simple example can be found in the comments we make on this topic.

Now, let's talk about the shortcomings of distance education; The first problem is that distance learning limits communication with people. Given that distance learning may involve participants in different regions (locations), most trainees receive more personal attention and communication from tutors, counselors, and classmates than from traditional education. believe that they have the capacity. Quality distance learning programs engage students through group projects and online discussions. In doing so, teachers will be able to answer students 'questions in a timely manner and evaluate their work on a regular basis, and students will have more opportunities to interact.

Another question is whether there will be accuracy in assessing the knowledge of students studying in distance learning courses. You can use any crib from a distance. There are no restrictions for him.

One of the next problems is time. You don't have time to study. You will have the opportunity to study at special times.

The problem may be with the technology you are using. For example, a breakdown in technology or a slow internet connection can cause you inconvenience.

When using an interactive approach in the education system, the teacher encourages the student to actively participate. In some cases, the quality of education may be adversely affected by the student's lack of or shyness, or his or her reluctance to express himself or herself. This, of course, can reduce the effectiveness of education. In order to avoid such situations and to avoid such situations, it is in distance learning that the choice and application of a more interactive method than in other teaching methods helps to achieve the intended goal faster and more effectively. When the learning process is organized on an interactive basis, the student's interaction increases, and the skills of partner and creativity are formed. Skills to work with curriculum, syllabus, textbook, standard norms, manuals, content of the topic are formed. Independent reading, working, mastering the content of education, the text becomes a daily personal affair. The student is accustomed to expressing his / her opinion freely, to defend his / her opinion, to prove it, to confirm it. Most importantly, didactic motives are formed in the learning process. That is, the needs, desires, and aspirations of the student are met. The student's interest in the learning process increases. This will take the student to a higher level in achieving the learning objectives.

Now let's talk about the advantages of using interactive methods in distance learning of foreign languages, first of all, it leads to a better mastery of the content of teaching. In due course, educational communication between student-teacher-student is established. the learning material is best remembered through mutual information, retrieval, and processing. Students develop the skills of communication, expression and exchange of ideas. Each student is able to think independently, work, and observe. In interactive lessons, the student not only masters the content of education, but also develops his critical and logical thinking.

Conclusion:

The term distance education is well known today. Distance education is a new method in the education system of our country, and today this process is receiving serious attention. All universities have computer classes, most of which are connected to the global Internet.

Distance learning has the following advantages:

1. Creative learning environment. There are many ways in which a teacher can teach, and students can only read a given material. On the basis of the proposed distance learning, students themselves search for the necessary information in a computer database and ensure that their experiences communicate well with others and work on their own. encourages education.
2. Possibility of independent study. Distance learning includes primary, secondary, tertiary and advanced training. Inspectors with different levels of training can work on their own lesson plans and interact with students at their level.
3. Big changes in the workplace. Distance learning is a form of education that is accessible to millions of people, most notably young people who are learning to be productive. This type of training plays an important role in training.
4. A new and effective tool for teaching and learning. The word "interactive" is English and means "self-employed." Interactive lessons encourage students to think creatively, to actively express information, to

express ideas freely, to take initiative, to find solutions to problems in groups, to work collaboratively, to express ideas in writing. Nowadays, when it comes to the introduction of new methods or innovations in the educational process, it is understood that interactive methods are used in the learning process. Interactivity is the interaction of two people, that is, the learning process takes place in the form of a conversation, in the form of a dialogue (computer communication) or based on the interaction of the student. Interactivity is the interaction, movement, and interaction that takes place in the student-teacher interaction. The main goal of the interactive method is to create an environment for active, free thinking of the student by creating the most favorable conditions for the learning process. It demonstrates its intellectual potential and enhances the quality and effectiveness of education. Interactive lessons are organized in such a way that no student is left out in the process, that is, they have the opportunity to openly express what they see, know and think.

Two-way communication with the distance education system, student interaction. In the process of distance learning, the intensity of the exchange of information between students is higher than the exchange of information between the student and the teacher, so it is necessary to provide e-mail addresses to all participants in the learning process. Allows you to solve multiple problems at once when using the interactive method. Most importantly, it develops students' communication skills.

Choosing an interactive method of distance learning in foreign languages is a good idea. Because the interactive method of teaching serves to activate the acquisition of knowledge by students, the development of personal qualities by increasing the activity between students and the teacher in the educational process. The use of interactive methods helps to increase the effectiveness of the lesson. With this in mind, we can say that. The interactive method leads to many positive results in the process of distance learning foreign languages.

The use of interactive methods in the distance learning of foreign languages enhances the participation of students, encourages them to achieve maximum results. Interactivity also helps teachers incorporate more complex material into the course. Of course, the organization of interactive lessons has its drawbacks. These are learning processes that take a lot of time. Not all students have the opportunity to be supervised in interactive classes. When studying very complex materials, students are not able to solve the problem completely and clearly, and in such situations, the role of the teacher is low. Due to the participation of weak students in the learning process in groups, even strong students get low scores or grades.

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Postmodernism is the Main Factor of Influence on the Modern World's Architecture Exhibition Complex

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ABSTRACT
The role of postmodernism in the development of modern architecture and its use in various public buildings, including exhibition halls.

The idea of postmodernism and the use of binary binoculars, including the cornucopia, are believed to have a place in modern architecture.

KEYWORDS: *Uncomfortable, cardinally, phenomenon, pluralism, fluorescent lamps*

INTRODUCTION

After gaining independence, Uzbekistan has radically changed its attitude towards art and culture. The democratization and liberalization of society has allowed the art of modern Uzbekistan to develop not only in line with traditional types, but also in its most relevant forms. There was a great opportunity for the development and support of young personnel in the field of culture and art. The Government of Uzbekistan has adopted various programs for the development of spiritual, moral and universal values. In 2008, the book of the first President I. Karimov “High Spirituality - Invincible Power” was published. This work of the President is of great importance in educating the younger generation, as noted in the work, the manifestation of spiritual courage and patriotism should be reflected in our everyday life.

Uzbekistan’s entry into the global economic and cultural community led to the development of new domestic urban planning, architectural and design trends. With independence, the republic created prerequisites for the development of national architecture, fine and applied arts in their most relevant forms.

Almost every city in the world has its own iconic architectural structure symbolizing a distinctive feature (culture, nationality, technical superiority, etc.), attracting tourists to this part of the city to the maximum. Naturally, everyone who visited this zone is interested in leaving something for memory. So there are proposals from craftsmen for some voluminous miniature symbols.

Methodology

Postmodernism is the result of denial. At same time, modernism rejected classical, academic art and turned to new art forms. However, after many years, he himself became a classic, which led to the rejection of the traditions of modernism and the emergence of a new stage of artistic development in the form of postmodernism, which proclaimed a return to pre-modern forms and styles at a new level.

At the beginning of the twentieth century, the classical type of thinking of the modern era changes to non-classical, and at the end of the century to post-non-classical. To fix the mental specificity of the new era, which was radically different from the previous one, a new term is required. The current state of science, culture and society as a whole in the 70s of the last century was characterized by J.F. Lyotard as a "postmodern state." Postmodernism took place in the 60-70s. The twentieth century, it is connected and logically follows from the processes of the modern era as a reaction to the crisis of its ideas. In the second half of the twentieth century, the innovative spirit of modernism and international style has exhausted itself. The urban environment has become uncomfortable due to the cheap development of houses built in the spirit of pure rational functionalism, creating a feeling of gloom, monotony and monotony. In the 70s in the USA, as a reaction to this, huge buildings appeared that were superior in scale to glass towers in the style of Mies van der Rohe. Their scale did not correlate with the human body, and was more like some kind of cosmic level. The smooth glass surface of the buildings did not have horizontal floor artifacts revealed from the outside, as it was in the Misa skyscrapers, and with its entire “body” it reflected the sky and the surrounding space, entering into irrational interaction with it. The similar building of the Pacific Design Center in Los Angeles, built by Caesar Pelli in 1971-76, stands completely outside the urban context and sets its own standards for scale. This is a huge building made of blue glass, locals call the "blue whale". It stands in the midst of chaos of a faceless environment as an anti-monument and, despite its gigantic dimensions, gives the impression of a stranded sea monster with shiny wet blue skin, which inexplicably fell into the human world.

When the formalistic cold constructions of "white modernism", the mean forms of the "minimal architecture" of functionalism, the cult of technology and high-tech constructions get bored, some architects try to change the formal language of architecture by returning forms from past centuries that have been excluded from practice, color and other "extra" elements. But it would be wrong to limit the essence of the new movement to just a nostalgic appeal to the historical forms of the past, although it played a big role in the composition of the new style, called by its theoreticians postmodernism. The main thing that architects of postmodernism tried to return to architecture is the imagery expelled from it many decades ago, making it not just a process of creating spatial structures, but a kind of art.

The architects of postmodernism tried to introduce other laws into architecture, in addition to functional correspondence and the maximum simplification of the basic forms - fiction, imagination, theatrical game principle, complex figurative associations. Another quality that distinguishes the architecture of postmodernism, especially in European countries, is a conscious desire to link new buildings with the historical urban environment, without spoiling it with new inclusions, to feel the urban context of future buildings. Sometimes this trend of postmodernism is called contextualism. An appeal to historical forms in postmodernism is never directly quoted, instead a game of hints of prototypes, encrypted symbolism and complex associations appears.

In this sense, the sensational construction of Charles Moore - Piazza Italy in New Orleans, a place chosen by the Italian community of the city to host its festivals, can be seen as a typical example. The desire of customers - to create the material embodiment of nostalgia - the architect performed in the form of a grotesque, creating a collage of classic European architectural motifs, which is located around a huge stone map of Italy. The very statement of the problem here predetermined and justified the use of eclectic forms in order to create an artistic image-association. Mario Botta introduced some formal techniques into the architecture of postmodernism, which were later used by his epigones and became a kind of universal architectural language of postmodernism. In his single-family houses - villas in Switzerland, the ideas of solitude, isolation in a natural or architectural environment are laid. His villas are self-sufficient, they do not need any communication. In a small residential building, large forms are used, as if intended for large public buildings - huge round windows with a mirrored glass surface that protect the inner world even from outside.

The Austrian architect Hans Hollein in the interiors of the Vienna Travel Bureau tried using architectural means to convey the sensations, images, dreams and illusions that arise from a person traveling to distant lands. Where a modernist architect would have made glass walls and hung them with advertising posters, Hollein sets up steel palm trees, among which stands the ruin of a classical column. Eagles fly over the ticket office. The space here is like a scene, and the visitor, moving along it, is included in the overall performance, starting to play some role. The architect manages to create an atmosphere of something unknown, mysterious, full of anticipation of the upcoming trip and the discovery of some secrets. Often the architecture of postmodernism is criticized for the fact that instead of moving forward, it began to lead back into history, explaining this by a fear of the future in the face of global environmental disasters.

However, the main merit of postmodernism is that the language of architectural forms has become incomparably richer, volumes and compositions have become more expressive, the concept of beauty and imagery has been rehabilitated even in relation to strictly functional buildings. The architects of postmodernism, showing respect for the historical and national heritage, have created many wonderful projects for the reconstruction of historical parts of cities, assimilating modern buildings into the historical fabric of the city without harming the parties. But the main thing is that they returned architecture to the fold of art.

Postmodernism, the distinction of which is the rejection of truth and universal pluralism, is a reaction to a change in the place of culture in a post-industrial society. Such an attitude towards culture arose due to a violation of the “purity” of the phenomenon of art, the condition for which is semantic generation, dating back to the creative principle, the original creative act. These conditions were violated in the new society with its endless possibilities of technical reproduction, and the existence of art in its former forms was called into question. Postmodernism, rejecting the rationalism of the international style, turned to visual quotes from the history of art, to the unique features of the environment (which our epigones did not do, taking from the postmodern only its primitively understandable “omnivorousness”), combining this with the latest achievements of building technologies. Architecture, as well as fine art, proclaimed the principle of "open art", which freely interacts with all old and new styles. In this situation, the previous confrontation between tradition and the avant-garde loses its meaning. Having rejected the possibility of a utopian transformation of life, postmodernists accept being as it is and having made art extremely open, they filled it not with imitations or deformations of life, but with fragments of the life process. This process is usually only adjusted, and not completely transformed into something new and unprecedented. Postmodernism replaces the desire for structural ordering with its understanding of growth expressed in the concept of “rhizome”. Postmodernism itself does not pretend to create a global theory; its world is a world of “surfaces”, “games of particulars,” cultural variants of previous eras. The worldview of postmodernism is a fixation of a situation when repressive borders between types, forms, and kinds of cultural activity disappear. The concept of the center, which is the focus and symbol of power, disappears as a result of the decentralization process, which means the destruction of the central position of the West as the traditional core of modern culture, as well as the loss of the meaning of the theory of “two cultures”.

Previously, it was customary to think differently. In 1939, American art critic Clement Greenberg wrote that kitsch and avant-garde are two absolute poles of the culture of the 20th century, and between them there is less and less something third, that is, a traditional culture. If it does not become the vanguard, it falls into kitsch, into a light chewing gum that does not require the public anything but money. One of the striking examples of kitsch, Greenberg considered Russian Wanderers, in particular Repin, but believed that "Repin was lucky that Russian peasants were protected from the products of American capitalism: he would have no chance next to the cover of the Saterdey Evening Post." The correctness of Greenberg is easy to see today. But in the same 1930s, the European philosopher Walter Benjamin wrote another classic article, “A Work of Art in the Age of its Technical Reproducibility”. And what Greenberg considered kitsch's main drawback - his inability to intellectually stimulate - Benjamin turned into a new aesthetic of “distraction”, absorbing the viewer into himself, most typical of cinema. As you can see, Benjamin looked at the future sharper than Greenberg. Benjamin foresaw that mass production would reach unprecedented technical and aesthetic heights, and he turned out to be right: in the place that kitsch occupied in the 19th century, today there were mass media, TV, fashion, design and architecture of the post-Soviet space of the “please” style. In the modern world, dividing into a highbrow culture (what is commonly called “classics” in our country) and lowbrow (mass, popular, commercial) has completely lost its meaning: to be commercial is a condition of survival. Instead of a world of spiritual hierarchies, which is divided into high and low, we live in a scattered world of a market that is divided into mainstream and cult marginal. The mainstream has pop and classic. A cult is considered just the vanguard and kitsch. A striking example of postmodernism in museum architecture is the Guggenheim Museum, opened in September 1997, sensationally elevated modern architecture and the city itself to the level of the 21st century. He contributed to the renewal of the city and stimulated its further development. It can be say that the structure here prevails over functions, and that the architecture of the Guggenheim is perhaps better known than what is inside; however, it is difficult to resist the creation of Canadian architect Frank O Henry, with inspiration using flowing canopies, cliffs, ledges, streamlined shapes and turrets. Like all great architects, Henry designed the Guggenheim, implying a certain historical and geographical context. The place he chose was a production wasteland, part of the district on the banks of the Ria de Bilbao, where there were dilapidated and deteriorated city warehouses. Bilbao's historic industries — shipbuilding and fishing — reflected Henry's own interests and, not least, his previous experience with industrial materials. It is believed that the brilliant titanium tiles that cover most of the building and resemble the giant scales of herring are a reflection of the admiration that the architect experienced in childhood, watching the fish. The interior of the Guggenheim is truly enormous, and this also has a special meaning. The cathedral-like atrium is over 45 meters high. Light pours in through the glass cliffs. From the atrium there is Gallery 104 - the "fish gallery", a spacious arena 128 m long and 30 m wide, where the structures of the "Snake of Richard Snake" and its "Meaning of Time" are located, which are massive sheets of iron, bizarre and incomprehensibly arranged, between that you can wander around, dissolving in the surrounding rusty red world among the muffled, whistling and clanging metal sounds. Today, the tendency of the birth of such museums is increasing every day.

Weisman Museum of Art, Minneapolis (USA). The building of this museum is a complete abstraction, there is no single system. This museum is very famous among architects, designers, art historians, as well as ordinary people who like unusual buildings. Denver Museum of Art, Denver (USA). The building consists of large geometric elements, which together constitute a single system, surprising in its appearance. The influence of the designs of modern museum complexes as a new period. Building materials and structures by themselves do not have a large direct impact on the architecture of museums and galleries.

In ancient times - in the Mycenaean era or in even earlier epochs, when a person had almost no opportunity to process building materials - their choice was offered by nature itself, the only supplier of building material, thereby determining all construction methods. The architecture of these primitive eras can be called the "genius of finds", because the inability to process building materials made them look ready-made in nature. Suitable blocks of stone, tree trunks, animal skins - these are mainly the materials that could be used, and the architecture itself consisted in their appropriate combination. This primitive art gives us a special sense of admiration for the first and modest victories of the human mind over rough, untouched nature. Here we can undoubtedly talk about the most concrete influence of materials and construction methods on architecture.

The architecture of museums, therefore, in many ways creates its own arsenal of materials and construction methods. An in-depth analysis convinces us that the history of museum architecture is not only a consistent change of some completed structural solutions to others; rather, it is a multilateral development process, which, due to the internal interaction of all its factors, constantly generates new solutions, new forms, new building materials, constantly changes the very use of building structures. And instead of just stating the influence of materials and structures on their architecture, it will be more correct to not bias and carefully consider this internal process, try to determine the nature of the changes that occur in it. Consideration of the evolution of the architectural forms of museums provides very instructive material for modern architecture as a whole. In the primitive era of the creation of the supporting frame, this basic structural element, was perhaps the only problem in architecture. Stone walls, their openings and floor beams - that's almost all the architecture of those times. Somewhat later, during the Hellenic culture, many details and their combinations, in essence, were only small "processes" of the supporting frame and often were completely inseparable from it. Starting from Mycenae to the Parthenon, we see that the beams made of natural stone for processing are similar to stone blocks of walls and that most of the construction tasks were solved along with the construction of the building frame. Today, this only basic element of ancient architecture - the frame - has changed so much that it has actually turned into a light metal structure, the manufacture of which is just a small part of the total volume of the structure. And if such a metal structure in its character even resembles the tent buildings of antiquity, it still differs from it in the most significant way. The frame of a modern building, unlike its ancient prototypes, is often not only not the largest part of the entire structure in size, but, as a rule, is no longer crucial for its architectural forms. The architecture of the building, deprived of decorations, gives aesthetic satisfaction if it has impeccable proportions; in addition, it will be interesting and expressive subject to a certain compositional completeness. The decor itself, when used correctly, can have great expressiveness, and if it is not replaced by something else that performs the same functions, the architecture will lose more than win. When decorative elements are used in excess, without the right attitude to the main forms of construction, they are used obsessively, the exposition building becomes clumsy and tasteless, beauty turns into its opposite. When used correctly, decor gives expressiveness to the architecture of the museum building, introduces variety into it, dissecting smooth surfaces, serves as an accent and punctuation tool, enhances the effects of chiaroscuro and in some cases says something about the purpose of this building. Another striking example of the design innovation of museum complexes is the museum and gallery of modern art in the city of Graz (Austria) called Kunsthaus opened in 2003. The unusual shape of the Kunsthaus Museum is fundamentally different from ordinary exhibition halls. The team of architects used an innovative stylistic language known as "drip architecture" (other names: amoeba, blob, blobitektura, blobism). Due to the unusual shape of the building, the creators affectionately called it "Friendly Alien" (Friendly Alien). Surprisingly, the rounded forms of the museum harmoniously fit into the ensemble of traditional houses surrounding it, without destroying the general structure of the landscape, but rather, revitalizing it. The facade of the museum represents a special fusion of architecture and new media, for which it received the name BIX. BIX is an abbreviation formed by the words "large" and "pixel", which most fully express the subtleties of the technical side of the design. 900 square meters of the “skin” of the giant amoeba are formed by plates of acrylic glass, under which there are ring luminescent lamps with a capacity of 93,040 watts. The voltage in each lamp can be supplied in the range from 0 to 100%, which allows you to demonstrate simple texts and graphics on the surface of the building. The electrical installation is computer controlled.

Conclusion

Scientific knowledge is determined by the longevity indicator of buildings. The emergence of new methods and technologies of construction contributes to a new development in the architecture of museum complexes and the duration of their construction. Thus, we examined the problem of modern culture as a factor influencing the object of study, that is, postmodernism is the main factor influencing the modern world architecture of exhibition complexes, as well as museum architecture in the context of modern culture. Today, other requirements and worldviews are being posed. The new generation requires new ideas and solutions.

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Possibilities of Computer Graphics and Functions

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ABSTRACT

The importance of computer graphics technology today is enormous. Computer graphics allows you to quickly and efficiently prepare drawings, diagrams, drawings and other images. The rapid development in each area is based on the high capabilities of computer graphics. Computer graphics is also a powerful tool that slowly increases the productivity of mental labor.

KEYWORDS: *Computer graphics, technology, vector object, three dimensions*

INTRODUCTION

Today, the achievements of our country in world economic development have had a positive impact on us, of course, our country, which has a rich cultural history, is gaining a worthy place in the world community. The efforts of the head of state to develop small and medium-sized businesses, the opportunities created for entrepreneurs are leading to the rapid development of economic growth.

The penetration of computer technology in various areas of human activity requires modern professionals to have the skills to effectively use computer technology in their fields.

Due to the rapid development of modern technology, the application of advanced technologies in manufacturing, construction and other fields, designers and designers are required to prepare graphic images depicting a new product project in a very short time. The potential of computer graphics in the preparation of graphic images in a short time, the evaluation of product quality and its features in the form of a sketch is enormous. Nowadays, it is difficult to imagine the activities of many industries, such as trade enterprises, accounting, accounting of products and materials, office work in enterprises and organizations, research activities, medicine, telecommunications, education, without computer technology.

It is well known that computer graphics is a powerful tool that slowly increases labor productivity, including mental labor productivity. In recent years, due to the rapid expansion of the possibilities of computer graphics and its widespread use in design, computer graphics began to be widely studied in the educational process of various educational institutions.

With the help of computer graphics tools it is possible to clearly demonstrate the achievements of computer technology in terms of time and work quality when performing labor-intensive graphical operations. Computer graphics allows you to quickly and efficiently prepare schematics, drawings and other images.

Computer graphics tools are also widely used in training and control programs of automated learning systems. It is impossible to create and display various graphic images (animated, moving three-dimensional, etc.) in e-textbooks, which have become very popular in recent years, without the help of computers, and their importance in the educational process remains clear.

It is no exaggeration to say that the main content and essence of the changes taking place in the film industry today, the increasingly complex techniques and technologies of the citizens of our independent country are achieving new achievements. In this regard, it is the newest and most important network in the film industry, and the tasks and challenges facing the three-dimensional animation direction are huge.

We intend to assess the role and potential of this science in society by analyzing the essence of computer graphics in terms of its current state and prospects of all the changes taking place in the life of our society.

DISCUSSION:

General information about computer graphics

Computer graphics has firmly entered our lives. It is worth noting that commercials and clips created with a creative approach have an impact. But a clip created on the basis of computer graphics can amaze the mind, except for emotions. Advertising can be called successful advertising only if a person can click on the most delicate threads of consciousness and emotions and see himself in the place of the protagonist of advertising. If a brand can see itself as a buyer of goods, or a user of services, that clip is considered successful, which is a guarantee of success. Computer or mechanical graphics is a part of human activity that has its own problems and peculiarities. At the same time, computer graphics will be a tool designed for design, construction and scientific, educational base on the basis of a combination of analytical and applied programming of human activity, descriptive geometry, mathematical calculations and similar academic disciplines. Mathematicians could not even imagine that their very complex ideas could be demonstrated and drawn by a machine. Computer graphics, which is an integral part of world technology, is emerging along with exposure. Previously, the beginning was a "vector" drawing, that is, the point was calculated on the screen or on paper. For example, a graphic view of a circle, straight line, or other more complex drawing.

Advances in computer engineering and technology have made it possible to create a structure of drawing objects. To clarify this issue, we need to understand the word "graphic object" - that is, the object of drawing.

A graphic object is the drawing itself or part of it. Depending on the type of computer drawing (raster drawing) - pixels or splines, and (in vector drawing) - vector objects - circles, squares, straight lines, curves, etc.

RESULT:

The information appears in the form of a graph on the monitor it was on a large computer set up for scientific and military research in the mid-1950s. An interface that has become the standard for all applications, from operating systems. Data plot programming is a key part of computer software. There is a special department in computer science, which studies the creation and processing of computer drawings, hardware and programming complexes. It encompasses all kinds of images that a person can imagine and perceive, be it a hox monitor or a movie screen, paper, film, fabric, and so on.

Transformation of information into visual form (visualization) is used in various areas of human activity. For example, in medicine (computer tomography), scientific research (creation of visual forms of substances, vector fields, etc.), modeling of fabrics and clothing, design research. Depending on the method of organizing the images - they are divided into raster or vector drawings.

In contrast, in the three-dimensional, that is, in the virtual field, there is a direction that studies the image, which can show the object, the image in all directions. Three-dimensional imaging includes both vector and raster directions. When it comes to color, it has the concepts of black and white and color graphics. When adapting to the specialty, it is divided into the following sections: engineering drawings, scientific graphics, Web graphics, computer tomography and others. Based on the combination of computer, television and film technology, a new territory has emerged, namely computer graphics and animation.

In the early computers, they were not able to work with drawings, but they were able to receive and process drawings. In the first matrix computers, it was only possible to see the shape of the pattern.

In 1963, American scientist Ivan Sutherland created a software hardware complex and named it ***Sketchpad***. He used a digital pen to draw dots, lines, and circles on the screen. Primitive actions: copying, moving, and so on. In fact, it was the first vector editor available from a computer. It can also be called the first graphical interface of the program, even though it was in fact before this concept emerged.

In the mid-60s, computer graphics appeared in manufacturing industries. Under the leadership of T. Mofett and N. Taylor, the first electronic drawing machine was developed by Itek. In 1964, General Motors, along with IBM, introduced the DAC-1 automated design system.

In 1968, a group led by NN Konstantinov created a model of a mathematical movement of a cat on a computer. The BESM-4 machine program drew a cartoon called "Kitten" by solving the differential equations, and it was a big step for its time. The drawing was drawn on paper using an alphanumeric printer. A huge breakthrough for computer graphics came with the ability to maintain this shape and then display it on the screen.

Computer graphics began to be widely used, especially in artistic decorations. Using the simplest graphic editors, it will be possible to create images of two-dimensional objects. More sophisticated editors use many special effects. Even people who are far from artistic decoration can create simple pictures very quickly. Currently, exhibitions of works of art are being organized. Although most works are created by hand, their sketches are created in computer graphics. Such graphics packages include: Painter (Fractal Design), Adobe Photoshop (Adobe Systems Inc.), Adobe Illustrator (Adobe Systems Inc.), CorelDRAW (Corel Corp.). Computers are becoming an ideal tool for creating animated products. The labor of the multipliers became easier, and their labor began to take on a creative character. Computer graphics in particular are being used very effectively in creating three-dimensional animated videos.

CONCLUSION:

The application of computer graphics is evolving. However, computer graphics are being used intensively in book graphics and polygraphic decorations. Computer graphics methods are widely used in industry. For example, designers who define the appearance of newly produced goods use wordless computer graphics in their work. In business, computer graphics tools are used in two ways: in the corporate style of the firm and in advertising. Modern media organize their work mainly on the basis of computer graphics.

In cinematography, computer graphics are widely used in animation work. Faster computer graphics than other industries are being used intensively in computer games. Computer graphics are used effectively, especially when creating Web pages, because the level of attractiveness of the page is very important.

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The Influence of the Timing of Sowing Turnip Salad on the Biochemical Composition

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ABSTRACT
The article highlights the problems of providing the population with healthy food. In particular, the biochemical composition of turnip and turnip salad is revealed, the difference in the indicators of the presence of sugar, vitamin C and other useful substances in them, so necessary for a person, is shown.

KEYWORDS: *turnip salad, simple turnip, biochemical composition, leaf, roots*

INTRODUCTION
Currently, the main urgent problem is the organization of healthy nutrition for the population of our country and an increase in the range of products. And at such a time, the introduction into the republic from the countries of Southeast Asia of turnip salad, which has national economic importance, was carried out, as well as the study of the biochemical composition of these crops, which is one of the important tasks of today.

Turnip salad is considered a dietary product. Not only its roots are used, but also the leaves. The plant is rich in ferments, trace elements, minerals and vitamins, its leaves are thin, delicate and rich in carotene, vitamin C. In addition, it contains PP, B_1, B_2, calcium, phosphorus, sodium, iron and other minerals. In ancient times, due to a large amount of calcium in it, the poor families used it as a special agent for the prevention of blood diseases, bones and rickets. The largest amount of potassium (400 mg/100g) and calcium (49 mg/100g) in the turnip salad.

In the countries of Southeast Asia and especially in Japan, this plant is looked at as the main source of vitamin C and carotene. The state has taken control of its cultivation [2; 303 pages]. But in the literature, there is no information on the biochemical composition of not only turnip salad, but also simple turnips in the conditions of Uzbekistan.

Therefore, for the first time in Uzbekistan, biochemical analysis of turnip leaves and its roots was carried out. The analysis of the biochemical composition was carried out at the Tashkent Chemical-Technological Laboratory under the State Commission for Testing Agricultural Plant Varieties, together with the supervisor of L.I. Lemeshkin.

MATERIALS AND METHODS
The experiments were conducted in the experimental fields of the Research Institute of Vegetable, melon crops and potato. The institute is located in Zangiota district of Tashkent region. The climate of this place is slightly different from the climate of most vegetable farms located in the irrigated plains of the country.

Its distinctive feature is that there is enough light and heat, continental variable and dry air. The duration of sunlight is 2700–3000 hours per year, with summer sunlight 360–400 hours per month and 90–130 hours in winter. The daily temperature fluctuations are high (10–15^{0}C in winter and 15–20^{0}C in summer).

RESULTS AND DISCUSSION
Tests have shown that the biochemical composition of root crops and turnip leaves is associated with the variety, the period and period of its cultivation. The biochemical composition of root crops and leaves of simple varieties of turnip and turnip salad, planted in spring at different times under a film, was studied.

From the analysis of the information obtained, the following conclusion was made: turnip leaves are rich in dry substances, sugar and vitamin C. It ranks second after sweet pepper in the amount of vitamin C in the leaves. If in sweet pepper the amount of vitamin C is 250 m/g per 100 g, then in turnip leaves this figure is 125,4-186,5 mg per 100 g. Vitamin C in turnip leaf is 5,0-7,5 times more than in tomato, 12,5-18,6 times more than in cucumber, 4,1-6,2 times more than in carrots.

Biochemical analysis of turnip leaves planted in spring at different times revealed the following: in the first control variant in the variety Namangan mestniy of dry matter 9,6%, and in variety Muyassar this figure is 10,4%. This means that this indicator in relation to the control variety is 108,3% higher. The indicator of the amount of sugar in the control variety was 6,5%, and in the Muyassar variety – 6,8%. This is 104,6% higher compared to the control variety. But the amount of vitamin C in the Muyassar turnip cultivar is 61,1 mg% less than in the control variety.

According to the sowing dates of both turnip varieties, from the first term to the sixth term, a decrease in the amount of biochemical substances in the leaf was observed. In our opinion, the reason for this is that the plant period falls on hot days. As you know, turnip is a cool, cold-resistant plant. For its growth and development, the optimal temperature is 15-18^{0}C. As the temperature rises, the leaves coarsen, shrink and lag behind in development. All this, of course, affects the biochemical composition. The biochemical composition of the root crops of simple turnip and turnip salad sown under the film in spring at different sowing dates is shown in Table 1. From the information given in the table-1, it can be seen that the biochemical composition of the Namangan mestniy turnip improves from the first term. If in the first term the amount of dry matter was 3,8%, then in the sixth term this figure was 8,2%, which is 115,8% more in relation to the first term. The same situation was observed in terms of the amount of sugar and vitamin C.

We believe that the variety Namangan mestniy has adapted well to local conditions.

In the turnip variety Muyassar, on the contrary, there was a decrease in the biochemical composition of root crops from the first term to the sixth. For example, the amount of dry matter in the first term was 9,6%, and by the sixth term it decreased by 4%.

Similarly, there was a decrease in the amount of sugar by 1,2%, vitamin C by 3,7%. In the first three terms, that is, in the winter months, the biochemical composition of the root turnip salad was very good, especially the dry matter (97,6-152,6%), sugar (70,0-77,8%) higher than in the control variety, vitamin C in relation to the control variant was less by 4,6-5,0%. From the fourth term, a decrease in the number of dry substances and sugar in root crops was observed. And the amount of vitamin C in the fourth and fifth stages was higher, in the fifth period it sharply decreased. There was a high amount of sugar, dry matter and vitamin C in the leaf of the turnip plant during the summer sowing period than when sowing in the spring.

Table-1 Biochemical composition of the root vegetables of simple turnip and turnip salad, sown in spring under the film (2011-2013)

№	Sowing dates	Dry matter %	Relative to the control variety, %	Amount of sugar, %	Relative to the control variety, %	Vitamin C, мг/%	Relative to the control variety, %
Namangan mestniy (control)							
1	1-февраль	3,8	100	1,8	100	31,2	100
2	10-февраль	4,1	100	1,8	100	32,1	100
3	20-февраль	4,2	100	1,7	100	33,1	100
4	2-март	4,6	100	2,8	100	33,3	100
5	10-март	7,7	100	4,1	100	35,1	100
6	20-март	8,2	100	3,6	100	48,9	100
В среднем		5,4		2,6		35,6	
Muyassar variety							
1	1-февраль	9,6	252,6	3,2	177,8	28,9	92,6
2	10-февраль	9,4	229,3	3,1	172,2	30,5	95,0
3	20-февраль	8,3	197,6	2,9	170,6	32,8	99,1
4	2-март	6,3	137,0	2,7	96,4	34,8	104,5
5	10-март	8,2	106,5	3,6	87,8	41,1	117,1
6	20-март	5,6	68,3	2,0	55,6	25,2	51,5
В среднем		9,6		2,9		32,2	

So, if the amount of dry matter in the variety Namangan mestniy, sown in the spring sowing period, was 7,8-9,2%, then during the summer sowing period this figure was 9,9-10,3%. In the Muyassar variety, this indicator is respectively 8, 3-10,5% and 11,2-12,1%.

The indicator of the amount of sugar is 5,7% in spring and 6,7% in summer sowing. The same condition was observed in terms of vitamin C.

Summer sowing dates did not have a strong effect on the biochemical composition of the turnip leaf. For example, the dry matter index of the Muyassar variety was about 11,2-12,1% in terms of sowing time, the sugar content was 7,6-7,9%, but from the first term to the fourth, the biochemical quality indicators of the root crop in two varieties were high.

In the variety Namangan mestniy, sown on August 30, the amount of dry matter was 9.7%, and in the Muyassar variety - 6.4%. This is 1.0-0.7% higher in relation to the control variant, the amount of sugar in the Namangan mestniy was 5.69%, in the Muyassar variety 2.36%. This is 0.63-0.30% higher than the control variant. Vitamin C in the Namangan mestniy was 43.2 mg%, in the Muyassar variety 33.0 mg%. This relative to the control option is higher by 8.1-16.4%.

CONCLUSION

As our studies have shown, the summer sowing time has an effect on the biochemical composition of the plant turnip salad and simple turnip. Growing turnip salad in large quantities contributes to the transformation of turnips into one of the sources of vitamin C in our republic.

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A Hydraulic Impact Theory and Calculation with Breaking Flow Continuity

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ABSTRACT

The article presents the theoretical studies results of hydraulic shock with flow continuity rupture in the pressure the pumping station pipeline. Calculated dependencies are obtained for calculating the shock pressure magnitude and the first period duration of reduced pressure, taking into account the hydraulic resistance along the pipeline length in the discontinuity event in the flow. The calculation results are compared with the Professor D.N. Smirnov's experiments results.

Comparative calculations using the proposed method with D.N. Smirnov experimental data gives a satisfactory agreement and confirms the proposed method reliability.

KEYWORDS: *water hammer, pressure pipeline, water hammer pressure, flow continuity rupture, reduced pressure duration, check valve, vacuum, friction head losses*

1. INTRODUCTION

Currently, in the Republic of Uzbekistan, 1,693 pieces of irrigation pumping stations are used to irrigate more than 2.3 million land hectares. Ensuring the normal operation safety and reliability of the pumping stations used is in current importance. A dangerous process during normal operation of pumping stations pressure pipelines, as you know, are hydraulic shocks, accompanied by the breaks formation in the flow continuity in the injection water supply. The water hammer study, taking into account the continuous flow rupture in pressure systems, has not yet been fully studied [1,2,3,4]. Any scientific information on the water hammer study is relevant. This work is devoted to this issue.

An experimental water hammer study taking into account the flow discontinuity is given in [3,4,5,6,7]. These works [3,4,5,6,7] did not take into account the reduced pressure duration in the first impact phase, no dependences are given to determine the phases number of the water hammer. This data is very important for the impact parameters analysis.

In [8], theoretical studies have been carried out, which are related to the discontinuity formation in the water flow in a pipeline and by determining the maximum pressure magnitude during hydraulic shock in different sections along its length. However, in [8], short pipelines are provided, in which the pressure losses due to friction along the length can be ignored.

The work purpose is to determine the maximum pressure during a hydraulic shock in the first period of reduced pressure in the flow rupture event continuity, taking into account the pressure loss due to friction in a long pressure pipeline.

2. CALCULATION METHOD

Water is supplied by a pump at a speed V_0 to the pressure basin. A non-return valve is installed at the beginning of the discharge pipeline. When the check valve is instantly closed, the water stops and the water pressure instantly decreases by the $\frac{aV_0}{g}$ value, where g is the gravity acceleration, a is the propagation velocity of the shock wave.

With the above hydraulic process, the following condition is met:

$$\frac{aV_0}{g} > H_0 + H_{вак.макс.} + H_{тр} \qquad (1)$$

where $H_{вак. max.}$ Is the value of the vacuum in the source of the hydraulic shock;

$H_{тр.}$ is friction head loss up to the considered point of the pressure pipeline cross-sections;

H_0 is geodetic head.

When condition (1) is met, the flow continuity rupture occurs at the check valve, and water continues to move at a certain residual velocity through the pressure pipeline.

The Allievi chain equations connecting the heads H_i and H_i-1 - and the velocities V_i and V_i-1 - in the section of the pipeline at the gate in the i-th and (i-1) - th phases have the form [9,10,11]:

$$H_{i-1} + H_i - 2H_0 = \frac{a}{g}\left(V_i - V_{i-1}\right), \qquad (2)$$

for the first phase $H_i = -H_{вак. max}$.

Then from (2) we obtain:

$$H_0 - H_{вак.макс.} - 2H_0 = \frac{a}{g}\left(V_1 - V_0\right),$$

from where

$V_1 = V_0 - V_*$, where $V_* = \frac{g}{a}\left(H_0 + H_{вак.макс}\right)$, V_1 – represents the residual speed with which the water mass torn off near the check valve moves in the pipeline towards the pool. This speed decreases from phase to phase (friction forces are not taken into account here) until it reaches zero.

The check valve has a vacuum space filled with air bubbles and steam, the pressure in it will be equal to, i.e. $H = -H_{вак.max.}$, the velocity of the separated water mass of the flow in the subsequent phases according to (2) will accordingly be equal to:

$$\left.\begin{aligned} V_1 &= V_0 - V_* \\ V_2 &= V_0 - 3V_* \\ V_3 &= V_0 - 5V_* \\ &\ldots\ldots\ldots\ldots\ldots\ldots \\ V_i &= V_0 - (2i-1)V_* \end{aligned}\right\}. \qquad (4)$$

We determine the total values of the traversed paths of the water mass for each phase, taking into account that this path first increases to a certain value S, and then decreases to zero. Then, equating to zero the indicated sum, we find the number of vacuum spaces n, i.e.

$$t_\phi \sum_{i=1}^{n} V_1 = 0$$

or

$$\sum_{i=1}^{n} V_1 = n(V_0 - nV_*) = 0, \qquad (5)$$

From it

$$n = \frac{V_0}{V_*}. \qquad (6)$$

Substituting the value of n in (4), we obtain the velocity of the water mass at the moment of its impact on the check valve, equal to

$V_n = -(V_0 - V_*) = -V_1$. (7)

In this case, the additional pressure of the water hammer in excess of the geodesic pressure will be equal to

$$\Delta H_2 = \Delta H_1 + \Delta H_{доб.} = \frac{aV_0}{g}, \qquad (8)$$

where $\Delta H_1 = H_0 + H_{вак.max.}$ the largest drop in shock pressure compared to geodesic;

$$\Delta H_{доб.} = \frac{a}{g} V_1 = \frac{a}{g}(V_0 - V_*). \qquad (9)$$

The largest value of the shock pressure will be equal to:

$$H_{макс.} = H_0 + \Delta H_2 = H_0 + \frac{aV_0}{g}. \qquad (10)$$

When the water supply through the pump is instantaneously interrupted with the formation of a discontinuity in the flow at the check valve in the pipeline, an increased pressure above the geodetic pressure arises, equal to [8]:

$$\Delta H_2 = \frac{aV_0}{g}.$$

The duration of the first period of reduced pressure without regard to friction forces is

$t_v = n\, t_\phi$. (11)

It is possible to determine over the geodetic pressure and the duration of the first period of reduced pressure, taking into account the head loss due to hydraulic resistance along the length of the discharge pipeline. We use the Darcy-Weisbach formula to determine the head loss

$$H_{тр} = \lambda \frac{L}{d}\frac{V^2}{2g}, \qquad (12)$$

where λ – is the coefficient of hydraulic friction resistance, d – is the discharge line diameter.

Then the loss of kinetic energy will be equal to:

$$V_{тр} = \frac{g}{a} H_{тр} = \frac{1}{2}\cdot\frac{L}{a}\cdot\frac{\lambda}{d} V^2. \qquad (13)$$

At the moment of rupture of the continuity of the flow through the pipeline from the place of the rupture of propagation, the wave of reduced pressure ($H_0 + H_{вак.max}$), which corresponds to the instantaneous velocity V_*.

This speed, formed due to the deformation of the walls of the pipeline and changes in the density of water in it, propagates through the pipeline.

Calculating the loss in speed by formula (13), through each half-phase we will have

$V^* = V_* - V^*_{тр}$. (14)

where

$$V^*_{тр} = \frac{1}{2}\cdot\frac{L}{a} V_*^2.$$

Obviously, for the entire time that there is a vacuum space (in the case under consideration, at the beginning of the pressure pipeline, at the check valve), there will be $H = -H_{вак.max.}$, and in the last section of the pressure pipeline adjacent to the pressure basin of sufficiently large dimensions positive pressure equal to atmospheric pressure plus the immersion of the last section under the pressure basin horizon. Based on this, in the initial section of the pressure pipeline (at the check valve), the instantaneous velocity during the rupture of the pressure flow changes by the value V_*, and in the last section by the value $V^* = V_* - V^*_{тр}$ (taking into account the speed loss for half phase of water hammer).

Therefore, at the moment of restoring the continuity of the flow, the super geodetic pressure of the hydraulic shock will be equal to

$$\Delta H_2 = \frac{a}{g} V^* + \frac{a}{g} V_n = \frac{a}{g}(V^* + V_n), \qquad (15)$$

where $\frac{a}{g} V^*$ the value of the pressure increase, equal to the previous pressure decrease relative to the geodetic, taking into account the loss in speed V^* for half the phase; $\frac{a}{g}V_n$ is the value of the additional shock pressure obtained as a result of a water hammer a mass of water at a speed of V_n about a check valve.

In this case, the maximum pressure of the water hammer will be equal

$$H_{макс} = H_0 + \Delta H_2 = H_0 + \frac{a}{g}\left(V^* + V_n\right). \qquad (16)$$

To determine the duration of the first period of reduced pressure and the velocity V_n of the water mass at the moment it hits the check valve, we will write expressions for the column velocity for each subsequent half of the water hammer phase.

Residual speed value, i.e. the velocity of the mass of water at the beginning of the first phase is equal to:
$V_1 = V_0 – V_*$.

For the next half phase, this speed will be:
$V_{1,3} = V_1 – V_* - V_{1\,тр} = V_0 - 2V_* - V_{1\,тр}$,
and at the beginning of the second phase, the speed value will be:
$V_2 = V_{1,5} - V_* - V_{1,5\,тр} = V_0 - 3V_* - (V_{1\,тр} + V_{1,5\,тр})$
and so on.

Thus, the velocities of the mass in the next half of the phase will respectively be equal:

$$\left.\begin{aligned} &V_1 = V_0 - V_*,\\ &V_{1,5} = V_0 - 2V_* - V_{1mp},\\ &V_2 = V_0 - 3V_* - \left(V_{1mp} + V_{1,5mp}\right)\\ &\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\\ &V_n = V_0 - (2n-1)V_* - (V_{1mp} + V_{1,5mp} + \ldots\ldots +\\ &+ V_{(k-0,5)mp} - V_{k\,mp} - \ldots.V_{(n-0,5)mp} \end{aligned}\right\}, (17)$$

here k – the number of the phase from which the mass of water begins its reverse movement, and the speed calculated by formula $V_{i\,тр}$ (i = 1; 1,5; …; n – 0,5) (13).

Similarly to formula (5), the algebraic sum of all velocities (17) for the first period of reduced pressure is equal to zero:
$(2n – 1)V_0 – n(2n - 1)V_* - (2n - 2)V_{1тр} – (2n - 3)V_{1,5тр} - (2n - 4)V_{2тр} –$
$…. – [2n – 2(k – 0,5)]V_{(k-0,5)тр} + (2n – 2k)V_{k\,тр} + [2n – 2(k + 0,5)]V_{(k + 0,5)тр} + … = 0$

or
$2V_* n^2 – (2V_0 + V_* - Q)n + (V_0 - R) = 0$, (18)

where
$Q = 2(V_{1тр} + V_{1,5тр} + … + V_{(k-0,5)тр} – V_{kтр} – V_{(k+0,5)тр} – …)$
$R = 2V_{1тр} + 3V_{1,5тр} + 4\,V_{2тр} + … + 2(k – 0,5)V_{(k-0,5)тр} – 2k\,V_{kтр} –$
$- 2(k + 0,5)V_{(k+0,5)тр} - …$

Solving the quadratic equation (18) with respect to n, we find the number of phases of a water hammer (during which there was a cavitation-vacuum space) equal to

$$n = \frac{1}{4V_*}\left[\left(2V_0 + V_* - Q\right) + \sqrt{\left(2V_0 + V_* - Q\right)^2 - 8V_*\left(V - R\right)}\right]$$
, (19)

here only a positive value of the root is taken by equation (18), since the plus sign satisfies the condition of the problem being solved.

Having found *n*, from (17) we can determine the water mass velocity at the moment of its impact on the check valve.

3. STUDIES RESULTS

Below are calculations to determine the magnitude of the shock pressure and the duration of the first period of reduced pressure, taking into account the hydraulic resistance along the length of the pipeline in the event of a rupture of the flow continuity. The calculation results are compared with the results of the experiments of D.N. Smirnov [6].

As can be seen from Table 1, comparative calculations by the proposed method with the experimental data of D.N. Smirnov give satisfactory results.

Table 1

№ of Smirnovs experiments	V_0, м/с	H_0	$H_{тр}$	$H_{вак.\,max.}$	L	$\frac{aV_0}{g}$	a, m/sec	ΔH_1	ΔH_2 по опытам Смирного	ΔH_2 по расче-там автора	$t_ф$	t_v according to Smirnov's experiments	t_v according to the author calculations
		M						M				Sec	
1	0,42	36,5	7,0	-	1148	39,4	922	35,0	33,0	33,8	2,49	2,85	2,69
2	1,16	40,0	55,0	7	1148	109,0	922	47,0	86,0	89,3	2,50	5,10	5,10
3	1,32	21,0	70,5	7	1180	105,6	787	28,0	82,0	74,6	3,00	8,10	8,22
4	1,44	17,0	75,0	7	1176	91,2	622	24,0	56,0	61,5	3,80	9,00	9,72
5	1,50	10,0	82,5	8	1170	83,5	545	18,0	49,0	48,9	4,80	11,10	13,92
6	1,69	5,0	87,0	8	1165	71,7	416	13,0	32,0	36,0	5,60	14,70	13,10
7	1,22	36,5	56,0	7	1148	114,7	922	43,5	88,5	89,3	2,49	5,40	5,55
8	0,93	36,5	36,5	6,5	1148	87,8	922	43,0	64,5	71,4	2,49	4,50	4,68
9	0,76	37,0	22,0	6	1148	71,3	922	43,0	61,0	62,0	2,49	3,90	3,96
10	0,58	37,0	14,0	5	1148	54,3	922	42,0	46,0	46,0	2,49	3,45	3,19
11	0,42	37,0	6,5	-	1148	39,4	922	35,0	33,8	2,49	2,49	2,85	2,69

1. For experience II we have data:
$V_0 = 1{,}16$ m/sec; $H_0 = 40{,}0$ m; $H_{тр} = 55{,}0$ м; $H_{вак.max.} = 7{,}0$ m; $a = 922$ m/sec; $t_ф = 2{,}50$ sec; d = 50 mm.

According to the initial data of the second experiment, we calculate:
$\frac{aV_0}{g} = 109{,}0$ м; $\frac{1}{2}\frac{\lambda}{d}\cdot\frac{L}{a} = 0{,}44$ sec/м; $V_* = 0{,}50$ m/sec; $V_{тр} = 0{,}44\cdot 0{,}50^2 = 0{,}11$ m/sec;

$V^* = V_* - V^*_{1тр} = 0{,}50 – 0{,}11 = 39$ m/sec; $V_1 = V_0 – V_* = 1{,}16 – 0{,}50 = 0{,}66$ m/sec;

$V_{1тр} = 0{,}44\cdot 0{,}66^2 = 0{,}19$ m/sec; $V_{1,5} = V_1 - V_* - V_{1тр} = 0{,}66 – 0{,}50 – 0{,}19 = 0{,}03$ m/sec;

$V_{1,5тр} = 0{,}44\cdot 0{,}03^2 = 0{,}00$; $V_2 = V_{1,5} - V_* + V_{1,5тр} = 0{,}03 – 0{,}50 + 0{,}00 = 0{,}53$ m/sec;

$V_{2тр} = 0{,}44\cdot 0{,}53^2 = 0{,}12$ m/sec; $V_{2,5} = V_2 – V_* + V_{2тр} = - 0{,}53 – 0{,}50 + 0{,}12 = 0{,}91$ m/sec.

Taking into account the condition $(V_n) < V_1$ and taking into account the friction forces, to determine n using formula (18), we will first calculate:

$Q = 2(V_{1тр} - V_{1,5тр}) = 2\cdot 0{,}19 = 0{,}38$ m/sec;

$R = 2V_{1тр} - 3V_{1,5тр} = 2\cdot 0{,}19 = 0{,}38$ m/sec;

$2V_0 + V_* - Q = 2{,}32 + 0{,}50 – 0{,}38 = 2{,}44$ m/sec;

$22V_0 + V_* - Q = 2{,}44^2 = 5{,}8536$ м^2/sec^2;

$4V_* = 4\cdot 0{,}50 = 2{,}00$ m/sec;

$8V_*(V_0 – R) = 4{,}00(1{,}16 – 0{,}38) = 4\cdot 0{,}78 = 3{,}12$ m^2/sec^2;

$$\sqrt{(2V_0 + V_* - Q)^2 - 8V_*(V_0 - R)} = \sqrt{2{,}733} = 1{,}65 \text{ m/sec.}$$

Based on the above calculated calculations, we determine the n value:

$$n = \frac{2{,}44 + 1{,}65}{2{,}00} = \frac{4{,}09}{2{,}00} = 2{,}04, \text{ n = 2, 04;}$$

$t_v = n\cdot t_ф = 2{,}04\cdot 2{,}50 = 5{,}10$ sec; from experience $t_v = 5{,}10$ sec;

$V_{2,04} = - 0{,}56$ m/sec;

$\Delta H_2 = 93{,}98(0{,}39 + 0{,}56) = 89{,}28$ м;

from experience $\Delta H_2 = 86{,}0$ м.

2. According to V experience, we have data:
$V_0 = 1{,}50$ m/sec; $H_0 = 10{,}0$ м; $H_{тр} = 82{,}5$ м; $H_{вак.max.} = 8{,}0$ м; $a = 545$ m/sec; $t_ф = 4{,}80$ sec; d = 50 mm.

Next, we calculate:

$V_* = 0{,}32$ m/sec; $\frac{1}{2}\frac{\lambda}{d}\frac{L}{a} = 0{,}66$ m/sec; $\frac{a}{g} = 55{,}56$ sec;
$V_{тр} = 0{,}66\cdot 0{,}32^2 = 0{,}07$ m/sec; $V^* = V_* - V^*_{тр} = 0{,}25$ m/sec;

$V_1 = V_0 - V_* = 1{,}50 – 0{,}32 = 1{,}18$ m/sec;

$V_{1тр} = 0{,}66\cdot 1{,}18^2 = 0{,}78$ m/sec;

$V_{1,5} = V_1 - V_* - V_{1тр} = 1{,}18 – 0{,}32 – 0{,}78 = 0{,}08$ m/sec;

$V_{1,5тр} = 0{,}66\cdot 0{,}08^2 = 0{,}00$

$V_2 = V_{1,5} - V_* - V_{1,5тр} = 0{,}08 – 0{,}32 – 0{,}00 = - 0{,}24$ m/sec;

$V_{2тр} = 0{,}66\cdot 0{,}24^2 = 0{,}04$ m/sec;
$V_{2,5} = V_2 - V_* + V_{2тр} = - 0{,}247 – 0{,}32 + 0{,}04 = 0{,}52$ m/sec;

$V_{2,5тр} = 0{,}66\cdot 0{,}52^2 = 0{,}18$ m/sec;

$V_3 = V_{2,5} - V_* + V_{2,5тр} = - 0{,}52 – 0{,}32 + 0{,}18 = - 0{,}66$ m/sec.

Taking into account $\sum V_1 = 0$, we can write:
$Q = 2(0{,}78 + 0{,}00 – 0{,}04 – 0{,}18) = 2\cdot 0{,}56 = 1{,}12$ m/sec;

$R = 2V_{1тр} + 3V_{1,5тр} - 4V_{2тр} - 5V_{2,5тр} = 1{,}56 – 0{,}16 – 0{,}90 = 0{,}50$ m/sec;

$V_0 – R = 1{,}50 – 0{,}50 = 1{,}00$ m/sec;

$2V_0 + V_* - Q = 3{,}00 + 0{,}32 – 1{,}12 = 2{,}20$ m/sec; $2{,}20^2 = 4{,}84$;

$4V_* = 4\cdot 0{,}32 = 1{,}28$ m/sec; $8V_*(V_0 – R) = 2{,}56\cdot 1{,}00 = 2{,}56$ м^2/sec^2;

$$\sqrt{(2V_0 + V_* - Q)^2 - 8V_*(V_0 - R)} = \sqrt{2{,}28} = 1{,}51 \text{ m/sec}$$

$$n = \frac{2{,}20 + 1{,}51}{1{,}28} = \frac{3{,}71}{1{,}28} = 2{,}90 \quad n = 2{,}90;$$

$t_v = n\cdot t_ф = 2{,}90\cdot 4{,}80 = 13{,}92$ sec; по опыту $t_v = 11{,}10$ sec;

$V_{2,90} = V_{2,5} – 0{,}40/0{,}50(V_3 - V_{2,5}) = - 0{,}52 – 0{,}11 = - 0{,}63$ m/sec;

$\Delta H_2 = 55{,}56\cdot 0{,}88 = 48{,}9$ м; по опыту $\Delta H_2 = 49{,}0$ м.

4. CONCLUSIONS

Taking into account the above, in conclusion, we can draw conclusions.

1. The dependence is obtained for calculating the maximum pressure during a hydraulic shock in the first period of reduced pressure in the event of a rupture of the continuity of the flow, taking into account the pressure loss due to friction in a long pressure pipeline.
2. The ratio for determining the number of phases during the impact process is obtained.
3. The obtained ratios are very important for the analysis of technical parameters of water hammer.

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Study of the Synthesis of Pyrrole and its Derivatives

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ABSTRACT

It is of practical interest to develop effective synthetic methods for obtaining pyrrole and its homologues based on commercially available compounds.

KEYWORDS: *medicine, pyrrole, method, ammonia, aromatic, chloride*

Not only poor knowledge, but also the significance, as well as the most diverse possibilities of application in technology, medicine, agriculture, etc. many pyrroles and their derivatives are highly bioactive. Among this class of compounds, promising drugs have been found as the dominant subunit providing the entire play of colors, both in the animal and plant world.

Pyrrole rings are part of the molecules of many natural and biologically active compounds. Pyrrole derivatives include a number of important plant alkaloids, such as nicotine atropine and many others. Pyrrole rings are contained in the molecules of the blood dye, hemoglobin, and the green matter of plants - chlorophyll, vitamin B12, alkali pigment, a number of antibiotics, etc.

The widespread use of pyrrole and its derivatives is delayed due to the lack of cheap and convenient methods for their preparation. The various known methods for the synthesis of the pyrrole ring under normal conditions with a moderate yield of the target product are multistage, the starting materials are in many cases difficult to obtain. The service life of the catalysts and components used is limited, and there are certain difficulties in separating the resulting complex mixture.

In this regard, it is of practical interest to develop effective synthetic methods for obtaining pyrrole and its homologues based on commercially available compounds, in particular, acetylene and its homologues.

Substituted pyrroles are obtained in good yields from butadiene by reacting with ammonia, primary aliphatic, aromatic, heterocyclic amines in the presence of catalysts, with heating [1], as well as the cyclization reaction of diacetylene with primary amines [2-4].

A compound of this type is of interest, since it is known that pyrrole and its derivatives are used in various areas of the national economy [5-7].

In this work, we studied the process of obtaining pyrrole derivatives (Table1) by cyclization of diacytylene with ammonia in the presence of Cu_2Cl_2, for 1.5 hours, and as a dioxane solvent.

During the synthesis, the influence of various factors was revealed: catalysts, solvents, reaction time and temperature on the yield of the target product.

Table 1 Physicochemical parameters of pyrrole derivatives

Pyrrole derivatives	Exit, %	Temperature, °C	R_t	Gross formulas	Element analysis, N, %	
					вычисл.	найд.
1- derivative	59,7		0,61	C_4H_5N	20,89	20,58
2- derivative	68,3	71-72	0,76	$C_{16}H_{13}N$	6,39	6,11
3- derivative	66,2	89-90	0,69	$C_{16}H_4Br_2N$	3,71	3,48
4- derivative	70,1	113-114	0,73	$C_{16}H_4N_3O_4$	13,59	13,28

It has been found that dioxane is the most convenient solvent. The highest yields were obtained when using hemi-chloride copper as a catalyst. The reaction time is 1-2 hours, at wide temperature ranges - 90-230-2 C.

Thus, as a result of the study, the optimal conditions for the occurrence of the cyclization reaction have been found.

The composition and structure of the synthesized compounds were confirmed by the data of elemental analysis and IR spectroscopy. The IR spectra show absorption bands in the range of 1320-1300 cm-1, 1650-1630 cm-1 and 3440-3410 cm-1.

At present, further work is being carried out to identify new properties of the obtained compounds.

Information about the catalytic mechanism of the formation of pyrrole and its derivatives from diacetylene mixed with primary aliphatic amines and ammonia was studied in the works. Only a few authors explain the role and amount of the catalyst used in the cyclization of primary analysis with substituted diacetylene [4-6]. It has been proven that copper catalysts form dative bonds with a triple bond and contribute to the formation of P-complexes. Assuming that the salt is in the form with diarylhexadiine [7-9], it can form a complex compound.

We have identified it individually. The study of the EPR spectrum of the starting compounds, the complex of final products and their comparison with the EPR spectra of typical copper derivatives of tolcylacetylene and copper phenylacetylenide showed that the molecules of the copper complex 1- (π-methylphilin) 4 (π-chlorophyll) butadiene -

1,3 are an asymmetric line from copper with a width of H = 165 Oe and with a q-factor of spectral splitting (qeff = 2.107). The number of unpaired electrons is 2 -1018 spin / g. The calculations were carried out according to the method proposed by Blumenfeld et al. [10].

In all cases, when electron paramagnetic resonance influenced the formation of a π-complex of copper with long, changes were observed in the IR spectra in comparison with the spectra of the initial diarylbutadiines.

In the IR spectra of the copper complex 1- (π-methylphenyl) -4- (π-chlorofinyl) -butadiene-1,3, the absorption band in the region of 2148 cm-1, characteristic of the -C≡C - bond, disappears and new absorption bands appear in the area of 3100-3165 (wide) and 3440-3468 cm.

In addition to analytical methods, the amount of copper in the complex was also determined using the 64Cu-labeled activation method. It is likely that with an increase in the temperature of the reaction medium, the stability of the π-complex decreases, and a favorable transition state is created for the attack of a nucleophile ($R-NH_2$, NH_3) along one of the triple bonds.

Subsequently, the catalyst is detached from the diacetylene molecule with the simultaneous nucleophilic addition of the second primary amine molecule to the triple bond with the formation of an unstable diaminodiene compound, which under the influence of temperature and catalyst undergoes cyclodeamination with the formation of pyrrole derivatives.

Consequently, the formation of the pyrrole ring proceeds through the formation of the diarylbutadiene copper complex. The transition to the active state of the diine molecule occurs through the decomposition of the π-complex under the reaction conditions. Separately taken copper complexes of diarylbutadiene (without the addition of primary amine) are almost completely distributed with increasing temperature of the reaction medium. Diarylbutadiene-1, 3 completely goes into organic solvent, and the catalyst precipitates.

Thus, as a result of studying the cycloaddition reaction of primary amines to dialcyylenes, the influence of the nature and number of substituents of the phenyl radical of the phenyl group, temperature, solvents, duration of the process, as well as the amount and nature of the copper catalyst on the cyclization process was established and a probable mechanism of this reaction was proposed.

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Formation of General Labor Skills in Children with Intellectual Disabilities

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ABSTRACT
This article highlights the features of the formation of General labor skills of children with intellectual disabilities.

KEYWORDS: *integration, information technology, educational process, special school, scientific and methodological, global intelligence*

Orientation in the task, planning and self-control are called General labor skills, since they provide consciousness, purposefulness and independence of work, or intellectual, since they are formed due to a certain level of intellectual development when solving mental tasks in the course of work. The level of their generality is determined by the possibility of using them in the new business environment.

Mastering any type of labor activity is associated with the acquisition of certain labor skills. In addition, work is a necessary condition and means of education, and especially for children with intellectual disabilities.

All this required the analysis of scientific data on the content of the concept of "skill", its formation in manual labor classes. Without knowledge of the features of the formation of skills in this category of children, it is impossible to properly organize the process of education and upbringing in a special institution and prepare its pupils for independent work.

The analysis has shown that there is still a controversy in the specialized literature on the definition of the concept of "skill".

In children with intellectual disabilities, General labor skills are formed with delay and deviations at all stages of development, which are the simplest knowledge in working with paper and plasticine, indicated by the program of training and upbringing of this category of children. They do not have any of the activities inherent in this age in a timely manner, and the leading activity that is intended to become the support of all mental development in this age period is not formed. Therefore, it cannot serve as a means of corrective influence on the development of a child with disabilities. Therefore, one of the essential tasks of correctional and educational work is the formation of prerequisites for the development of activities and targeted training in all its types. At the same time, it is necessary to take into account the stages of development of all types of activities in a normal child.

Pedagogical prerequisites for the formation of General labor skills of children with intellectual disabilities are the appearance of certain needs, motives, interests: in order for a child to start acting with objects, he must have a need, a need for their use in mastering ways of acting with them.

However, the need alone is not enough for the development of skills. the child must learn to understand the goal and analyze the conditions for mastering the action in an accessible form and within accessible limits. Therefore, the child must already have a sufficient level of perception development. Visual-motor coordination and manual motor skills. Work with children in conditions of their stay in boarding schools and special groups is aimed at solving specific tasks. "It is necessary, using all the possibilities of education and training, to form vital skills that will allow students to navigate the environment to a certain extent, to perform simple work tasks."

In labor practice, there is often a need for a more significant restructuring of a particular method of performing work, when the change goes beyond the list of actions known to the worker, i.e. it is a question of creating (constructing) a new simplest method based on a known one. However, the construction of even the simplest techniques is fundamentally different from those changes in the motor program of admission that students carry out without going beyond the known list of actions. The creation of new methods of work is possible with a higher level of creative (productive) human activity.

Mastering professional methods of work does not yet create the ability to act independently in production conditions. The ability of a person to work independently is based on a sufficiently developed ability to navigate the work situation, plan and control their actions and work in General.

Mass school students usually have basic techniques for analyzing a sample product at the beginning of their training in school workshops. So, they first select the main parts of the product (base, body), then-the parts that are attached to the main ones or are located on them, and finally, the details of individual parts. Students with intellectual disabilities who have not been trained in orientation techniques examine products inconsistently, without a specific system, and often do not pay attention to individual elements of the sample object. As a result, the object image formed by them does not contain small and inconspicuous parts or elements of the product.

Mentally healthy children in the analysis of the subject sample based on their existing knowledge and understanding. So, when they examine a new product, they highlight parts, details, and properties that are already known to them. Moreover, familiar elements of the product can be included in the formed image of the object faster, without detailed analysis, but only on the basis of perception of identification signs (the most characteristic by which one can recognize a particular property). In the process of orientation (where possible), they use techniques known from General education (mathematics, drawing). For example, count the number of identical parts, determine the size of parts by measuring. In most students of special schools and boarding schools, such actions (if they have not been specially trained) can rarely be detected.

The analysis of the use of speech in orientation actions reveals a particularly large difference between students of mass and special schools and boarding schools. Experimental studies show that simpler spatial relationships and other subject properties of a sample product can be correctly reflected in the memory of students of special schools and boarding schools, although speech is not used much in this process.

It should be noted that the lack of ability to use their speech in orientation actions is manifested differently in different students of special schools and boarding schools. Opportunities for developing this skill are very closely related to the intellectual level of students.

Thus, the stage of orientation in the work assignment of students of special schools and boarding schools is characterized by the poverty of their content. At a low level of correctional orientation of training, students do not possess the techniques of mental activity that allow them to form a clear image of the future result of work and take into account all the conditions of the upcoming activity. Inspection of a product sample before starting work is often reduced to passive viewing. Increasing the time for such an inspection improves the results of preliminary orientation very slightly. Therefore, the less time students with intellectual disabilities spend on preliminary orientation, compared to the norm, is largely due to their inactivity, inability to organize their actions.

The independence of students in work depends largely on their ability to anticipate each subsequent course and intermediate results of their actions, i.e. to plan their activities.

The planning process can be extended when the child consciously decides that they need to carefully consider the content of the upcoming work. In other circumstances, they may not realize that they need to plan when preparing for work. However, even in this case, the work is carried out according to a pre-created plan, but the planning process is minimized. Usually, this is how the work is planned by a more experienced person who has the opportunity to apply a ready-made plan stored in memory in new conditions. Educational work most often requires detailed planning.

It is well known from practice that students of special schools and boarding schools without special pedagogical measures do not need detailed planning of work tasks. This is due to the peculiarities of their psyche (lack of motivation and thinking), the fact that the planning process is difficult for these students and they do not realize its necessity on their own. The disadvantages of planning are largely due to the low ability of students with intellectual disabilities to act "in the internal plan", i.e. use your imagination to build dynamic images of a changing object (from a blank to a finished product), mentally change the position and shape of the object (an imaginary turn, mental connection or dismemberment of the product). The same difficulties are shown in drawing lessons, when the task is to find the third projection from two data.

A characteristic drawback of work plans drawn up by students with intellectual disabilities is their low mobility. Having prepared work plans, students usually do not change them even under circumstances that interfere with further work.

The difficulties experienced by students in special schools and boarding schools in planning their work, as well as the lack of training in this skill, contribute to the formation of the habit of making a work plan during the task, rather than before work. Each subsequent operation they think about and plan after the previous one is completed. Observations show that often many students of special schools and boarding schools are not guided by their own plan, but copy the labor actions of the most successful group mates. This practice leads to a decrease in the activity of students and a decrease in the correctional orientation of educational work.

A number of difficulties in teaching self-control to students with intellectual disabilities are associated with the inability to perform measurement operations. Poor knowledge of measurement units and techniques makes it difficult to master control operations performed using measuring tools (ruler, measuring tape, caliper, protractor, protractor).

Students of the third group lag behind in the assimilation of program material in labor lessons due to the underdevelopment of the properties of the energy side of activity. In some cases, students who are lagging behind in labor training have a combination of disadvantages inherent in different groups. However, most of them, along with disadvantages, have significant positive qualities in their work.

Thus, the analysis of the didactic aspects of labor training of students with intellectual disabilities indicates that labor lessons contain more opportunities for using information technologies at all stages of training, and their use in the classroom can be both an independent element of the methodology and used in conjunction with other tools in the processes of orientation, planning and self-control of activities.

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Creating Women's Clothing with Main Fashion Trends

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ABSTRACT

Dressing well is an art. In order to master this art, one must not only follow the requirements of fashion (you can get acquainted with fashion through the materials published in fashion magazines, periodicals), but also constantly cultivate your aesthetic taste. In order to cultivate taste, it is necessary to get acquainted with all kinds of art based on the concepts of law, norms and harmony. Good taste comes first. Cleanliness means, first of all, the harmony of colours and shapes of the ensemble, that is, clothes, shoes, hats, bags, gloves.

KEYWORDS: *fashion, modernity, colour combination, dress, design, ensemble*

The creative process is the search for unity of content and form. In some cases, when a creative task is solved, the use of traditional methods does not provide an interesting solution. Before a designer creates a collection, he is inspired by something, and this is reflected in his collection. In the design process, it is possible to focus on intensifying the creative activity of designers. Designers from all over the world are looking for new ideas every step of the way to create new products that fit the era. Manufacturing firms demand great new, endless, ideas from designers but not interesting ones. This leads to the search for ways to further accelerate creative imagination. The designer relies primarily on a creative source when creating a costume collection. Every designer can use any natural phenomenon, from a simple kitchen item, to various elements of the natural environment, as a creative resource in creating their collection. Let's say it's an event happening in the world, music, painting, literature, ballet, theater, circus, cinema, ethnic themes, engineering structures, even car details.

It is possible to use several types of simple applied art works (glass, stone, wood, metal, ceramics, etc.), a variety of musical instruments, from the texture of the earth to the rain and wind as a creative source. In general, every designer at a certain stage in his career, inspired by historical and folk traditions, turns to creative sources. If we look at history, we can see that designers have had a different source of creativity over time. When designing a dress for women, it implies relevance not only on the podium but also in everyday life. Luxurious flowers were the highlight of Fashion Week in Paris. Bright and exotic plants can be seen in the clothing collections of Chanel, Eliesaab, Victor & Rolf, Giambattista Valli, Yanina, Couture. Pret-a-porter-style dresses made from red roses are also available at the most popular brand, Dolce & Gabbana. Bright floral prints, patterns and embellishments are also found in Oscar de la Renta, Blumarine, Celine, Comme des Garcons Simone Rocha, Micheal Kors.

1-rasm Dolce&Gabbana 2015-yil bahor-yoz kolleksiyasi

Yellow, bright, sunny, canary, elegant, this season, the designers have used these colours effectively. This can be seen in the summer dresses in the collection of Celine and Chloe.

The suitability of the costume also depends on the decoration, details and harmonious colours of the parts. In modern fashion, a set of colours cannot consist of only one or two colours.

The importance of colours in the composition is very important when creating clothes based on fashion trends. Colours participate in the composition with their own characteristics. The whole set of colours can be divided into 3 rows:

1. Gray achromatic tones between black and white;
2. The range of chromatic colours (spectral colours) can be divided into the following characteristics:

A. Warm gamma: yellow, orange, red and the colours between them;
B. Cool gamma: green, blue, purple and the colours between them;

C. Additional colours - are located diametrically opposite to each other in the colour range.
3. Rows from chromatic colours (spectral) to achromatic colours, for example, rows from green to white, from green to gray, from green to black.

Clothing comes in many shades of light, dark and complex. From light, dark or close colors of one color (blue with blue, orange with brown), as well as soft colors from white, yellow, pink, blue, etc.) It is easy to ensure mediation using. You can combine white with black, and blue with white. But overall, the contrast is consistent. You just have to be more discriminating with the help you render toward other people. Properly worn clothing is also appropriate for a particular situation, a person's occupation, event, environment, and so on.

Lack of modesty in dress is a sign of bad taste. In the workplace, wearing big clothes, luxurious jewellery, fancy clothes, wearing clothes that do not match each other's colours, wearing tight or wide skirts, pants, and so on, is a violation of fashion, and if it is claimed to be fashion, it is tasteless. Some people who reject modern fashion think that we dress according to fashion. But they are wrong. There are no fancy clothes. You can dress in the latest fashion and you can also dress in very old-fashioned fashion. Clothing should not look ridiculous in front of others. First of all, good dress depends on good taste.

Extremely fashionable clothes, like old fashioned clothes, look unnatural, ugly. Clothing not only makes a person look beautiful (or ugly), but also reflects a person's attitude to his environment. When a woman is dressed in a very luxurious way at work, she is showing off, but when she walks in her usual work clothes during the ceremonial moments, she shows that she is ignoring the mood of those around her. Dressing with taste also means being able to look at yourself critically.

One should feel one's natural flaws and dress in a way that others do not notice. Age should also be taken into account when choosing clothes. Young people wear sportswear, and light-coloured, floral clothes are more suitable for them. Thirty-year-old women (conditionally) are considered to be the basis of fashion. At this age, a woman should know her appearance and be able to choose clothes that will enhance her appearance. And after the age of forty, it is important to remember that some of the flaws of the past years (with clothes and makeup) should be hidden. Obese young women should not be content with too many simple clothes, especially dark clothes to avoid feeling obese, because simple clothes can hide both youth and grace along with obesity. It is important to keep the shape and colour of the clothes in moderation. Fat old women should also not give up colourful clothes, only clothes made of very floral fabrics. It is important to learn to dress nicely and cleanly from an early age. The personal example of the parents plays an important role in choosing the right clothes from a young age. It is necessary to choose clothes that fit the body of children and are comfortable.

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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

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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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