ISSN: 2349-7793

INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES

Vol. 16 No. 5 (2022): May

IMPACT FACTOR: 6.876

ASSOCIATE EDITORS

ARTICLES

- PDF

• THE PLACE AND ROLE OF ENTERPRISE IN THE DEVELOPMENT OF THE NATIONAL ECONOMY

Shermatov G'.G'

- PDF

• EVALUATION OF THE WORK OF THE WORKING BODIES OF ROTARY AND COMBINED MACHINES

Otaxanov Bakhrom Sadirdinovich, Qidirov Adxam Rustamovich

- PDF

• STUDY EVALUATION OF ADHESION BETWEEN POLYMER AND REINFORCING FILLERS

Khalimov Shukhrat Abdurahimovich, Nurmuhammadov Ravshan, Sadikov Muhammad Akramzhanovich, Khasanov Mazhidkhan Mukhmudkhanovich

- PDF

• ROLE OF NATIONAL AND CULTURAL CENTERS OF UZBEKISTAN IN PUBLIC LIFE

Ochilova Nigora Ruzimuratovna

- PDF

• Factors Affecting Cattle Milk Productivity.

B. J. Toshpulatov , B. M. Rajabov , Sh. B. Qurbanov

- PDF

• PROSPECTS FOR THE DEVELOPMENT OF TRUNK DIAGNOSTICS

Mansurov Mukhtorjon Toxirjonovich, M. Yusupjonova

- PDF

PENTAGONAL DOMAIN, WHEN THE SLOPE OF THE CHARACTERISTIC OF THE OPERATOR THE FIRST ORDER IS GREATER THAN ONE

MIRZA MAMAJONOV, XILOLA SHERMATOVA

117-130

- PDF

- **BUKHARA'S PARTICIPATION IN PUBLIC DIPLOMACY IN COOPERATION WITH FOREIGN COUNTRIES THROUGH UNIFIED CITIES**

Tuyev Fazliddin Erkinovich

131-132

- PDF

- **HUMAN PHILOSOPHY IN THE TEACHING OF NASAFI**

Narziyev Zubaydillo Ibodilloyevich

133-136

- PDF

- **THE IRRIGATION AND MELIOIRATION SYSTEMS IN BUKHARA: PROBLEMS AND OUTCOMES**

SH.M.Mirzoyev

137-142

- PDF

- **THE SPIRITUAL-PHILOSOPHICAL LEGACY OF IBN SINA AS PER NEWLY ESTABLISHED FINDINGS**

Izzatullayeva Gavhar Normurotovna

143-147

- PDF

- **A new opportunity in the development of the national innovative system-economy in Uzbekistan.**

Mirzaev Qulmamat Jonuzakovich, Usmanov Farzod Shokhrukhovich

148-150

- PDF

- **THE FEATURES AND TYPES OF MULTIMEDIA TECHNOLOGIES**

Yorkulova Marjona Shukhratovna, Akhmedova Malohat Ergashevna

151-155

- PDF

- **Evaluation of the prevalence and intensity of caries in children with rheumatism.**

Kazakova N.N, Sadieva D.Sh, Khamrayeva Sh.F

156-160

- PDF

- **THE NATURE AND CHARACTERISTICS OF BLOG FIELD AND JOURNALISM**

Tursunova Khonzodabegim Khudoberdi kizi

161-164

- PDF

- **TO STUDY THE EXPERIENCE OF USING MODERN INNOVATIVE SEISMIC PROTECTION SYSTEMS IN THE DESIGN OF SKYSCRAPERS**

Dilshoda Abduqayumova Anvarjon qizi

165-167

- PDF

- **WAYS OF APPLYING INTERNET RESOURCES IN TEACHING ENGLISH TO A2 LEVEL LEARNERS**

Saydaliyeva Umida Furqat qizi , Ziyadulloyeva Mohidil Shovkat qizi

168-171

- PDF

- **ACRYLAMIDE AND QUINAZOLINDION: INDUSTRIAL APPLICATION**

Karimova Sadoqat Amrilloyevna

172-174

- PDF

ROOTSTOCK GROWING TECHNOLOGY

Nazirova Rakhnamohon Mukhtarovna
Doctor of Technical Sciences (PhD), Associate Professor of the Department of Technology of Storage and Primary Processing of Agricultural Products,
Fergana Polytechnic Institute;
Akhmadjonov Avazbek Akmaljon ugli
Master student of group M 19-20
Fergana Polytechnic Institute;
Usmonov Nodirjon Botiraliyevich
senior lecturer of the department "Technology of storage and primary processing of agricultural products",
Fergana Polytechnic Institute;
Fergana, Republic of Uzbekistan.

Annotation: *In principle, from a biological point of view, seedlings can also be self-rooted. However, in many cases, ungrafted trees do not have early fruiting, that is, their fruiting begins relatively late. But when selecting rootstocks and scions, it is important to take into account and know the compatibility of the graft components in scion-rootstock combinations. The fact is that it greatly affects the productivity, mechanical strength and durability of trees.*

Key words: *cutting, mother liquor, grafting, seedling, bole, bush formation, vertical trellis.*

The quality of the rootstock determines the yield and resistance of the tree to diseases. A rootstock is a plant (or part of it), to the stem or root system of which a graft is grafted (a cutting or part of it with a bud of a plant of the variety you need). The rootstock plays a very important role: it provides complete nutrition to the upper part of the plant, i.e. scion.

Consider the main types of rootstocks, their advantages and disadvantages.

Seed stock. You can get it from a seed or a bone. For example, you sow the seed of an apple tree, from which a tree grows over time - a seed stock.

Benefits of seed stock:

• not whimsical viable tree with a developed root system;
• quite easily tolerates severe frosts and drought;
• has a long productive period;
• gives a rich harvest

Disadvantages of seed stock:

• there may be difficulties in caring for the tree;
• inconvenient to pruning and harvesting;
• the first fruits appear on average after 4-7 years;
• takes up a large space, so planting a lot of such trees in a small garden will not work;
• developed root system may suffer from nearby groundwater

Clone stock. It is obtained exclusively in a vegetative way, i.e. rooting cuttings. Gardeners often use this method when it is necessary to secure certain valuable properties of the mother plant (scion) to the rootstock, for example, the sweet taste of the fruit.

Clonal rootstocks are of two types:

• dwarf rootstock – the average height of trees is 2-3 m;

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

• semi-dwarf rootstock - tree height 3-4 m.

Advantages of a clone rootstock:

• precocity (the first crop can be harvested 2-4 years after planting);

• small size - trees are easy to cut, no bulky ladders are needed when harvesting;

• better crop quality compared to growing on a seed rootstock;

• suitable for small gardens, as they take up little space;

Disadvantages of clonal rootstock:

• labor input in leaving;

• superficial placement of the root system leads to the fact that the rootstock may suffer from frost and drought;

• the need to install special supports that will keep the tree from falling;

• thanks to the superficial root system, the trees are not afraid of high groundwater

• relatively short productive period (from 8 to 15 years)

For successful fusion of rootstock and scion, many factors must be taken into account. One of them is a botanical relationship. Best results can be achieved by intraspecific vaccinations (for example, a wild cherry is used as a rootstock, and a varietal cherry is used as a scion). Many gardeners also practice grafting between species (for example, rootstock - cherry plum, and scion - plum) and even intergeneric vaccinations (rootstock - plum, and graft - peach).

The table below shows the most common rootstock options and the most suitable scions for them.

Table 1

The most common types of rootstocks

Rootstock	scion
Quince	Quince, pear
cherry plum	Cherry plum, plum, apricot, peach
Aronia	Aronia, pear, rowan
Hawthorn	Hawthorn, pear, apple, quince, cotoneaster
Cherry	Cherry, plum, apricot, cherry, peach
wild cherry	Cherry
Pear	Pear, apple tree
cerapadus	Cherry
Apple tree	Apple, pear, chokeberry, cotoneaster
Plum	Plum, apricot, cherry plum
Peach	Wild peach and bitter almond
Cotoneaster	Pear
Irga	Irga, pear, rowan

A complex of technological methods that ensures the production of rootstock cuttings that meet the requirements of the standard. Includes: selection of varieties, laying of mother liquors of rootstock vines, formation of bushes and arrangement of supports, care of young and vine-bearing plantations, preparation of cuttings and their storage. The selection of varieties is carried out taking into account the purpose of grafting, their zoning in accordance with the zonal characteristics of the grape culture, since rootstock varieties are distinguished by different resistance to adverse environmental factors (individual pests and diseases, frost, drought, soil salinization, etc.), as well as unequal affinity in

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

relation to various European varieties of grapes (see Mother cells of rootstock vines). The laying of mother liquors of rootstock vines in special nurseries. farms are carried out with high-quality seedlings according to projects, in places with increased heat supply, on relatively light mechanical ones. composition of soils, according to plantation, with the introduction of increased doses of fertilizers (see Laying a vineyard). The formation of bushes is carried out using various forms, depending on the conditions of the culture and the biological properties of the varieties (cup-shaped, fan-shaped, short-sleeved, cordon, and other modifications with or without boles).

In this case, the bushes are kept on various supports, including trellises (low U- and T-shaped, vertical 3-6-wire, one-wire oblique, pyramidal, etc.), on stakes, and also in spreading (see. Culture planted. Culture of grapes on stakes, Pyramidal support of rootstock mother liquors, Tapestry).

Planting care should ensure good shoot growth and vine maturation. It consists in the annual pruning of bushes, performing operations with its green parts (debris, tying shoots, pinching, chasing), tillage, fertilizing, protecting bushes from pests and diseases. Features of T. century. p. are: short pruning of vines (leaving 2-4 eyes), as well as careful and timely breaking out of excess shoots (up to 50%) when they reach a length of 30-40 cm, ensuring the optimal load of the bushes; multiple stepchildren (4-6 times per growing season) with the removal of stepchildren of the 1st and 2nd orders on the main shoots (when reaching a length of 10-15 cm); obligatory chasing of shoots at the completion of their growth in length with the removal of grassy tops with 5-6 internodes; garter shoots, providing their rational placement in space (Fig. 1-3).

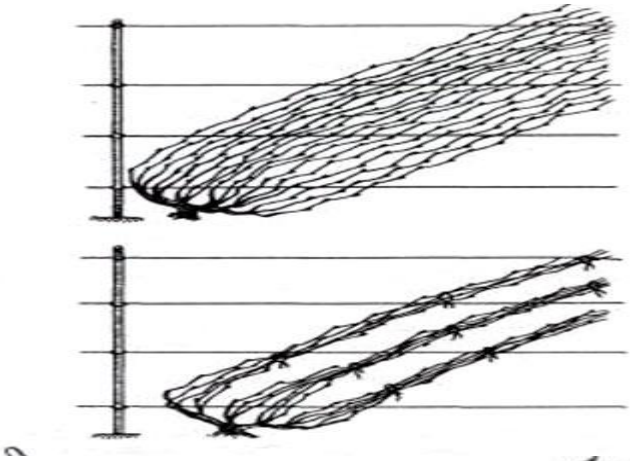


Fig.1. Growing a rootstock on a vertical trellis with different methods of tying shoots

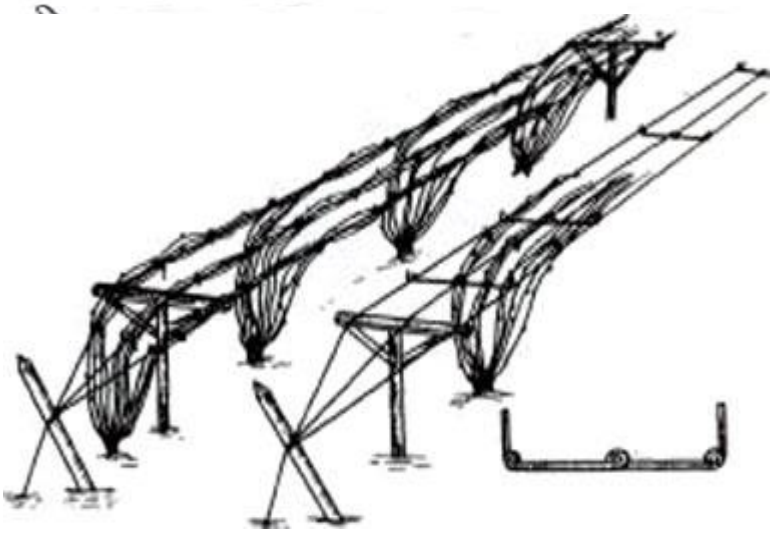


Fig. 2. Growing rootstock on a horizontal T-shaped trellis

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

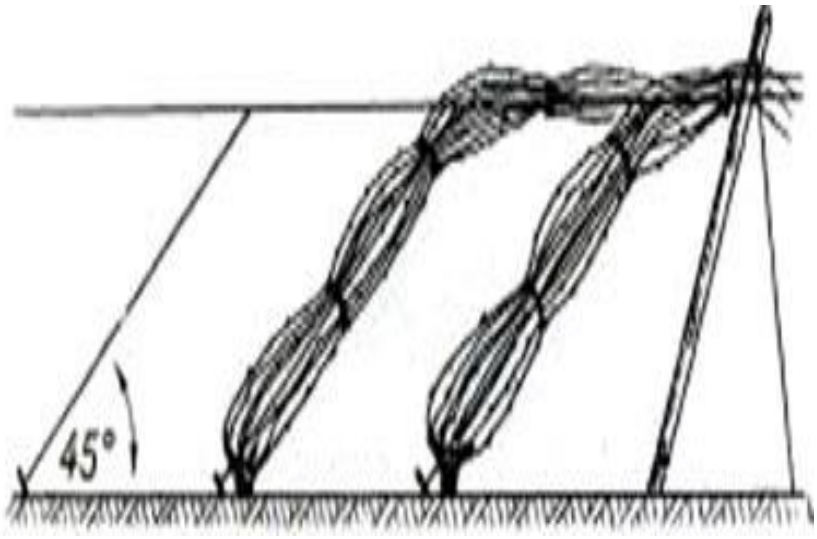


Fig. 3. Growing rootstock on one wire oblique trellis

Soil care consists in the annual autumn plowing of row-spacings, the application of herbicides or cultivation during the growing season, excluding the development of weeds). Fertilization is carried out taking into account the agrochemical characteristics of soils and the state of plantings. Harvesting of the vine and laying it for storage are carried out during the dormant period of the grapes. Cut off all the shoots, simultaneously performing the final pruning of the bushes. Cut vines are sorted by thickness and tied (in 2-3 places) into bundles of 100-200 pieces: separately - vines suitable for grafting (with a diameter of more than 6.5 mm), and separately - for rooting in a shkolka (with a diameter of 5 .0 to 6.5 mm). Thinner vines are not harvested (see Procurement of cuttings). A label is attached to each bundle (with the designation of the farm, ampelographic variety, number of cuttings) and stored.

REFERENCES:

1. R.M.Nazirova, M.X.Xamrakulova, N.B.Usmonov. Moyli ekin urug‘larini saqlash va qayta ishlash texnologiyasi. O’quv qo’llanma. Фергана-Винница: ОО «Европейская научная платформа», 2021. – 236 с. https://doi.org/10.36074/naz-xam-usm.monograph

2. Nazirova R. M., Sulaymonov O. N., Usmonov N. B.//Qishloq xo‘jalik mahsulotlarini saqlash omborlari va texnologiyalari//0‘quv qo‘llanma. Premier Publishing s.r.o. Vienna - 2020. 128 bet.

3. Nazirova R. M., Qahorov F.A., Usmonov N. B.// Complex processing of pomegranate fruits. Asian Journal Of Multidimensional Research. 2021, Volume: 10, Issue: 5. pp. 144-149. https://www.indianjournals.com/ijor.aspx?target=ijor:ajmr&volume=10&issue=5&article=020

4. Мухтаровна, Н. Р., Ботиралиевич, У. Н., & ўғли, М. А. М. (2021). Особенности обработки озоном некоторых видов плодов и овощей для их долгосрочного хранения. Central Asian Journal Of Theoretical & Applied Sciences, 2(12), 384-388. Retrieved from https://cajotas.centralasianstudies.org/index.php/CAJOTAS/article/view/367

5. Mukhtarovna, Nazirova R., et al. "Study of the Influence of Processing on the Safety of Fruit and Vegetable Raw Materials." *European Journal of Agricultural and Rural Education*, vol. 2, no. 6, 2021, pp. 43-45. https://www.neliti.com/publications/378976/study-of-the-influence-of-processing-on-the-safety-of-fruit-and-vegetable-raw-ma#cite

6. Nazirova Rakhnamokhon Mukhtarovna, Qahorova Shohsanam Akram kizi, Usmonov Nodirjon Botiraliyevich//Biological Protection Of Plants. International Journal of Progressive Sciences and Technologies. Vol 27, No 1 (2021). http://ijpsat.es/index.php/ijpsat/article/view/3168

7. Nazirova Rakhnamokhon Mukhtarovna, Tursunov Saidumar Islomjon ugli, & Usmonov Nodirjon Botiraliyevich. (2021). Solar drying of agricultural raw materials and types of solar

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

dryers. *European Journal of Research Development and Sustainability*, *2*(5), 128-131. Retrieved from https://scholarzest.com/index.php/ejrds/article/view/824

8. Nazirova Rakhnamohon Mukhtarovna, Sulaymonov Rustam Ismoilovich, Usmonov Nodirjon Botiraliyevich, Qosimova Komila Muhammadsoli kizi, & Abdullayev Dilmurod Dilshodjon ugli. (2021). Influence of storage conditions on preservation of potato. European Scholar Journal, 2(2), 68-70. Retrieved from https://scholarzest.com/index.php/esj/article/view/265

9. Nazirova Rahnamokhon Mukhtarovna, Akramov Shokhrukh Shukhratjon ugli, & Usmonov Nodirjon Botiraliyevich. (2021). Role of sugar production waste in increasing the productivity of cattle. Euro-Asia Conferences, 1(1), 346–349. Retrieved from http://papers.euroasiaconference.com/index.php/eac/article/view/110

10. Nazirova Rahnamokhon Mukhtarovna, Akhmadjonova Marhabo Makhmudjonovna, & Usmonov Nodirjon Botiraliyevich. (2021). Analysis of factors determining the export potential of vine and wine growing in the republic of uzbekistan. *Euro-Asia Conferences*, *1*(1), 313–315. Retrieved from http://papers.euroasiaconference.com/index.php/eac/article/view/99

11. Nazirova Rakhnamokhon Mukhtarovna, Holikov Muhridin Bahromjon ogli, & Usmonov Nodirjon Botiralievich. (2021). Innovative grain reception technologies change in grain quality during storage. *Euro-Asia Conferences*, *1*(1), 255–257. Retrieved from http://papers.euroasiaconference.com/index.php/eac/article/view/79

12. Nazirova Rakhnamokhon Mukhtarovna, Tojimamatov Dilyor Dilmurod ogli, Kamolov Ziyodullo Valijon ogli, & Usmonov Nodirjon Botiralievich. (2021). Change in grain quality during storage. Euro-Asia Conferences, 1(1), 242–244. Retrieved from http://papers.euroasiaconference.com/index.php/eac/article/view/75

13. Nazirova Rakhnamokhon Mukhtarovna, Rahmonaliyeva Nilufar Nodirovna, & Usmonov Nodirjon Botiralievich. (2021). Influence of seedling storage methods on cotton yield. Euro-Asia Conferences, 1(1), 252–254. Retrieved from http://papers.euroasiaconference.com/index.php/eac/article/view/78

14. Nazirova Rakhnamokhon Mukhtarovna, Otajonova Baxtigul Bakhtiyor qizi, & Usmonov Nodirjon Botiralievich. (2021). Change of grape quality parameters during long-term storage. Euro-Asia Conferences, 1(1), 245–247. Retrieved from http://papers.euroasiaconference.com/index.php/eac/article/view/76

15. Nazirova Rakhnamokhon Mukhtarovna, Mahmudova Muhtasar Akhmadjon qizi, & Usmonov Nodirjon Botiralievich. (2021). Energy saving stone fruit drying technology. Euro-Asia Conferences, 1(1), 248–251. Retrieved from http://papers.euroasiaconference.com/index.php/eac/article/view/77

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

CURRENT TASKS IN THE ORGANIZATION OF SMALL BUSINESS AND PRIVATE ENTREPRENEURSHIP IN THE FIELD OF PRODUCTION

Abdurakhmon Kamalov
Senior Lecturer, Namangan Engineering Construction Institute
Republic of Uzbekistan, Namanagan city, 12 Islam Karimov street.

Abstract: Today, it is safe to say that the government has gained positive experience in the development and management of small and private businesses. Nevertheless, the deeper application of measures to develop, manage, further improve and increase the efficiency of entrepreneurial activity is becoming a requirement of the times.

Key words: management, the program, production, small businesses, analysis, region

In Uzbekistan, small business and private entrepreneurship are developing in all sectors of the economy. Today, it is safe to say that the government has gained positive experience in the development and management of small and private businesses. Nevertheless, the deeper application of measures to develop, manage, further improve and increase the efficiency of entrepreneurial activity is becoming a requirement of the times.

In particular, the share of small business and private entrepreneurship in the gross regional product in Namangan region in January-March 2021 amounted to 62.8%, an increase of 0.4 points compared to the same period in 2020.

As can be seen in Figure 1, the share of small businesses operating in Namangan region in January-March 2021 in GRP is 17.8 points higher than the national average.

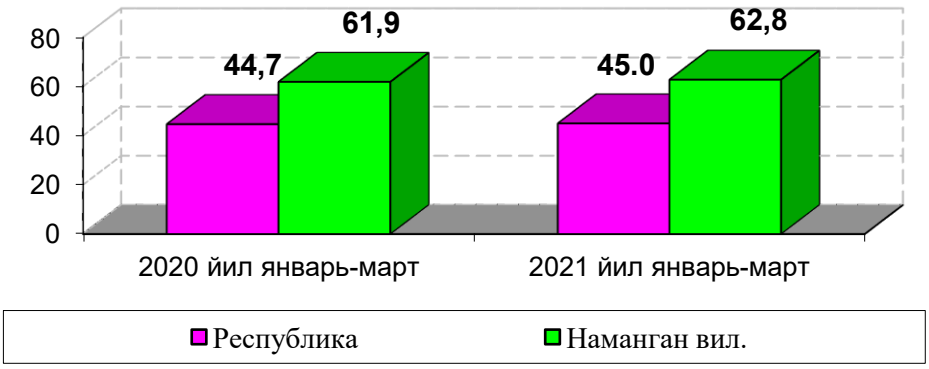


Figure 1. **Small business and private entrepreneurship Share in GRP (in percent)**

The implementation of the program of localization of production of finished products, components and materials in the development of industrial production in Namangan region has also

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

had an impact. 101.0 billion soums were allocated for 99 projects included in the program. soums worth of products were produced.

In January-March 2021, small businesses in Namangan region spent 1096.3 billion soums. UZS, its share in total production amounted to 38.8%. In the districts (and cities) of the region, the highest share of small business and private entrepreneurship in industrial production was observed in Yangikurgan, Chartak (100.0% of total industrial production), Kosonsoy (71.7%) districts. At the same time, the smallest share was observed in Turakurgan (11.3%), Uchkurgan (11.4%), Mingbulak (25.3%) and Chust (25.9%) districts (Figure 2).

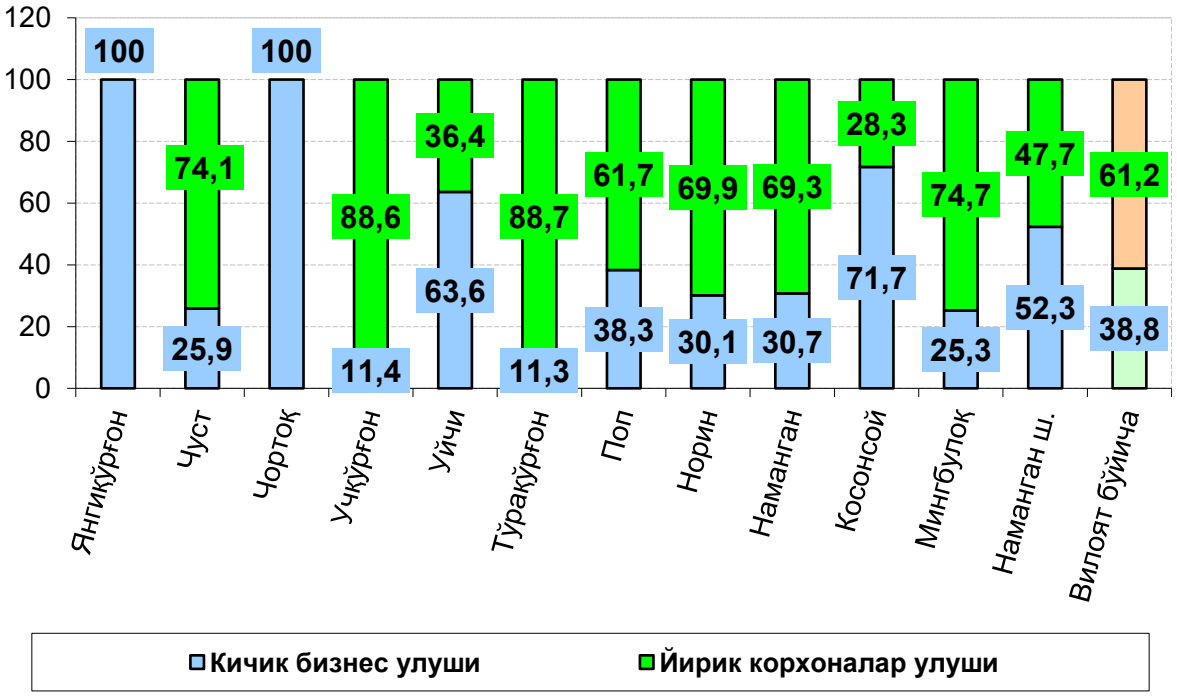


Figure 2. **Share of districts (and cities) of Namangan region in small business and private entrepreneurship (in%)**

Therefore, it is expedient to intensify efforts to produce industrial products in Turakurgan, Uchkurgan, Mingbulak and Chust districts. It is in these areas that additional measures need to be taken to increase the activity of small businesses and private entrepreneurship.

The share of small business and private entrepreneurship in the creation of industrial products remains low compared to different sectors of the economy.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

For example, in Namangan region in some sectors of the economy, in particular, passenger traffic (97.8%), gross agricultural output (97.3%), freight (93.4%), construction (91.3%), trade turnover (90.4%) in such sectors as small business and private entrepreneurship. The share of small business and private entrepreneurship is also growing rapidly in capital investments (73.9%), gross regional product (73.7%), consumer goods (72.2%). However, the share of small business and private entrepreneurship in areas such as total services (65.8%) and industrial production (50.0%) is lower than in areas such as the above (Figure 3).

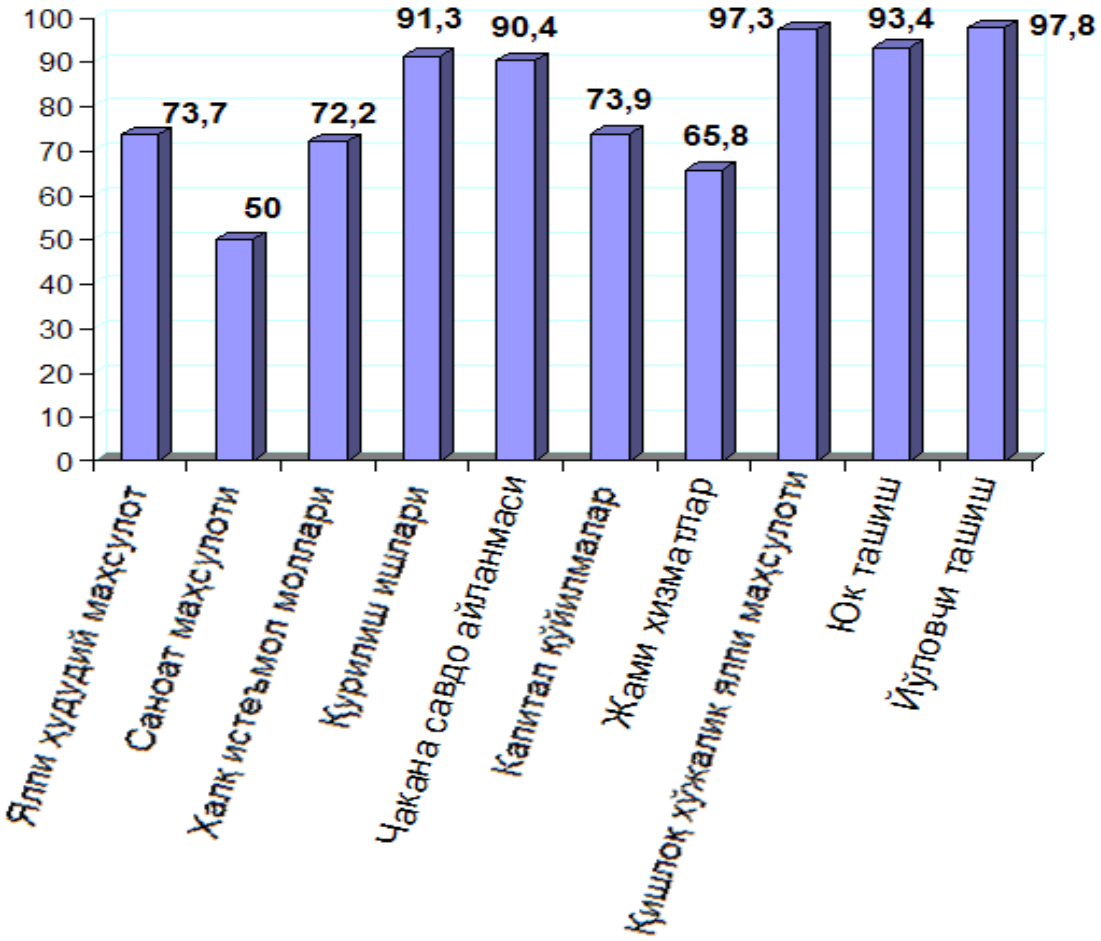


Figure 3. **Share of small business in sectors of the economy, in%** (As of January 1, 2021)

If we analyze the situation for January-March 2021, the stimulation and expansion of the production of finished products has affected the growth of consumer goods production compared to January-March 2020 (112.4%), while its share in total industrial production 51.5 percent.

Continuing our analysis by region, the share of small business in the production of industrial products in Naryn (28.5%), Mingbulak (19.9%), Uchkurgan (18.9%) and Turakurgan (18.8%) districts is very low. Although the average situation is observed in Namangan city (61.4%), Uychi (69.5%), Chust (58.1%) districts, industrial production is also observed in Namangan (45.4%) and

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

Pop (48.9%) districts. the share of small business in cultivation is relatively low. The share of small business in the creation of industrial products in Chartak and Yangikurgan districts is 100%. In Kosonsoy district, this figure is 98.3%. Thus, the share of small business in the creation of industrial products in seven districts of the region remains low. It is in these areas that problems arise in the implementation of reforms specific to market relations.

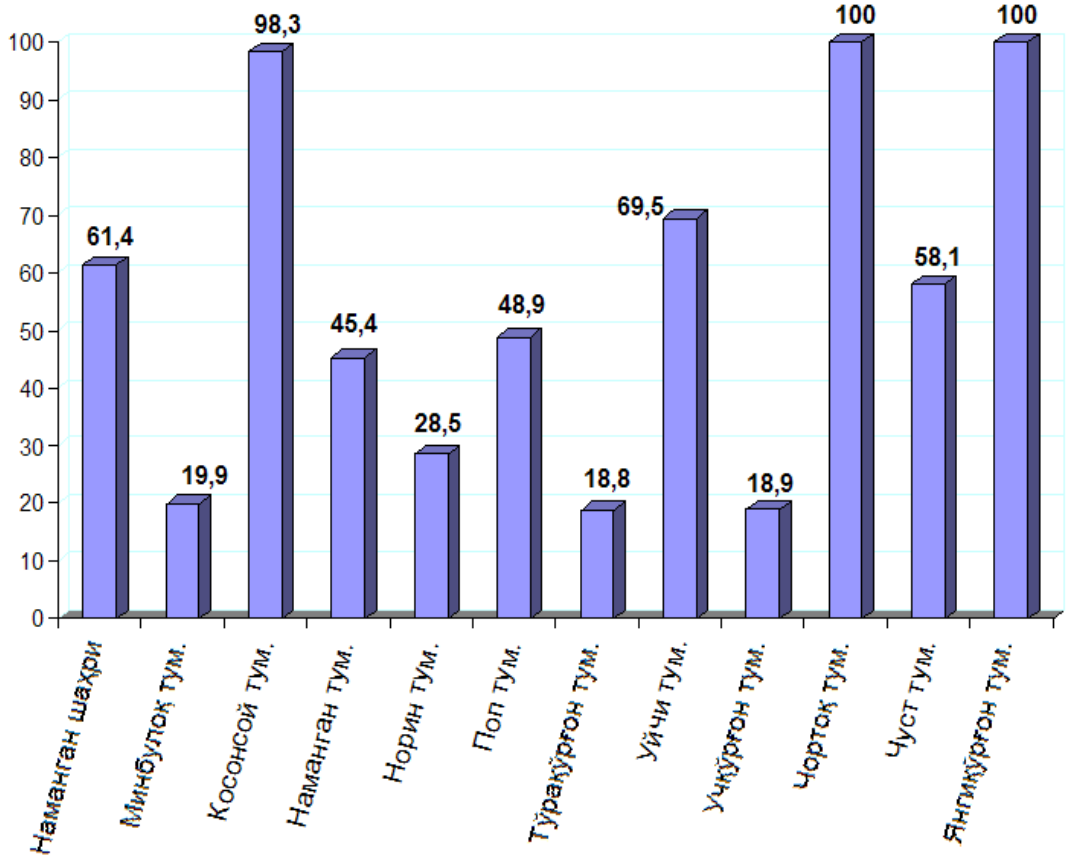


Figure 4. **The share of small business in industrial output in the regions, in%**

In our opinion, in a market economy, it is necessary to take measures to increase the competitiveness of products or services produced by industrial enterprises. At the same time, it is important to organize the effective use of labor resources operating in the industrial sector and their effective management. On the basis of effective management of labor resources and the involvement of qualified specialists in improving production, we will have the opportunity to increase production efficiency, increase labor productivity.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

In short, increasing the share of industry in the gross regional product of Namangan region and the wide involvement of small business is a priority. To do this, we must first pay attention to the establishment of agricultural processing enterprises (production of various food products, wood processing, furniture, etc.), based on our capabilities. Adequacy of raw materials, labor force and capacity available in the region for the establishment of these enterprises will increase labor productivity in enterprises. Such material and technical support of production provides for the solution of issues in the following areas:

- ensuring the uninterrupted operation of industrial enterprises;

- efficient use of minimum resources and strengthening contacts with suppliers;

- Ensuring the production process on the basis of the principles of compact organization and implementation of the established plan;

- Ensuring the financing of all activities, such as scientific equipment, production, sales;

- providing the production process with the required number of qualified specialists.

In general, a new form of any production will be strengthened if it provides high labor productivity. Correspondingly, the level of labor productivity characterizes the high form of organization. The productivity indicator is the best criterion for the development of management methods.

The conclusion is that today the country has all the legal conditions for the development of small business and private entrepreneurship, and measures to increase the share of small business in industry are accelerating. However, due to the weakness of the new economic thinking, non-compliance with the law, disorder, "circumvention" of the law have a negative impact on the development of small business and the economy as a whole. Such a situation may reflect an imperfect view of the market system.

References:

1. Арипов, О. А. (2019). СОЗДАНИЕ БЛАГОПРИЯТНОГО НАЛОГОВОГО КЛИМАТА ДЛЯ МАЛОГО БИЗНЕСА И ЧАСТНОГО ПРЕДПРИНИМАТЕЛЬСТВА В УЗБЕКИСТАНЕ. In *АКТУАЛЬНЫЕ ВОПРОСЫ СОВЕРШЕНСТВОВАНИЯ БУХГАЛТЕРСКОГО УЧЕТА, СТАТИСТИКИ И НАЛОГООБЛОЖЕНИЯ ОРГАНИЗАЦИЙ* (pp. 64-68).
2. Арипов, О. А. (2018). ОСНОВНЫЕ КОМПОНЕНТЫ ФОРМИРОВАНИЯ ДЕЛОВОЙ СРЕДЫ И МАСШТАБНЫЕ РАЗВИТИЯ В ЭКОНОМИКЕ УЗБЕКИСТАН. In *Региональные проблемы преобразования экономики: интеграционные процессы и механизмы формирования и социально-экономическая политика региона* (pp. 121-123).
3. Abdullayevich, A. O. (2021). Problems Of Agricultural Development In Uzbekistan. *Design Engineering*, 9724-9729.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

4. Арипов, О. А. (2019). Структурные элементы деловой среды и их влияния на функционирования субъектов малого бизнеса и предпринимательства. *Региональные проблемы преобразования экономики*, (8 (106)).
5. Aripov, O. A. (2019) "Development of small business and priate entrepreneurship and creating competent business environment for them," Economics and Innovative Technologies: Vol. 2019 : No. 2 , Article 1.
6. Арипов Ойбек Абдуллаевич (2018). Ўзбекистонда ишбилармонлик муҳитини яхшилашдаги ташкилий-ҳуқуқий саъй-ҳаракатлар. Экономика и финансы (Узбекистан), (5), 18-25.
7. Ogli, I. S. H., & Oglu, O. I. A. Peculiarities of the Development of Industrial Production in Namangan Region. *Volume*, *9*, 544-547.
8. Abdullayevich, A. O., & Abdullajanovich, U. T. (2021, December). DEVELOPMENT OF SMALL BUSINESS AND PRIVATE ENTREPRENEURSHIP IN UZBEKISTAN. In *Conference Zone* (pp. 123-128).
9. Abdullajanovich, U. T. (2022, March). THE ROLE OF INDUSTRIAL ENTERPRISES IN THE DEVELOPMENT OF THE NATIONAL ECONOMY. In *Conference Zone* (pp. 271-276).
10. Yakubovich, Y. A., & Sobirjon o'g'li, J. E. (2021, December). TAX POLICY AND WAYS TO IMPROVE IT. In *Conference Zone* (pp. 167-170).
11. Ubaydullaev Toxirjon Abdullajanovich, & Ibrogimov Sherzodbek Halimjon ogli. (2021). THE MAIN DIRECTIONS OF DIVERSIFICATION OF EXPORTS OF INDUSTRIAL PRODUCTS ON THE BASIS OF LOCALIZATION. *Galaxy International Interdisciplinary Research Journal*, *9*(12), 70–75. Retrieved from https://internationaljournals.co.in/index.php/giirj/article/view/623 More Citation Formats
12. Xolmirzaev, U. A. (2020). Financial assets and improvements of their analysis. *Экономика и социум*, (1), 102-105.
13. Khakimov, B., & Kholmirzayev, U. (2020). IMPROVING CASH ACCOUNTING AND ANALYSIS ON THE BASIS OF INTERNATIONAL EXPERIENCES. *International Finance and Accounting*, *2020*(1), 18.
14. Xolmirzaev, U. A., Juraev, E., & Jamgirova, G. I. (2021). APPROACH TO ACCOUNTING FOR FINANCIAL ASSETS IN THE ENTERPRISE IN ACCORDANCE WITH INTERNATIONAL STANDARDS. *Интернаука*, (21-5), 17-19.
15. Gulshirin, J., & Abdulazizovich, X. U. B. (2022, March). INCREASING THE EFFICIENCY OF INVESTMENT IN THE DEVELOPMENT OF EXPORT DIVERSIFICATION IN THE REGION. In *Conference Zone* (pp. 277-281).
16. Хакимов, Б., Талабоев, Х., & Холмирзаев, У. (2021). ВОПРОСЫ УЛУЧШЕНИЯ АНАЛИЗА ОБРАЩЕНИЯ ДОЛГОВОЙ ЗАДОЛЖЕННОСТИ В УСЛОВИЯХ НАПРАВЛЕНИЯ. *Экономика и социум*, (6-2), 441-446.
17. Xolmirzaev, U., Juraev, E., & Axmadjonova, M. (2021). THE ROLE OF ACCOUNTING IN SMALL BUSINESS MANAGEMENT. *Интернаука*, (21-5), 20-22.
18. Juraev, E., Xolmirzaev, U. A., & Rustamova, M. (2021). INCREASING THE EFFICIENCY OF REAL INVESTMENT IN THE CONDITIONS OF ECONOMIC LIBERATION. *Интернаука*, (21-5), 9-11.
19. Sirojiddinov, I., Xolmirzaev, U., & Axmadjonova, M. (2021). THE NEED AND FACTORS TO ACCELERATE THE DEVELOPMENT OF PRIVATE ENTREPRENEURSHIP. *Интернаука*, (21-5), 14-16.
20. Xolmirzayev, A. X. (2021). RISK FACTORS AND UNCERTAINTIES IN THE ECONOMY. *Мировая наука*, (2), 24-27.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

21. Холмирзаев, У. А. (2021, October). ҚИСҚА МУДДАТЛИ ҚИММАТЛИ ҚОҒОЗЛАРНИ АНАЛИТИК ҲИСОБИНИ ТАКОМИЛЛАШТИРИШ. In *" ONLINE-CONFERENCES" PLATFORM* (pp. 396-399).
22. Juraev, E. S., & Xolmirzayev, U. A. (2019). Profits of housekeeping and its development. *TRANS Asian Research Journals*, *8*(4).
23. Abdurahmon, K., & Abdulazizovich, K. U. (2021, December). SOME ISSUES OF IMPROVING SECURITIES ACCOUNTING. In *Conference Zone* (pp. 129-132).
24. Yuldashev, A. A., & Jurayev, E. S. (2018). DIRECTION OF DEVELOPMENT LOCAL TAX-BUDGET POTENTIAL IN THE REGIONS. *Теория и практика современной науки*, (3), 111-115.
25. Juraev, E., & Juraeva, M. (2021). CURRENT ISSUES OF HIGHER EDUCATION SYSTEM DEVELOPMENT. *Интернаука*, (21-4), 62-63.
26. Zayliyev, A. A., Jurayev, E. S., & Muxammadjonov, B. B. (2018). DISCLOSURE LINES OF CREATIVE FINANCIAL REPORTING OF TRADE BANKS. *Теория и практика современной науки*, (3), 120-122.
27. Zayliyev, A. A., Jurayev, E. S., & Muxammadjonov, B. B. (2018). TARGETING OF PROJECT FINANCING AND MONITORING IN CREDIT TERRITORIES. *Теория и практика современной науки*, (3), 116-120.
28. Juraev, E. S. (2017). World experience in lending to small businesses. High School.
29. Жураев, Э. С. (2018). ЗАРУБЕЖНЫЙ ОПЫТ ПО ВЕДЕНИЮ ФИНАНСОВОЙ ПОЛИТИКИ ДЛЯ РАЗВИТИЯ МАЛОГО БИЗНЕСА. *Экономика и социум*, (11), 357-362.
30. Juraev, E. S. (2018). Foreign experience in conducting financial policies for small business development. Economy and Society.
31. Ботирова, Р. А., Сирожиддинов, И. К., & Жураев, Э. С. (2020). Поддержка и стимулирование инвестиционных процессов в экономике в условиях короновирусной пандемии. *Экономика и социум*, (5-1), 416-421.
32. Juraev, E. S. (2020). INFLATION RISK. *Мировая наука*, (1), 29-33.
33. Ходжибаева, И. В. (2020). Механизм государственного регулирование инвестиционной деятельности. *Экономика и социум*, (3), 563-565.
34. Sirojiddinov, I., & Xodjibaeva, I. (2020). Features of the investment process in the economy in the conditions of the pandemic coronavirus. *EPRA International Journal of Multidisciplinary Rescarch-Peer Revieved Journal*.
35. Isomukhamedov, A., & Sirojiddinov, I. (2022, January). DETERMINING AND ACCOUNTING FOR THE COST OF PRODUCTION IN SMALL BUSINESSES IN THE MANUFACTURING SECTOR. In *Conference Zone* (pp. 241-243).
36. Ботирова, Р. А., & Сирожиддинов, И. К. (2017). Социальная направленность инвестиционных процессов в Узбекистане. *Молодой ученый*, (41), 38-39.
37. Сирожиддинов, И. К., & Ботирова, Р. А. (2014). Стимулирование развития малого бизнеса и частного предпринимательства в Узбекистане. *Молодой ученый*, (6), 486-488.
38. Ботирова, Р. А., & Сирожиддинов, И. К. (2015). Роль коммерческих банков в финансовом оздоровлении предприятий. *Молодой ученый*, (5), 245-246.
39. Сирожиддинов, И. К., & Ботирова, Р. А. (2016). Ускоренное развитие промышленности-основа структурных преобразований в экономике. *Молодой ученый*, (28), 546-548.
40. Сирожиддинов, И. К., & Ботирова, Р. А. (2016). Представление финансовой отчетности в соответствии с международными стандартами финансовой отчетности. *Молодой ученый*, (12), 1460-1461.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

41. Isakov, M. (2020). МИ Isakov Biznes-rejalashtirish 2019. *Архив научных исследований*, (22).
42. Isakov, M. (2020). МИ Abdurahim Ortiqov, Musaxon Isakov. Industrial iqtisodiyot. O ‘quv qo‘llanma.-T. TDIU, 2019.
43. Sharifjanovna, Q. M. (2021). Perpendicularity of a Straight Line to a Plane and a Plane to a Plane. *International Journal of Innovative Analyses and Emerging Technology*, *1*(5), 70-71.
44. Abduraximovich, U. M., & Sharifjanovna, Q. M. (2021). Methods of Using Graphic Programs in the Lessons of Descriptive Geometry. *International Journal of Discoveries and Innovations in Applied Sciences*, *1*(6), 149-152.
45. Комилов, С., & Козокова, М. (2015). Разработка вычислительного алгоритма решения гидродинамических задач управления процессами ПВ в неоднородных средах при условии использования этажной системы разработки. *Молодой ученый*, (11), 324-328.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

ISSN: 2349-7793 Impact Factor: 6.876., Volume: 16 Issue: 05 in May 2022

"Features of the technology of cutting worms with a cutter on CNC machines"

Tadaeva Elena Vladimirovna
Phd., Namangan Engineering Technology Institute

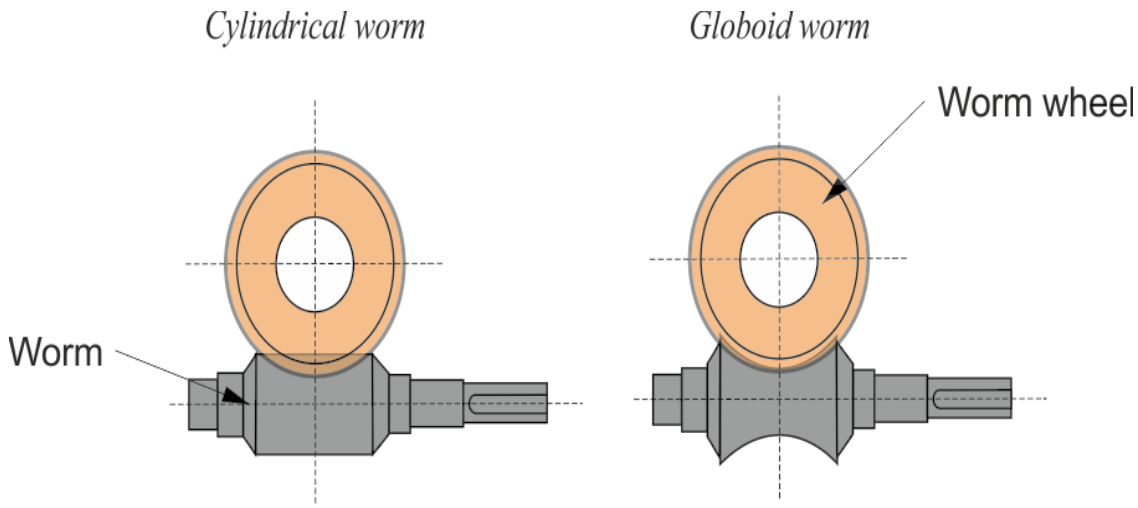
Annotation: *This article describes the essence of the concept of "worm", the purpose of worm gears, types of worms, a summary of the design of the process of processing worms, the advantages of using a CNC lathe.*

Key words: *Worm, worm wheel, cylindrical, globoid, design, Lathes, milling equipment, CNC lathes.*

Such a concept as a "worm" in mechanical engineering implies a screw with a special thread, the profile of which has a trapezoidal shape. In practice, in mechanical engineering, single-start, two-start and four-start worms are used. The worm gear serves as a transmitter of rotation between the shafts and the worm screw associated with it. Worm drives have the ability to transmit motion at an angle of 90°.

According to the geometric view, worm gears combine the properties of gears (gear) and screw pairs. The combination of features of various mechanisms determines the features of the worm gear and approaches to the design of the transmission. The worm gear consists of two links. The driving link is the worm, the driven link is the worm wheel. The leading link of the worm gear is the “Worm”, and the driven link is the worm wheel.

According to their design, worms are cylindrical and globoid. In cylindrical worm gears, the shape of the worm is cylindrical, and in the globoid gear, the worm has a shape narrowed in the center (that is, it repeats the shape of the wheel).



From the above figure, it can be seen that loboid worms have an unusual shape and therefore are a little more difficult to manufacture than cylindrical worms that have a simple cylindrical surface. For the manufacture of worms, the design of the technological process for the manufacture of this part is required. The first stage in the design will be the creation of a drawing of the workpiece, based on such factors as: the drawing of the finished part, the type of production, the requirements for the quality of the part, etc.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

After calculating the allowances of machined surfaces and creating a drawing of the workpiece, you should select the method for obtaining the workpiece. Often, rolled products of a suitable diameter are used as a workpiece or a workpiece is obtained by stamping. After receiving the workpiece, it is required to design a processing route, select equipment for processing.

The choice of equipment for processing the part is the most important part of the project, here the requirements for the quality of the final product must be provided, fixtures for machining on machine tools and many other factors affecting the quality and efficiency of the process. Cutting the worm with milling equipment is essentially a more efficient method of processing, but the profile of the worms is distorted.

The simplest type of processing of worms is cutting them on a lathe with a cutter with a straight profile. To obtain the correct profile of the turns, the profile of the cutter must have the contour of the cavity between the teeth of the worm in its certain section and be aligned with the plane of this section when cutting.

Fine cutting of the worm is performed as follows. First, one side of the coil is processed until the required angle of the worm profile and the required surface finish are obtained. Then the worm is turned and the second side of the coil is processed with the same cutter. This procedure for processing the worm is explained by the fact that when cutting the right thread, the left cutter works in unfavorable conditions due to the “running” of the helical surface onto the cutting edge. Similarly, when cutting a left-hand thread, the right cutter works under the same conditions.

Since when cutting worms with a large pitch, chips with a thickness of about 45 mm are removed, the spring cutters used in this case do not provide the required profile. Therefore, for cutting worms, it is advisable to use cutters with a rake angle reduced from 65 to 40 °. one). With the beginning of the use of CNC machines for processing various parts, many production indicators have changed for the better. CNC machines not only simplify work and help save working time, but their quality indicators are the highest than conventional machines.

When analyzing modern CNC lathes available on the market of foreign countries, the newest, recently tested and optimized according to the latest requirements, in which they tried to take into account all the shortcomings of previous models, the 161F4 lathe was studied. The special turning machine with CNC model RTS 161F4 is designed for cutting helical surfaces of screws, worms, screws by whirl milling.

The characteristics of this machine have impressive improvements and the rigidity of the machine design allows you to fully use the capabilities of high-speed cutting and carbide tools in the processing of both ferrous and non-ferrous metals.

References:

1. Gear and worm gears. Some questions of theory, calculation and production | Andozhsky V. D., Belyanin A. I.
2. Machine parts. Calculation and design. Handbook, 3rd edition, volume 1, Moscow, 1969
3. Chasovnikov L.D. Engagement gears, 2nd edition, Moscow 1969

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

WOMEN IN THE POPULATION ORDER EMPLOYMENT LEGAL PROBLEMS

Sharofiddinova Gulnoza Ilxomjonovna
Trainee-researcher of the Department of Economics
Namangan Engineering Construction Institute
Republic of Uzbekistan, Namanagan city, 12 Islam Karimov street.

Abstract: *An article about the problems of managing women's employment in the Namangan region. It highlights women's employment issues in the region.*
Key words: *women, management, labor force, population, employment.*

Namangan region is located in the north of the Fergana Valley and has its own demographic characteristics. The territory of the region is 7,444 thousand sq. Km, and the population at the beginning of 2022 was 2931.1 thousand people. The population density is 385.2 people per 1 sq. Km. 50.8% of the region's population are men and 49.2% are women. 64.8% of the region's population (national rate - 50.7%) live in urban areas and 35.2% (national rate - 49.3%) live in rural areas (Figure 1).

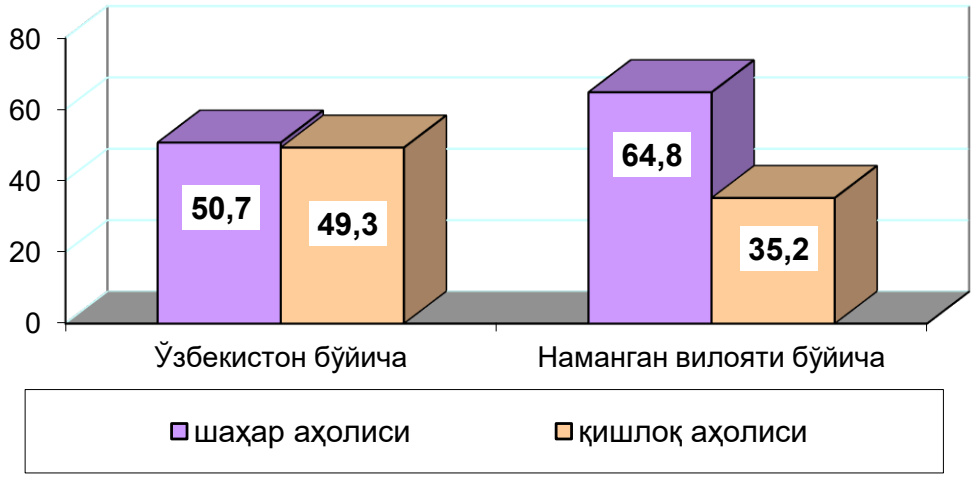


Figure 1. Location of urban and rural population[1]

49.2% of the population of Namangan region are women, which is 1.6 points less than the total share of men in the region. However, the share of women in the population of Uychi district is 50.0%, which is 0.8 points higher than the regional average. In each of Uchkurgan and Chartak districts, 49.9% of the population are women. This is 0.7 points more than the regional average. In Turakurgan (49.4%) and Pop (49.7%) districts, the share of women in the population is higher than the regional average. The share of women in the population of Mingbulak district is 49.2%, which is

[1] The image is based on data from the Namangan Regional Statistics Office.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

equal to the region. The share of women in Yangikurgan and Narin districts is 49.1%, and in Kosonsoy district - 49.0% (Table 1).

Table 1[2]

Population and sex in the territory of Namangan region[3]

(thousand people)

Regions	Total population	Women	Men	In relation to the total population	
				women	men
Namangan sh.	661.3	320.9	340.4	48.5	51.5
Mingbuloq	131.2	64.5	66.7	49.2	50.8
Kosonsoy	217.7	106.7	111.0	49.0	51.0
Namangan	183.8	89.9	93.9	48.9	51.1
Norin	169.3	83.1	86.2	49.1	50.9
Pop	226.9	112.9	114.0	49.7	50.3
Tur**a**kurgan	233.5	115.4	118.1	49.4	50.6
Uychi	222.1	111.0	111.1	50.0	50.0
Uchkurgan	178.1	88.9	89.2	49.9	50.1
Chartoq	206.2	103.0	103.2	49.9	50.1
Chust	274.3	134.2	140.3	48.9	51.1
Yangikurgan	226.7	111.5	115.2	49.1	50.9
By region	**2931.1**	**1442**	**1489.3**	**49.2**	**50.8**

In 2005-2007, the number of women in the region increased from 1,036.0 thousand to 1,059.6 thousand, and by the beginning of 2022 their number was 1,442,000. In order to provide employment

[2]The table data is as of January 2022.
[3] The table is calculated by the author on the basis of data from the Namangan regional department of statistics.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

for women in the region, it is expedient to launch new facilities in urban and rural areas, to establish small businesses and micro-firms, to develop private entrepreneurship, to establish domestic labor, to develop family business.

The average age of the population in the country is 29.7 years for women. In Namangan region, this figure is 29.2 years, which is 0.5 points lower than in the country. This indicates that the female workforce across the country will increase in the future.

The analysis shows that the labor force in Namangan region is growing rapidly. Therefore, the issues of employment of women in the Namangan region are of particular importance.

As the role of women in the development of the national economy of Uzbekistan grows, "further strengthening the role and status of women in government and society will remain one of the important directions of our reforms [4]. "

It is known that the Development Strategy, adopted on January 28, 2022, calls for [5]further deepening of the ongoing reforms in the new Uzbekistan, as well as the establishment of enterprises in various fields. Otherwise, the problem of employment will be complicated. To solve this problem, first of all, it is important to provide employment for the labor force living in urban areas.

Therefore, by 2022, the attention of women in the policy of our state and measures for their social protection have been strengthened. In particular, in the Development Strategy of New Uzbekistan for 2022-2026, the 4th priority is to pursue a fair social policy, the development of human capital, the 69th goal of which was:

-creation of an atmosphere of intolerance to oppression and violence against women in society, ensuring the rights and legitimate interests of women;

- Continuation of the policy of gender equality , increasing the socio-political activity of women, the implementation of reforms to support them;

-Education of women in education and professional skills, comprehensive assistance in finding a decent job, support for entrepreneurship, identification of talented young women and the proper orientation of their abilities;

- Improving the quality of medical and social services provided to women in the regions, especially in rural areas, the effectiveness of work to ensure a healthy lifestyle among them;

- Establishment of systemic measures to provide housing for women in need of housing, improve living and working conditions, increase income;

[4] Mirziyoev Sh. New Uzbekistan Strategy. –T .: “Uzbekistan” publishing house, 2021. 249 pages.

[5]See: Decree of the President of the Republic of Uzbekistan. "On the New Development Strategy of Uzbekistan for 2022-2026". PF-60-son. January 28, 2022.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

- Providing social, legal and psychological assistance to women in difficult social situations, targeted support;

- Targeted work with the "Women's Book", the implementation of public control over the timely elimination of women's problems by the authorities.

In our opinion, the issue of employment in our country is one of the priorities of social policy, and the solution of the problem of employment of women, especially young people in the region, their livelihood should not be neglected. Because the issues of social protection of women in the country are expanding. However, while unemployment among women is largely unqualified, most of them are limited to general secondary education. This does not mean that women can work as professionals in different professions.

One of the most serious problems in Namangan is the low level of skills and education among women. In most areas, women living in rural areas stop studying and getting an education after receiving a general secondary education. As a result, they become preoccupied with household and agricultural activities. For example, in rural areas, particularly in Namangan Province, most women are accustomed to working on the farm in addition to household chores. In addition, their jobs include simple cleaning, product handling, or inspection. Their salaries are almost unsatisfactory.

In our opinion, the most important issue today in creating new jobs is to increase the number of small businesses, to open them a wide range of opportunities and benefits. In particular, the coronavirus pandemic has helped the labor market, labor relations and employment, as well as the employment of the unemployed, especially **women , due to the closure of external borders. demanded** that urgent measures be taken to ensure

According to statistics for the country by 2020, **513 thousand** women were provided with employment and labor services by labor authorities, and **125.4 thousand** were placed in permanent jobs. Unemployed and **260.3 thousand** women from low-income families included in the **Iron Book were involved in paid public works, and 270.5 billion soums** were allocated for their salaries from the Public Works Fund under the Ministry . **30.8 thousand soums** were allocated to unemployed women during the period of **unemployment billion UZS unemployment** benefit [6].

Private business entities **231 people 5.3 billion soums** to cover the costs of vocational training, retraining and advanced training of employees . **sum** subsidies were allocated, resulting in the employment of **2,200 women .** Construction of light greenhouses on private plots, purchase of seeds and seedlings for planting, as well as irrigation equipment **12.4 thousand women received 32.4 billion soums. sum** subsidy funds were provided [7].

[6] Source: https://mehnat.uz/uz/news/importance-and-progresses-of-participation-with-government-organizations-in-promoting-your-work-and-entrepreneurship

[7] The analysis data are for 2020.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

In order to increase women's employment in Namangan region, we believe that the following should be addressed:

- Organization of various courses (free of charge) and national training centers to improve women's literacy and skills;

- taking measures to create new jobs through the development of home-based activities;

placement of labor-intensive production and service enterprises in densely populated areas (especially in urban areas), intensification of their organization;

- Conduct research to study the supply and demand for the profession in order to use the quality of labor from unemployed women;

Raising literacy in order to bring small businesses to rural areas and increase the sense of ownership of individual entrepreneurship .

It would also be expedient to create conditions to increase the level of employment of women, to activate traditional forms of entrepreneurship, such as family business and handicrafts, and to open a wide range of products for consumers to sell in market conditions.

References:

1. Арипов, О. А. (2019). СОЗДАНИЕ БЛАГОПРИЯТНОГО НАЛОГОВОГО КЛИМАТА ДЛЯ МАЛОГО БИЗНЕСА И ЧАСТНОГО ПРЕДПРИНИМАТЕЛЬСТВА В УЗБЕКИСТАНЕ. In *АКТУАЛЬНЫЕ ВОПРОСЫ СОВЕРШЕНСТВОВАНИЯ БУХГАЛТЕРСКОГО УЧЕТА, СТАТИСТИКИ И НАЛОГООБЛОЖЕНИЯ ОРГАНИЗАЦИЙ* (pp. 64-68).
2. Арипов, О. А. (2018). ОСНОВНЫЕ КОМПОНЕНТЫ ФОРМИРОВАНИЯ ДЕЛОВОЙ СРЕДЫ И МАСШТАБНЫЕ РАЗВИТИЯ В ЭКОНОМИКЕ УЗБЕКИСТАН. In *Региональные проблемы преобразования экономики: интеграционные процессы и механизмы формирования и социально-экономическая политика региона* (pp. 121-123).
3. Abdullayevich, A. O. (2021). Problems Of Agricultural Development In Uzbekistan. *Design Engineering*, 9724-9729.
4. Арипов, О. А. (2019). Структурные элементы деловой среды и их влияния на функционирования субъектов малого бизнеса и предпринимательства. *Региональные проблемы преобразования экономики*, (8 (106)).
5. Aripov, O. A. (2019) "Development of small business and priate entrepreneurship and creating competent business environment for them," Economics and Innovative Technologies: Vol. 2019 : No. 2 , Article 1.
6. Арипов Ойбек Абдуллаевич (2018). Ўзбекистонда ишбилармонлик муҳитини яхшилашдаги ташкилий-ҳуқуқий саъй-ҳаракатлар. Экономика и финансы (Узбекистан), (5), 18-25.
7. Sirojiddinov, I., & Xodjibaeva, I. (2020). Features of the investment process in the economy in the conditions of the pandemic coronavirus. *EPRA International Journal of Multidisciplinary Rescarch-Peer Revieved Journal*.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

8. Isomukhamedov, A., & Sirojiddinov, I. (2022, January). DETERMINING AND ACCOUNTING FOR THE COST OF PRODUCTION IN SMALL BUSINESSES IN THE MANUFACTURING SECTOR. In *Conference Zone* (pp. 241-243).
9. Ботирова, Р. А., & Сирожиддинов, И. К. (2017). Социальная направленность инвестиционных процессов в Узбекистане. *Молодой ученый*, (41), 38-39.
10. Сирожиддинов, И. К., & Ботирова, Р. А. (2014). Стимулирование развития малого бизнеса и частного предпринимательства в Узбекистане. *Молодой ученый*, (6), 486-488.
11. Ботирова, Р. А., & Сирожиддинов, И. К. (2015). Роль коммерческих банков в финансовом оздоровлении предприятий. *Молодой ученый*, (5), 245-246.
12. Сирожиддинов, И. К., & Ботирова, Р. А. (2016). Ускоренное развитие промышленности-основа структурных преобразований в экономике. *Молодой ученый*, (28), 546-548.
13. Сирожиддинов, И. К., & Ботирова, Р. А. (2016). Представление финансовой отчетности в соответствии с международными стандартами финансовой отчетности. *Молодой ученый*, (12), 1460-1461.
14. Ogli, I. S. H., & Oglu, O. I. A. Peculiarities of the Development of Industrial Production in Namangan Region. *Volume*, *9*, 544-547.
15. Abdullayevich, A. O., & Abdullajanovich, U. T. (2021, December). DEVELOPMENT OF SMALL BUSINESS AND PRIVATE ENTREPRENEURSHIP IN UZBEKISTAN. In *Conference Zone* (pp. 123-128).
16. Abdullajanovich, U. T. (2022, March). THE ROLE OF INDUSTRIAL ENTERPRISES IN THE DEVELOPMENT OF THE NATIONAL ECONOMY. In *Conference Zone* (pp. 271-276).
17. Yakubovich, Y. A., & Sobirjon o'g'li, J. E. (2021, December). TAX POLICY AND WAYS TO IMPROVE IT. In *Conference Zone* (pp. 167-170).
18. Ubaydullaev Toxirjon Abdullajanovich, & Ibrogimov Sherzodbek Halimjon ogli. (2021). THE MAIN DIRECTIONS OF DIVERSIFICATION OF EXPORTS OF INDUSTRIAL PRODUCTS ON THE BASIS OF LOCALIZATION. *Galaxy International Interdisciplinary Research Journal*, *9*(12), 70–75. Retrieved from https://internationaljournals.co.in/index.php/giirj/article/view/623 More Citation Formats
19. Xolmirzaev, U. A. (2020). Financial assets and improvements of their analysis. *Экономика и социум*, (1), 102-105.
20. Khakimov, B., & Kholmirzayev, U. (2020). IMPROVING CASH ACCOUNTING AND ANALYSIS ON THE BASIS OF INTERNATIONAL EXPERIENCES. *International Finance and Accounting*, *2020*(1), 18.
21. Xolmirzaev, U. A., Juraev, E., & Jamgirova, G. I. (2021). APPROACH TO ACCOUNTING FOR FINANCIAL ASSETS IN THE ENTERPRISE IN ACCORDANCE WITH INTERNATIONAL STANDARDS. *Интернаука*, (21-5), 17-19.
22. Gulshirin, J., & Abdulazizovich, X. U. B. (2022, March). INCREASING THE EFFICIENCY OF INVESTMENT IN THE DEVELOPMENT OF EXPORT DIVERSIFICATION IN THE REGION. In *Conference Zone* (pp. 277-281).
23. Хакимов, Б., Талабоев, Х., & Холмирзаев, У. (2021). ВОПРОСЫ УЛУЧШЕНИЯ АНАЛИЗА ОБРАЩЕНИЯ ДОЛГОВОЙ ЗАДОЛЖЕННОСТИ В УСЛОВИЯХ НАПРАВЛЕНИЯ. *Экономика и социум*, (6-2), 441-446.
24. Xolmirzaev, U., Juraev, E., & Axmadjonova, M. (2021). THE ROLE OF ACCOUNTING IN SMALL BUSINESS MANAGEMENT. *Интернаука*, (21-5), 20-22.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

25. Juraev, E., Xolmirzaev, U. A., & Rustamova, M. (2021). INCREASING THE EFFICIENCY OF REAL INVESTMENT IN THE CONDITIONS OF ECONOMIC LIBERATION. *Интернаука*, (21-5), 9-11.
26. Sirojiddinov, I., Xolmirzaev, U., & Axmadjonova, M. (2021). THE NEED AND FACTORS TO ACCELERATE THE DEVELOPMENT OF PRIVATE ENTREPRENEURSHIP. *Интернаука*, (21-5), 14-16.
27. Xolmirzayev, A. X. (2021). RISK FACTORS AND UNCERTAINTIES IN THE ECONOMY. *Мировая наука*, (2), 24-27.
28. Холмирзаев, У. А. (2021, October). ҚИСҚА МУДДАТЛИ ҚИММАТЛИ ҚОҒОЗЛАРНИ АНАЛИТИК ҲИСОБИНИ ТАКОМИЛЛАШТИРИШ. In *" ONLINE-CONFERENCES" PLATFORM* (pp. 396-399).
29. Juraev, E. S., & Xolmirzayev, U. A. (2019). Profits of housekeeping and its development. *TRANS Asian Research Journals*, *8*(4).
30. Abdurahmon, K., & Abdulazizovich, K. U. (2021, December). SOME ISSUES OF IMPROVING SECURITIES ACCOUNTING. In *Conference Zone* (pp. 129-132).
31. Yuldashev, A. A., & Jurayev, E. S. (2018). DIRECTION OF DEVELOPMENT LOCAL TAX-BUDGET POTENTIAL IN THE REGIONS. *Теория и практика современной науки*, (3), 111-115.
32. Juraev, E., & Juraeva, M. (2021). CURRENT ISSUES OF HIGHER EDUCATION SYSTEM DEVELOPMENT. *Интернаука*, (21-4), 62-63.
33. Zayliyev, A. A., Jurayev, E. S., & Muxammadjonov, B. B. (2018). DISCLOSURE LINES OF CREATIVE FINANCIAL REPORTING OF TRADE BANKS. *Теория и практика современной науки*, (3), 120-122.
34. Zayliyev, A. A., Jurayev, E. S., & Muxammadjonov, B. B. (2018). TARGETING OF PROJECT FINANCING AND MONITORING IN CREDIT TERRITORIES. *Теория и практика современной науки*, (3), 116-120.
35. Juraev, E. S. (2017). World experience in lending to small businesses. High School.
36. Жураев, Э. С. (2018). ЗАРУБЕЖНЫЙ ОПЫТ ПО ВЕДЕНИЮ ФИНАНСОВОЙ ПОЛИТИКИ ДЛЯ РАЗВИТИЯ МАЛОГО БИЗНЕСА. *Экономика и социум*, (11), 357-362.
37. Juraev, E. S. (2018). Foreign experience in conducting financial policies for small business development. Economy and Society.
38. Ботирова, Р. А., Сирожиддинов, И. К., & Жураев, Э. С. (2020). Поддержка и стимулирование инвестиционных процессов в экономике в условиях короновирусной пандемии. *Экономика и социум*, (5-1), 416-421.
39. Juraev, E. S. (2020). INFLATION RISK. *Мировая наука*, (1), 29-33.
40. Ходжибаева, И. В. (2020). Механизм государственного регулирование инвестиционной деятельности. *Экономика и социум*, (3), 563-565.
41. Isakov, M. (2020). МИ Isakov Biznes-rejalashtirish 2019. *Архив научных исследований*, (22).
42. Isakov, M. (2020). МИ Abdurahim Ortiqov, Musaxon Isakov. Industrial iqtisodiyot. O ‘quv qo‘llanma.-T. TDIU, 2019.
43. Sharifjanovna, Q. M. (2021). Perpendicularity of a Straight Line to a Plane and a Plane to a Plane. *International Journal of Innovative Analyses and Emerging Technology*, *1*(5), 70-71.
44. Abduraximovich, U. M., & Sharifjanovna, Q. M. (2021). Methods of Using Graphic Programs in the Lessons of Descriptive Geometry. *International Journal of Discoveries and Innovations in Applied Sciences*, *1*(6), 149-152.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

45. Комилов, С., & Козокова, М. (2015). Разработка вычислительного алгоритма решения гидродинамических задач управления процессами ПВ в неоднородных средах при условии использования этажной системы разработки. *Молодой ученый*, (11), 324-328.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

ISSN: 2349-7793 Impact Factor: 6.876., Volume: 16 Issue: 05 in May 2022

The heat pump is the near future.

Yakubov Ulugbek Kutfidinovich

Doctoral student,
Samarkand State Institute of Architecture and Construction named after Mirzo Ulugbek
Taniberdiev Sherali Khudoyberdievich

Lecturer of the department "Heat and gas supply, ventilation service"
Samarkand State Institute of Architecture and Construction named after Mirzo Ulugbek

Annotation: *Energy saving is considered today one of the most relevant areas of development of the Republic of Uzbekistan. To date, there are widely known ways to save energy, in which low-potential heat is used as a heat source. The main element of such systems are heat pumping units (TNUS*

Keywords: *energy efficiency, heat pump, low-potential heat energy source.*

Today, many leading experts in the field of renewable energy sources are wondering whether we need alternative energy, which will take a leading place in the world in the renewable energy system. The question is far from idle, given the huge desire of all economically leading countries of the world to turn towards the transition to alternative energy sources. All except the Republic of Uzbekistan.

Our country is sitting on a gas pipe, earns on oil, coal, and these funds, apparently, are quite enough to satisfy the Uzbek economy. That is, we are making plans to introduce alternative energy sources, although a number of circumstances force us, nevertheless, to look for new ways to extract harmless, economically profitable energy sources: the earth's fossil reserves are not infinite, the climate surprises with its strangeness due, as world science claims, to the excessive use of coal and oil. There is a way out – alternative energy sources that surround us in water, air and underground (geothermal energy).

Of all the types of renewable energy sources known to us, the most relevant, in terms of continuity of work, is geothermal energy. Simply put, a heat pump. Firstly, the heat pump is equipped with an automatic control system. The heat pump system can work with any heating structure. Secondly, the electricity consumed in 1 kW/hour produces energy 4-5 times greater than the consumed one. That is, the cost of electricity goes only for the operation of the compressor. Thirdly, the system works automatically, giving out heat constantly.

What you need to purchase in order to install the heat pump system yourself. It's simple. Here is its principle of operation (see photo 1, you can click to enlarge).

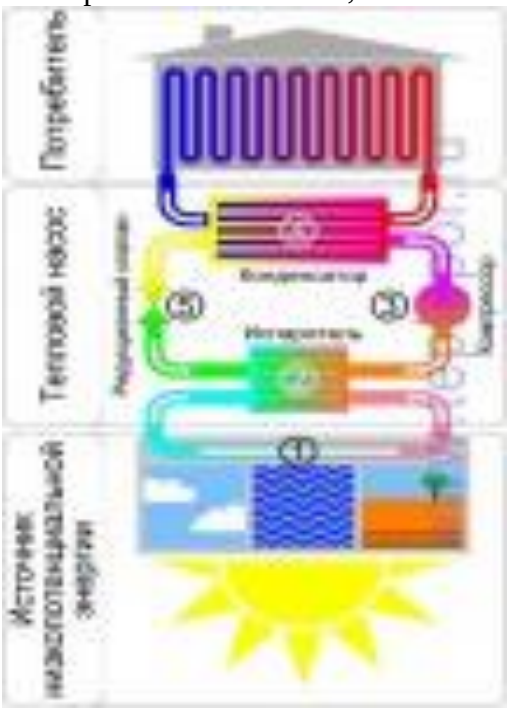
The whole process runs in a closed loop. The coolant passes through tubes placed underground at a depth of 1.5-2 meters, enters the heat exchanger (evaporator), transfers heat to the internal circuit of the pump, which is filled with liquid freon (refrigerant). It boils because it has a very low boiling point, turns into a gaseous state, enters the compressor, compresses, as a result of which its temperature jumps to 60 degrees and above. The gas goes to the condenser, where it heats the water in the heating system of the house. It cools down, becomes a liquid again. The cycle repeats.

Efficiency of application of geothermal energy sources. The supply of urban apartments, country houses, cottages with geothermal heat pumps already during the construction of new houses

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

ISSN: 2349-7793 Impact Factor: 6.876., Volume: 16 Issue: 05 in May 2022

is the time of the near future. In order to introduce renewable energy sources into the construction of the Republic of Uzbekistan, it is necessary to draw up a document in which builders will be instructed to include the installation of a heat pump in the project of the future house.



Take Sweden, a cold northern country, and geothermal heat pumps operate in half of houses and buildings. In Stockholm, 12% of the premises are heated by geothermal heat pumps. According to government decrees in America, during the construction of buildings, it is necessary to initially equip them with geothermal heat pumps. Without them, the commissioning of buildings is not allowed. Every year, millions of heat pumps are produced in the USA for these purposes. We are just thinking about adopting such rules, but in America they have been doing it for a long time.

The German government grants subsidies to organizations that install heat pumps, which encourages their production and operation. Even such a small country Switzerland has used 60,000 geothermal heat pumps. All the facts show that the world is steadily moving towards the use of alternative energy sources. This is especially evident in the examples of the introduction of heat pumps.

Such a system requires 1 kW of electricity, as already mentioned here, but it gives out 4-5 kW of heat and it does not care about price hikes for gas, coal, fuel oil. The geothermal heat pump reliably performs the function of an air conditioner in summer and a heater in winter.

In conclusion, I would like to say that houses should be built immediately with the installation of alternative energy sources. The most suitable for this is a heat pump that works continuously, all year round, in automatic mode.

List of used literature:

1. Berzan V. P. Aspects of the problem of stimulating the introduction of heat pumps / V. P. Berzan, S. G. Robu, M. L. Sheet // Problems of regional energy. – 2011.
2. European heat pump market // AVOK. — 2016
3. Heat pumps of Finland. TMenergy.
4. Shilkin N. V. The use of heat pumps in hot water supply systems of buildings/ N. V. Shilkin // PLUMBING. -2003
5. Kobylkin M. V. Perspective direction of introduction of heat pumps / M. V. Kobylkin, S. G. Batukhtin, K. A. Kubryakov // International Scientific Research Journal. -2014. –No. 5.
6. Chernyshev D. A. Justification of the use of heat pumps in heat supply systems of public and residential buildings of the Leningrad region: master's thesis: 08.04.01 / D. A. Chernyshev; St. Petersburg Polytechnic University of Peter the Great. — St. Petersburg, 2016.
7. Averyanova O. V. Energy-saving technical solutions for local-central microclimate systems when using heat pumps as local units combined into a single water circuit / O. V. Averyanova // Civil Engineering Journal. - 2011.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

ISSN: 2349-7793 Impact Factor: 6.876., Volume: 16 Issue: 05 in May 2022

Reinforcement of concrete with fibroconcrete

Pulatova Zukhra Umetovna,
Doctoral student.,
Samarkand State Institute of Architecture and Construction named after Mirzo Ulugbek

Abstract: *The use of fiber concrete reduces the total cost of construction work. The thickness of the concrete layer can be reduced to half the layer compared to conventional concrete.*

Keywords: *fiber, fiber, reinforcement, superplasticizers.*

New technologies reinforcement with continuous fibrous reinforcement changes the behavior of artificial stone, giving it increased resistance to cracking, reducing shrinkage deformation, creating the necessary margin of safety, maintaining the integrity of the structure even after the appearance of through cracks.

Fiber provides three-dimensional hardening of concrete compared to traditional reinforcement, which provides only two-dimensional hardening.

The use of fiber concrete reduces the total cost of construction work. The thickness of the concrete layer can be reduced to half the layer compared to conventional concrete.

The construction time is reduced by half, due to the lack of need for metal reinforcement of concrete floors, installation of a shelf grid.

The principle of operation of fiber concrete. Non-reinforced concrete has low tensile strength and ductility compared to compressive strength. These negative properties of concrete can be improved by combining reinforcement with the addition of fibers. Steel fittings and prestressed fittings are located in structures only in a certain direction. And the fibers are distributed evenly in the concrete and have no influence from the directions.

Table №1

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

Material	Density	Elastic modulus E, N/mm2	Tensile strength, N/mm2	Tensile strength at break, %	Alkali resistance	Melting point
Polypropylene	0,9	3000-15000	300-700	5-15	Отличное	150
For comparison:						
Concrete	2,2-2,4	30000-40000	1-4	0,02	-	-

To obtain a high-quality fiber cement composition, modification of the composition of concrete is required. Mixing of the concrete mixture is carried out in mechanical mixers until uniformity is achieved. The mixing time is calculated from the moment the mixer receives the calculated volume of the last component of the mixture, the mixer must not be loaded above the calculated volume. Chemical additives must be introduced during the mixing process, with the exception of superplasticizers and water-reducing additives, which can be introduced at the end of mixing. After their introduction, the concrete mixture is mixed again so that the additive is evenly distributed throughout the entire volume of the mixture and its effect is manifested in full force. When choosing fibers, their compressive and tensile strengths are taken into account.

Fibroblast in the composition of fibroblast takes from 1 to 20%. The largest number of fibers contains fiberglass – up to 25%. Fiber is added to the concrete mixer with concrete, evenly poured out so that lumps do not form. Fiber improves the quality of the mixture, accelerates solidification.

Advantages of adding fibers to cement mortar:

- gives strength, plasticity;
- protection against moisture penetration by reducing pores in concrete;
- there is no shrinkage;
- the concrete solidification period is reduced.

Preparation of high-quality concrete mortar with fiber:

1. Mix the dry components well together: 3 parts of sand, one part of cement. Add half the volume of fiber. Mix all the ingredients.
2. Add 400-500 ml of water per 1 kg of cement.
3. Add the remaining fiber in small parts and mix thoroughly.

The solution should have a homogeneous consistency, like thick sour cream.

We choose the brand of cement according to the classification, in the table:

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

Concrete grade	Application	Cement consumption in kg per 1 cubic meter of concrete
M 100	The smallest strength, used for concreting curbs, fences	165
M 200	It is used in the installation of screeds, foundations	240
M 300	It has high strength, is used for the installation of foundations, floors, etc.	320
M 400	It has the highest strength, withstands the load-bearing bridges and overpasses	417

The amount of fibers added to the cement mortar depends on the screed requirements.

№	Fiber consumption	Characteristics of the screed
1	300 g per cubic meter	Slightly increases the binding function and makes it easier to work with the material. This proportion works as an additive that slightly improves the quality of the screed.
2	600 g per cubic meter	Plasticity, resistance to moisture penetration, durability and service life of the coating will significantly increase.
3	800 to 1500 g per cubic meter	Maximum efficiency is achieved.

The minimum consumption should be at least 300 gr. per cubic meter. The ratio of the number of fibers per a certain volume of cement is indicated on the packaging or in the instructions for the fiber for screed.

If you add too many fibers, they can provoke the formation of cracks and splits of the screed.

The use of fiber leads to the fact that concrete becomes more resistant to stretching, its shrinkage rate decreases, which increases crack resistance. At the same time, the resistance of the material to

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

environmental influences increases: to alternating cycles of freezing and thawing, drying and humidification.

The most important factors are the elasticity and length of the fibers: the greater the elastic modulus of the polymer corresponds to a similar indicator of the cement matrix, and the longer the fibers used, the greater the effect of dispersion reinforcement on the crack resistance characteristics of concrete.

With such a reinforcing material, you will never have any problems associated with a concrete screed at home or at work!

Used literature:

1. Adylkhodzhaev A.I., Takhirov M.K., Samigov N.A. On the polystructural theory of composite building materials // Collection of scientific works of TASI.- Tashkent, 2008.

2. Akhverdov I. N. Theoretical foundations of concrete science. - Minsk: Higher School, 1991.

3. Bazhenov Yu.M. To the New century -- new effective materials and technologies // Construction materials, equipment and technologies XX1b.- 2001.-No. 1.

4. Bazhenov Yu.M. Concretes of the XXI century // Resource- and energy-saving technologies of building materials, products and structures / Materials of the International Conference. - Belgorod, 1995.

5. Bazhenov Yu.M. Technology of concretes of the XXI century / Academic readings of the Russian Academy of Sciences. New scientific directions of construction materials science. Part 1. - Belgorod, 2005.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

ISSN: 2349-7793 Impact Factor: 6.876., Volume: 16 Issue: 05 in May 2022

Advantages and advantages of binders of low water demand

Muzaffar Safarovich Makhammatov

Teacher of the department "Technology of Building materials, products and structures"

Samarkand State Institute of Architecture and Construction named after Mirzo Ulugbek

Abstract: *The advantage and advantage of binders of low water demand (VNV) is in their high dispersion, in very high strength (up to 100 MPa). This is achieved due to the content in large quantities of superplasticizer C-3.*

Keywords: *material composition, furnace slags, construction sand, pure clinker.*

According to the material composition, such binders are divided into pure clinker (VNV-100) and multicomponent with various mineral additives. For example, granulated blast furnace slags, fly ash, as well as fillers - inert additives in the form of construction sand, waste from mining and processing plants are used. This gives the binders good construction and technical properties.

One of the important conditions for obtaining a given quality of VHV is the necessary humidity of the initial components, the total value of which should not exceed 3 percent in the total mass of the composition.

Ball, tubular and vibrating mills are used for the production of binders of low water demand. However, studies have shown that ball mills equipped with a separator are preferable. They provide a given granulometric composition.

An organic modifier (SP C-3) introduced during grinding has a positive effect on the kinetics of crushed clinker. Thus, with the same initial grain dispersion (about 2500 sm^2/g), the duration of the clinker domol with the optimal amount of two-water gypsum and organic modifier until the specific surface area of the binder 4400 cm2 / g is reduced by 2 times compared to the duration of the clinker domol without a modifier. In this case, the modifier not only plays the role of a grinding intensifier, but also prevents aggregation of binder particles during finer grinding.

It is known that for factory-made cements, depending on the type and amount of mineral additives, the dispersion varies between 2500-3500 cm2 / g at a normal density of 24-28 percent, and sometimes higher. The normal density of the VNV with a specific surface area of 4500-5000 cm2 / g usually varies from 16 to 20 percent and even with the use of moisture-intensive mineral additives (for example, thermal power plant ash), introduced in an amount of up to 70 percent, does not exceed 24-26 percent.

The analysis shows that the activity of VNV significantly exceeds the activity of the original Portland cement brand 500. The possibility of replacing (up to 60 percent) of the clinker part with various mineral additives has been created.

They are characterized by a reduced degree of hydration of the elite in comparison with Portland cement, both at an early age and during prolonged hardening. This is due to the low water content of hydrate neoplasms. Thus, the degree of hydration of alite monomineral VNV at the age of 7 and 28 days of normal hardening is 28.5 and 34 percent, which is significantly lower than the same indicator of finely ground monomineral cement without a modifier (57.7 and 58.6 percent, respectively).

Despite the reduced values of the degree of hydration, the binder of low water demand has significant advantages over Portland cement, both in terms of hardening rates and absolute strength

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

values. The strength of cement stone on the VNV (82.4 Mpa) at the age of 1 day of normal hardening is 2.6 times higher than the strength of control samples, and at a later date — 2.1-2.3 times. The absolute values of the strength of cement stone at the age of 28 and 180 days were 184 and 205 Mpa, respectively, and control samples—81.7 and 98.5 MPa.

A characteristic feature of cement systems based on such binders is a significant slowdown in the processes of structure formation in the first 4-8 hours after sealing, followed by an intensive crystallization and hardening process. The duration of the induction period of the cement dough based on the VNV is reduced with an increase in the content of the clinker component in its composition.

One of the advantages of VNV is the long-term preservation of activity and intensive strength gain of cement stone and concrete based on it in various, including early, hardening periods.

Storage (up to 180 days) of such a binder with a clinker component content of 30-100 (NV-30 — VNV-100) in paper bags and room conditions did not lead to a change in the parameters of dispersion, water demand and strength in standard solutions (both calculated and early, at the age of 1-3 days).

The strength of the solution on Portland cement grade 500 after 30 days of storage in similar conditions decreased by 17-20 percent, and after 6 months of storage was only 35-37 percent of the original. At the same time, the specific surface area of cement decreased from 3200 to 2600 cm2/g. This indicates the agglomeration of clinker particles.

Tests of concrete mixtures on VNV in production conditions have shown that the highest rates of loss of mobility are characteristic of the composition on pure clinker cement VNV-100. With the transition to binders containing mineral additives, there is an increase in the retention of concrete mixtures in the sequence: VNV-100, VNV-50, VNV-30.

The molding properties of concrete mixtures are characterized by increased viscosity at rest and significant thixotropic liquefaction under mechanical influences, which predetermine a high degree of their compaction and low energy consumption for the molding process.

The kinetics of hardening of concretes based on VNV differs significantly from the nature of the increase in strength of concrete from isoplastic mixtures with superplasticizer C-3, prepared according to traditional technology. It is characterized by an intensive strength gain after a few hours. At the age of 16 hours of normal hardening, concretes based on VNV have a cubic strength equal to 25 MPa. This creates a real possibility of obtaining concretes with the required decoupling, transfer (for prestressed structures) or release strength for 16-24 hours of normal hardening or with a significant reduction in the duration of heat and moisture treatment for precast concrete products.

The strength of concrete equal to 22.6 MPa, based on VNV-100, is achieved in 8 hours from the moment of sample production, which is almost twice less than the time required to obtain concrete of the same strength according to traditional technology. At the same time, during all periods of hardening, the coefficient of cement use in concrete based on binders of low water demand is significantly higher than that of concrete without additives and with superplasticizer C-3.

The use of VNV-100 is promising for high-strength concretes of classes B45 and higher, while 35-50 percent of the clinker part of cement can be saved. It is suitable for non-welded reinforced concrete technology. VNV-50 is promising in concretes of classes VZO-B45 and can be used in concretes of class B25. At the same time, the clinker part of cement is saved by 50 percent or more, the time and temperature of heat treatment are significantly reduced, and in many cases there is no need for these concretes.

List of used literature:

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

1. Solar energy: a textbook / V.I. Vissarionov, G.V. Deryugina, V.A. Kuznetsova, N.K. Malinin; edited by V.I. Vissarionov. – M.: Publishing House of MEI, 2008.

2. Bazhenov Yu.M. To the New century -- new effective materials and technologies // Construction materials, equipment and technologies XX1b.- 2001.-No. 1.

3. Estimates of renewable energy resources in Russia: handbook-textbook / comp. Yu.S. Vasiliev, P.P. Bezrukikh, V.V. Elistratov, G.I. Sidorenko. – St. Petersburg: Publishing House of the Polytechnic University. un-ta, 2009.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

ISSN: 2349-7793 Impact Factor: 6.876., Volume: 16 Issue: 05 in May 2022

USE OF MODERN-INNOVATIVE PROGRAMS IN TEACHING FOREIGN LANGUAGES

Hasanova Yu.Z

Part-time teacher, Fergana State University

Kochkorova O.M.

1st year master's degree in linguistics (English)

Fergana State University

Annotation. *The article deals with one of the problems of modern teaching - the use of interactive methods to deepen the study of foreign languages and the formation of knowledge, skills and abilities of students in the process of teaching.*

Keywords: *national program, modern development, innovation, technology, education, pedagogical process, student, skill, knowledge, thinking, intraol games, presentation, roller, social activism, information, discussion, computer.*

The creation of the National Program of Personnel Training is aimed at training courageous, independent, creatively-minded, qualified, well-educated professionals who can ensure the modern development of Uzbekistan in accordance with international standards, as well as well-rounded personnel with personal qualities.

The concept of innovative technology includes ways to improve knowledge acquisition through the use of factors that increase the effectiveness of education, the design and implementation of various pedagogical processes [1,2,3,4,5].

Innovative technologies in the pedagogical process require the use of interactive methods in its implementation, through innovations and changes in the activities of teachers and students.

Innovative approach to updating the content of education, the introduction of new pedagogical technologies in the educational process, advanced methodological skills, the organization and management of the educational process on a scientific basis, making changes and adjustments based on the requirements of the time. it depends on the correct identification of important components, such as the development of the structure of the components of innovative activity appropriate to that educational institution.

Classes based on innovative technologies satisfy the desire of young people to express their views on important life achievements and problems, give them the opportunity to think, to justify their views. In order to solve the problems facing the education system in today's innovative processes, it is necessary to make the necessary decisions, independent and free-thinking individuals who are able to absorb new information and evaluate the information they have learned. Therefore, the role and importance of modern teaching methods, ie interactive methods, innovative technologies in the educational process of educational institutions is incomparable [6,7,8,9].

The use of interactive methods throughout the lesson ensures interaction, connectivity, mutual support, and complementarity between teacher and student.

In interactive games, students are active in a variety of ways:

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

- Physical activity involves the movement of the student during the lesson, the exchange of roles with their partners, that is, students change places, present in front of the board, speak, write, make various pictures;

- Social activism means the interaction of students with each other: they ask each other questions, answer questions, exchange ideas;

When interactive methods are used in teaching, students are quick to recall what they hear during a discussion.

- students not only receive information and data, but also have to rationally justify the problem under discussion, to explain from other options that their solutions are correct;

When interactive methods are used in the teaching process, students quickly remember what they heard during the discussion. This can be caused by:

- students not only receive information and data, but also have to rationally justify the problem under discussion, to explain from other options that their solutions are correct;

- Students develop their ideas thoroughly, because they know that logically incorrect conclusions can lead to controversy among other students;

The student can also use the computer to get the information they need, and to add their own ideas. As a result, the student becomes not only a listener, but also an independent thinker, researcher, and aspirant to regular learning. Information and communication tools are now widely used in students' learning. In particular, working on a computer, searching for and mastering the necessary information from different networks is becoming an interesting activity for students.

With the development of modern technology, the computer has become a teaching tool. It allows you to visualize a variety of information. New information technologies affect all components of the education system: goals, content, methods and organizational forms, as well as teaching aids. This allows us to solve the complex and urgent tasks of pedagogy, that is, the development of human intellectual, creative, analytical thinking and independence.

Computer programs give students a unique approach. The use of a computer opens up a wide range of possibilities, that is, the computer can receive and transmit information in various forms, remember, store, systematize, sort large amounts of information, quickly find the necessary information, as well as any type of information (text, graphics, etc.) has the ability to change quickly and accurately.

There are also great opportunities to use computers to teach foreign languages. From the point of view of computer-assisted learning, the principle of demonstration is important. If traditionally visualization is the visual content that satisfies the student's need to see objects and events in some form, then in computer-assisted learning, visualization is always with the most intuitive and precise objects in real life. allows you to see invisible sides. It should be noted that the computer not only reads, but also listens, watches video, as well as allows you to actively influence events by pressing various keys or mouse controls.

Traditional lessons are by nature passive forms of teaching. Computer-assisted learning, on the other hand, involves each student interacting with the system in order to master a lesson.

Computer work is of great interest to students, which provides a positive motivation for teaching foreign languages.

Multimedia tasks and tasks can have different characteristics:

- find the correct answer by pressing computer keys;
- fill in the blanks;
- fill in the tables;
- solving crossword puzzles;

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

- find the right word (answer);
- find antonyms and synonyms of the word;
- placement of objects in the picture;
- answering questions;
- read the words and show the subject;
- listen to and sing a song;
- listen to the text and choose the correct answer to the question;
- Type words, phrases, and sentences on a computer.

Fun exercises designed to develop all types of speaking activities will help to correct pronunciation, improve written speech and understand the meaning of words, and reinforce a newly introduced topic.

List of used literature

1. АБДУҲАМИДОВА О. Р., ТОЖИБОЕВА Н. М. ТЕОРИЯ И ПРАКТИКА СОВРЕМЕННОЙ НАУКИ //ТЕОРИЯ И ПРАКТИКА СОВРЕМЕННОЙ НАУКИ Учредители: ООО" Институт управления и социально-экономического развития". – №. 2. – С. 9-10.
2. Kosimova F. K., Abdukhamidova O. R. LINGUOCULTUROLOGICAL ANALYSIS OF THE CONCEPT OF" PREGNANCY" IN UZBEK AND ENGLISH //ПЕРСПЕКТИВНЫЕ ОБЛАСТИ РАЗВИТИЯ НАУКИ И ТЕХНОЛОГИЙ. – 2019. – С. 10-11.
3. Kuchkarova Y., Nuriddinova S. ISSUES OF PERFECT PERSONAL EDUCATION //Galaxy International Interdisciplinary Research Journal. – 2021. – Т. 9. – №. 12. – С. 524-527.
4. Qo'Chqorova Y., Xojimatova S. PEDAGOGIKADA BOLALARNING progress. – 2022. – Т. 3. – №. 2. – С. 874-879.
5. Xasanova Y. Z., Ta'lim tizimi islohotlari va ularning xozirgi kundagi axamiyati. Научно-образовательный электронный журнал. «Образование и наука в XXI веке 2022 г
6. Xasanova Y.Z., Dars jarayonida sahna ko'rinishlaridan foydalanish., Journal of new century innovations OAK e'tirof etgan bazalarda indekslanadigan jurnal. Uzbekistan,24 marts,2022.
7. Jumaniyazova N. A. et al. KITOB TARIXI //Eurasian Journal of Academic Research. – 2021. – Т. 1. – №. 9. – С. 942-944.
8. Jumaniyazova N. A. O. MALAYZIYA TAASSUROTLARI (2002-2003-YILLARDAGI XIZMAT SAFARI ASOSIDA) //Scientific progress. – 2022. – Т. 3. – №. 2. – С. 868-873.
9. Jumaniyazova N. A. O., Mavlonova S. T. U. CHET TILINI O'RGATISHDA KOMMUNIKATIV PRINSIPLAR HAMDA YANGI PEDAGOGIK TEXNOLOGIYANING ROLI //Central Asian Academic Journal of Scientific Research. – 2022. – Т. 2. – №. 2. – С. 118-122.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

ISSN: 2349-7793 Impact Factor: 6.876., Volume: 16 Issue: 05 in May 2022

THE SOCIAL AND PHILOSOPHICAL NATURE OF THE IDEA OF PEACE AND THE NEGATIVE CONSEQUENCES OF ARMED CONFLICT

Abdullaev Ikhtiyor
Teacher of the Department of Exact and Natural Sciences
Fergana State University.

Annotation. *This article highlights the socio-philosophical nature and negative consequences of armed conflict, as well as the first stage of the aspiration to a prosperous society from the efforts to improve human relations.*

Keywords: *thinker, relationships, socio-political events, tribes, communities.*

At different times, the progressive thinkers of the people, thinkers have sought a system that will lead society to happiness, ensure peace and tranquility of citizens, and ways to build it. In particular, the works of the ancient Chinese thinker Lao Tzu and the ancient Greek writer Yambula reflected the views of the "era of the sun". Some thinkers, such as Mo Tzu, in sources created by Aristotle, have studied peace as an internal problem of a particular nation. It is gratifying that among the scholars living in the Central Asian region, there are people who are looking for the foundations of peace and tranquility in the country.

In particular, Abu Nasr al-Farabi dreamed of building a society where the citizens were spiritual, enlightened, and always peaceful in social relations - a "city of interest people" and tried to create its spiritual, moral and legal foundations. In the City of Noble People, all are equal, perform their social duties conscientiously and with special responsibility, and justice is glorified as the main criterion in human relations [1,2,3,4,5,6,7,8,9,10,11,12].

According to Abu Nasr al-Farabi, “Everyone is created by nature in such a way that he needs many things to live and attain a high level of maturity, which he cannot achieve on his own. Therefore, it is only through the union of many that one can attain the maturity which one seeks by nature. The activities of such team members as a whole provide each of them with what they need to live and mature.

In this sense, according to Farobi, a society that unites people who help each other in order to achieve true happiness is a virtuous society. According to the great thinker, well-being alone is not enough for a person to live safely. Human courage, on the other hand, is not the courage in external warfare, but the victory of men over their vices and the maintenance of peace. Thus, the first stage of the aspiration for a prosperous society arises from the efforts of people to improve their relations.” In the sources, the concept of “war” is an organized armed struggle between tribes, states or social groups; 2) armed conflict between the parties. Indeed, the hallmark of wars is an armed conflict, a battle [13,14,15,16,17,18,19,20].

From a philosophical point of view, war is seen as a socio-political phenomenon. Mankind has long dreamed of living in peace, without wars. However, in ancient times, there were constant quarrels and clashes between the tribes in order to own areas rich in food, suitable for livestock and hunting, wetlands rich in fish. Due to the lack of private property in the primitive community system, and the fact that tribal members were not divided into different groups (rich, poor, etc.) in terms of property ownership, clashes between tribes were not as dangerous as in modern conditions.

However, such clashes resulted in varying degrees of injuries, sometimes casualties. This, in turn, has exacerbated tensions between tribes. The origin of war as a result of social conflicts and as a specific form is associated with the emergence of groups of people with different personal property

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

and social status. Therefore, the bloody 30 conflicts took place not only for food and wetlands, but also formed the concept of "material wealth", the desire to have additional labor, and the acquisition of property, gaining wealth as the number and scale of people's vital needs increased. In order to do so, there were wars and armed conflicts between the tribes [21,22,23,24].

Numerous armed conflicts between tribes and communities differed from each other in their social nature. The peculiarity of such conflicts is characterized by the use of imperfect weapons. Circumstances such as the isolation of any tribe, bloody revenge played a key role in the quarrelsome relations between the communities. In the armed conflicts between the states, a group of special armed men - the army, and later the navy - was directly involved. Clashes between the dominant and oppressed social groups within a country took the form of civil wars and popular uprisings.

Wars as a specific form of interstate conflict, as a socio-political phenomenon, have been studied in the field of "Political Science". After all, the military doctrine (policy) of a particular state also serves to express its content and political goals, which are a priority idea in its implementation.

Political goals are the leading basis of production, planning a war effort to strike at the opponent, improving relations between allied forces. With the help of the war strategy, its course is controlled and the development and outcome of the war are ensured. At the same time, measures will be taken to mobilize the population and the material resources of the two countries for hostilities.

In conclusion, it can be said that the examples of folklore in the formation of the idea of peace in the country in the field of pre-service military education - proverbs and epics; state symbols; exemplary stories from the lives of scholars and great commanders, songs of war and peace; audio recordings; posters; popular and feature films with periodicals; educational classes and spiritual-educational work; Laws of the Republic of Uzbekistan, instructions and guidelines on the organization of military activity; teachers; fiction; work tools; tools such as interpersonal communication and speech were convinced to be effective.

LITERATURE

1. Khakimjonovich A. I. PEDAGOGICAL FORMATION OF THE IDEA OF PEACE IN THE STUDENTS OF MILITARY MILITARY EDUCATION FUNDAMENTALS //Web of Scientist: International Scientific Research Journal. – 2022. – T. 3. – №. 1. – C. 739-743.
2. Ruzmatovich U. S., Omonboyevich T. S. CHANGES IN THE FUNCTIONAL ACTIVITY OF THE BODY IN THE PROCESS OF HEALTH TRAINING //World Bulletin of Social Sciences. – 2022. – T. 9. – C. 41-43.
3. Omonboevich T. S. CLASSIFICATION OF PHYSICAL MOVEMENTS BY CONTENT, STRUCTURE, STATUS OF TIME AND SPACE //Web of Scientist: International Scientific Research Journal. – 2022. – T. 3. – №. 1. – C. 733-738.
4. Orifjon M. NO ONE CAN MAKE THE COUNTRY FAMOUS IN SPORTS //Galaxy International Interdisciplinary Research Journal. – 2021. – T. 9. – №. 12. – C. 908-911.
5. Khalilovich G. K. et al. Eriosoma Lanigerum Hausm Juice Damage Properties And Effects Of Entomophagy Against It //Texas Journal of Multidisciplinary Studies. – 2022. – T. 7. – C. 78-84.
6. Mirzakhalilovich Y. M., Nabibullaevich K. F., Abdulazizovna K. B. ECOLOGICAL-GEOGRAPHICAL DISTRIBUTION OF APHIDS (HOMOPTERA APHIDINEA, APHIDIDAE) IN THE FERGANA VALLEY. – 2021.
7. Kizi M. I. B., Khasanbaevna R. D., Abdulazizovna K. B. USE AND PROTECTION OF WATER RESOURCES IN UZBEKISTAN: CURRENT STATE AND DEVELOPMENT PATHS //Достижения науки и образования. – 2021. – №. 3 (75). – C. 10-12.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

8. Ruzmatovich U. S., Abdknabievna Q. D. HEALTH EXERCISES FOCUSED ON THE DEVELOPMENT OF STRONG PHYSICAL QUALITIES //World Bulletin of Social Sciences. – 2022. – Т. 8. – С. 46-48.
9. Ruzmatovich U. S. et al. CHANGES EXPECTED TO COME IN OUR LIFE MOVEMENTS //Web of Scientist: International Scientific Research Journal. – 2022. – Т. 3. – №. 3. – С. 485-489.
10. Sh A. et al. Research Of The Physical Education Of Students Of The Military-Technical Lyceum" School Of Temurbeks" Taking Into Account The Influence Of Regional Factors //Turkish Journal of Computer and Mathematics Education (TURCOMAT). – 2021. – Т. 12. – №. 11. – С. 7009-7011.
11. УРАИМОВ С. ВОЕННО-ТЕХНИЧЕСКОГО ЛИЦЕЯ //Фан-Спортга.–2019. – 2019. – Т. 2. – С. 68-71.
12. Ханкельдиев Ш. Х., Ураимов С. Р. Пульсовая оценка беговых упражнений первокурсников Военно-технического лицея на занятиях по физическому воспитанию //Теория и методика физической культуры. – 2017. – №. 1. – С. 15-19.
13. Uraimov S. R., Qambarov O. F. Qualifications of physical education teachers forms of growth //Конференции. – 2020.
14. Ураимов, Санжар Рўзматович. "Теоретическая подготовка по физической культуре учащихся школьной системы образования." Педагогика ва психологияда инновациялар 11.3 (2020).
15. Ураимов С. Р. Влияние гиподинамического фактора на физическое состояние учащихся военно-технического лицея //материалы. – 2019. – С. 117.
16. Akhmadjonova S. et al. USE OF ADVANCED TECHNOLOGIES IN TEACHING THE TOPIC OF “ANALYZERS” IN THE FIELD OF HUMAN HEALTH //CURRENT RESEARCH JOURNAL OF PEDAGOGICS. – 2022. – Т. 3. – №. 01. – С. 9-16.
17. Каюмова Ё. К. и др. ВОПРОСЫ ИСПОЛЬЗОВАНИЯ ПЕДАГОГИЧЕСКИХ ТЕХНОЛОГИЙ В ПРЕПОДАВАНИИ ВАЛЕОЛОГИИ //Вестник науки и образования. – 2021. – №. 9-2 (112). – С. 16-20.
18. Kamalova H., Tuychieva H. Improving the spiritual immunological education of academic lyceum students specific issues //ASIAN JOURNAL OF MULTIDIMENSIONAL RESEARCH. – 2021. – Т. 10. – №. 4. – С. 616-620.
19. Abdullaeva Mavsumakhon Kuldoshevna, Rakhimova Dilfuza Khasanbaevna, Tuychieva Khilola Zokirjon Kizi, Shodmonov Usmonbek Bakhodir Ugli FORMATION OF KEY COMPETENCIES IN CHEMISTRY AND BIOLOGY // Вестник науки и образования. 2021. №8-2 (111). URL: https://cyberleninka.ru/article/n/formation-of-key-competencies-in-chemistry-and-biology (дата обращения: 05.05.2022).-in-chemistry-and-biology (дата обращения: 05.05.2022).
20. Baltabayeva M., Kodirova D. The need to provide the priority of spiritual and educational processes in the modern education system //ACADEMICIA: An International Multidisciplinary Research Journal. – 2022. – Т. 12. – №. 1. – С. 423-427.
21. Matluba M. The Role of Effective Use of Information Technologies in Teaching Natural Sciences //International Journal of Culture and Modernity. – 2022. – Т. 14. – С. 82-85.
22. Tursunalievich F. I. MOVEMENT OF CHILDREN ON THE BASIS OF THE MEANS OF OPTIMAL DAILY PHYSICAL ACTIVITY AND THEIR TRAINING //Web of Scientist: International Scientific Research Journal. – 2022. – Т. 3. – №. 1. – С. 744-750.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

23. Ruzmatovich U. S. et al. INCREASING THE ACTIVITY OF SCHOOL-AGED CHILDREN //World Bulletin of Social Sciences. – 2022. – T. 8. – C. 49-51.
24. Shahbazova G. Physical Culture Of Preschool Children //Journal of Academic Leadership. – 2022. – T. 21. – №. 1.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

ISSN: 2349-7793 Impact Factor: 6.876., Volume: 16 Issue: 05 in May 2022

THE ROLE OF THE FAMILY IN GROWING A HEALTHY GENERATION

Yu. Khasanova

Teacher of the exact and natural sciences chair,

Fergana State University., Uzbekistan

Annotation. *The family has always been a place built on certain warm feelings, mutual affection and love. In the family, which is an integral part of society, it is necessary to instill in the hearts such national characteristics as mutual respect, love, diligence, honesty, patience, honesty, modesty, modesty. Children who grow up in this environment have the right to grow both physically and spiritually, as well as to be the creators and heirs of a brighter future for our society.*

This article highlights the factors that require great attention in the upbringing of a healthy generation, the role of parents in raising a mature, healthy and harmoniously developed generation, the relationship between spouses, the stability of a healthy family environment, especially the role of women in the family and other educational issues.

Keywords: *family, healthy generation, society, upbringing, harmonious, social, human, factor, lifestyle, parent, child, science and technology, science, education, interrelation, respect, future.*

The family, which is the foundation of society, is a factor that ensures the continuity of generations, the transmission of values, customs and traditions of the rich spiritual heritage of our people from generation to generation.

Bringing up a healthy generation is to build basis of a great state and a prosperous life. Bringing up a healthy generation has two aspects – bringing up a physically healthy and perfect generation. For a person to be spiritually mature, he must first be physically healthy. It is simple, but it is a factor in the future development of our society.

Human health is the most important among social values. The problem of health is one of the indicators of socio-economic development of the country, which is inextricably linked with the specificity of ecological, economic and social genetic well-being, the level of science and technology and culture of the population. The most important challenge facing humanity is a healthy lifestyle, that is, the ability of older people to lead a humane and harmonious life, to live a regular life, to help form a new generation of physically healthy, mentally fit, to work, relax and socialize. is a socially rational lifestyle problem. A healthy lifestyle is associated with strengthening the family, a person's standard of living, health, mood, aspirations, confidence, daily changes in the level of socio-economic and spiritual development of society, and most importantly, measures to ensure the effectiveness of educating the younger generation [1,2,3,4,5].

A healthy environment in the family is the stabilization of lifestyle, harmonious upbringing of children, increasing civic responsibility in fulfilling the educational and social needs of the family. Harmony in the family, mutual respect, affection, etc., create a spiritual atmosphere between parents and children, have a positive impact on their development. Mutual agreement, the father's love for children and the mother is an example of a highly moral human relationship, which fills the child's heart with good feelings, nurtures a sincere attitude. Family upbringing is also important because it is based on the parents' love for their children and the children's deep love for their parents, and it differs from other upbringing.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

With the emergence of each family, a "family-family member", as well as a "family-society" relationship is formed, and it becomes an objective necessity to manage this relationship with certain rules of morality, customs and traditions. No one and nothing can be equal to a family in raising a pure and virtuous person. The family is one of the most important signs of lifestyle, and through them it is possible to make a moral assessment of the family's way of life.

The relationship between a couple is a part of moral relationship, and the parental relationship is a purely moral one. The most favorable conditions for the upbringing of the new generation are created in the family. Therefore, the essence of the moral relationship in the family is to preserve and strengthen the family, to create opportunities for the upbringing of perfect children.

There are three sacred sources in the life of every nation, the first of which is bread- to be full and healthy, the second is a book to be enlightened and to continue the history of generations, and the third - woman to keep the bond of life unbroken. Not only a woman the successor of generations and the link of life, she is a great person who has contributed to the material and spiritual development of society for centuries. During the years of independence, a lot has been done to maintain the prestige of our women in society. The Women's Committee of Uzbekistan was established on March 1, 1991 with the aim of active participation of women in the ongoing socio-political and democratic processes in the country, the spiritual and educational upbringing of women [6,7,8,9].

We can see the active participation of women in the political life of our society, in the management of the state and society, in the field of culture, science and public education. But one of the main responsibilities of a woman is to give birth and bring up members of society.

The role of woman in the family, the level of equality of the couple in the family, can be the basis for determining the moral level of the family. The participation of woman in the family in the storage and purchase of family funds strengthens their equality, further enhances the culture of family life. The development of a culture of family relations also depends on the attitude of the woman in the family as a mother, a friend, a housewife. If we pay attention to the fact that women are engaged in the upbringing of children, we will see that the harmonious upbringing of young people depends on their place in society and the family, their knowledge, spiritual and cultural level. Equality of a couple fully reflects the upbringing of children, the family's relationship with society. If the spiritual level of the couple in the family is rich, it is beneficial both for the family and for the society. Only healthy parents give birth to healthy children.

A healthy generation is first formed in the family. In this case, the role of the woman, that is, the mother, is unique. The well-being of the family, the high level of spirituality, depend mainly on women. A woman sets an example in the family with her spiritual and moral purity, thrift, and zeal. Therefore, special attention should be paid to the status of woman in the family. One of the main responsibilities of a woman is to give birth and bring up members of society. The second most important task of every woman is to be an educator. A woman who does not have a certain level of cultural and educational level cannot bring up children well so that they can grow up harmoniously, which means that a healthy lifestyle in the family is not at the required level. Striving for spirituality, culture, raising the cultural level is a socio-national obligation. The great state of the future needs enlightened, highly spiritual, cultured, educated citizens. Only enlightened mothers can bring up such people. At a time when raising a healthy generation and ensuring the stability of families is an urgent issue, we must first of all pay more attention to the physical and spiritual health of our women and girls, prepare our youth for independent marriage and livelihood. In addition, in order to bring up young people in the family physically and spiritually, parents are responsible for regularly enriching their spirituality, so that their children have a full understanding of the history, culture, literature and art, architecture of their country. For this purpose, it is expedient to make effective use of the oral

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

heritage of the people, inherited from our ancestors, as well as modern educational practices. A healthy family is the backbone of our society, which raises physically healthy, spiritually rich, harmoniously developed children.

LIST OF USED LITERATURE

1. АБДУҲАМИДОВА О. Р., ТОЖИБОЕВА Н. М. ТЕОРИЯ И ПРАКТИКА СОВРЕМЕННОЙ НАУКИ //ТЕОРИЯ И ПРАКТИКА СОВРЕМЕННОЙ НАУКИ Учредители: ООО" Институт управления и социально-экономического развития". – №. 2. – С. 9-10.
2. Kosimova F. K., Abdukhamidova O. R. LINGUOCULTUROLOGICAL ANALYSIS OF THE CONCEPT OF" PREGNANCY" IN UZBEK AND ENGLISH //ПЕРСПЕКТИВНЫЕ ОБЛАСТИ РАЗВИТИЯ НАУКИ И ТЕХНОЛОГИЙ. – 2019. – С. 10-11.
3. Kuchkarova Y., Nuriddinova S. ISSUES OF PERFECT PERSONAL EDUCATION //Galaxy International Interdisciplinary Research Journal. – 2021. – Т. 9. – №. 12. – С. 524-527.
4. Qo'Chqorova Y., Xojimatova S. PEDAGOGIKADA BOLALARNING progress. – 2022. – Т. 3. – №. 2. – С. 874-879.
5. Xasanova Y. Z., Ta'lim tizimi islohotlari va ularning xozirgi kundagi axamiyati. Научно-образовательный электронный журнал. «Образование и наука в XXI веке 2022 г
6. Xasanova Y.Z., Dars jarayonida sahna ko'rinishlaridan foydalanish., Journal of new century innovations OAK e'tirof etgan bazalarda indekslanadigan jurnal. Uzbekistan,24 marts,2022.
7. Jumaniyazova N. A. et al. KITOB TARIXI //Eurasian Journal of Academic Research. – 2021. – Т. 1. – №. 9. – С. 942-944.
8. Jumaniyazova N. A. O. MALAYZIYA TAASSUROTLARI (2002-2003-YILLARDAGI XIZMAT SAFARI ASOSIDA) //Scientific progress. – 2022. – Т. 3. – №. 2. – С. 868-873.
9. Jumaniyazova N. A. O., Mavlonova S. T. U. CHET TILINI O'RGATISHDA KOMMUNIKATIV PRINSIPLAR HAMDA YANGI PEDAGOGIK TEXNOLOGIYANING ROLI //Central Asian Academic Journal of Scientific Research. – 2022. – Т. 2. – №. 2. – С. 118-122.

.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

ISSN: 2349-7793 Impact Factor: 6.876., Volume: 16 Issue: 05 in May 2022

ANCIENT CITIES - RICHES OF NATIVE LAND

Abduhamidova Odinaxon Rahmonberdievna

Teacher, Ferghana state university

Rahmonberdieva Kxilola Dilshodjon kizi

Student, Kokand State Pedagogical Institute

Annotation: *This article is about the ancient cities of Uzbekistan.*

Keywords: *attractive, remarkable, manufacture, handicraft, pearl, plane- trees, observatory.*

Every year many tourists visit Uzbekistan. There are many ancient and attractive cities in Uzbekistan. Tourists want to see ancient, attractive cities and their remarkable monuments. The ancient and attractive cities of Uzbekistan are Bukhara, Samarkand, Khiva, Margilan, Kokand and Ferghana.

Bukhara is an attractive, ancient and beautiful city of Uzbekistan. The period of its existent is more than 2000 years. Bukhara consists into 2 parts: the new part and the old part. There are many new buildings and modern shops, schools, hospitals, Bukhara state university, Technology and Medicine Institutes, plants, factories, colleges in the new part of the city. There are many ancient monuments in the old part of the city. For ex: Nadirdivanbegi madressah, Mokhi Khosa, Ismoil Samoni mausoleum and others. Tower of Kalon is known all over the world. Many famous people of Uzbekistan lived and worked in Bukhara. For ex: Firdavsi, Rudaki, Abu Ali Ibn Sina and others

Khiva is one of the attractive cities of Uzbekistan. It lies from Urgench 32 kilometers. It is called a museum city. It is an international tourism centre. The skill of Khiva's carpet weavers is widely acknowledged all over the country. There are many mosques, madrasahs and mausoleums in Khiva. It was the capital of Khorezm. It was founded between VI-VIII centuries by Sorn's son. It was the major centre of the Moslem religion. The Ichan Kala complex is also in Khiva. The inner city of Khiva Ichan Kala divides the town into 2 parts. There are many ancient monuments, mausoleums, markets in Khiva. The Seyid Allauddin mausoleum is an attractive monument of the XIV century of Khiva. Beautiful mausoleum of a famous philosopher and poet Pahlavon Makhmud is in Khiva.

Samarkand is one of the attractive cities of the world. It was a centre of ancient civilization. There are many mosques, madrasahs and mausoleums in Samarkand. The Shakhi Zinda ensemble, the Bibi Khanim mosque, the tomb of Gur Amir, Ishrat Khana mausoleum, the observatory of Ulugbek, Sherdor and Tilla Kori madrassahs, the architectural ensemble of Registan Square are in Samarkand. It is a regional administrative centre of Uzbekistan. It has more than 525 000 inhabitants.

Marghilan is an ancient city of the valley. It is in Ferghana region. It lies 18 km to the North of Ferghana. It is also a beautiful city in the Ferghana region after Ferghana and Kokand. Marghilan is the silk centre of Uzbekistan. There are weaving mills which manufacture famous

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

Khan Atlas, Adras and Bekasam. It is a city of tradesmen and handicrafts. Margilan was famous all over the world with its silk. Khan-Atlas and Adras of Marghilan are very beautiful. Girls put on atlas or adras dresses on holidays and birthday parties, because they are a lovely dress for Uzbek girls [6,7,8,9].

Tashkent was founded over 2220 years ago. It is the capital of Uzbekistan. The ancient name of Tashkent was "Choch". At the beginning of the VIII century it is called "Shoch". It was also called "Shashkent"," Madinat ash- Shosh", "Binkat" and "Tarkan". The word Tashkent gives the meaning" durable (mustahkam) city as a stone".There were 349 mosques in Tashkent but only 3: Kokaldash, Baroqhan and Abulkosim madressahs survived for us. Famous Uzbek writer Abdulla Kodiri worked in Abulkosim madressah. That madressah was called" Muyi muborak".

Tashkent is very large, beautiful and modern city. It has 3 million people. Tashkent is a flowers city of Uzbekistan. The climate of Uzbekistan is continental. It is warm in 9 month of the year. In summer the temperature often rises to 36°-38°C but in winter the temperature falls to - 3°.

Tashkent is an industrial, political, cultural and educational centre of Uzbekistan. There are many universities and institutes, the Academy of Sciences, professional colleges, academic lyceums, schools, kindergartens, museums, cinemas, theatres, concert halls, public and district libraries and parks in Tashkent. It is the centre of musical education. There is a beautiful building of Uzbekistan State Conservatory [1,2,3,4,5].

There are 2 airports in Tashkent: International and National Airport. The underground of Tashkent is very beautiful. All metro stations are decorated with traditional Uzbek art. The fountains of Tashkent are very beautiful. The building of Tashkent Circus is very beautiful. Tashkent is known all over the world. Tashkent is often called a city of peace and friendship. Many international conferences and festivals, political meetings are held in Tashkent

Kokand is a city of poets and poets. It is an ancient city. It is situated in the western part of Ferghana valley. The distance of Kokand from Ferghana is 100 km. Its territory is 65 sq.km. The population of the city is 180 thousand. It is a cultural centre of Ferghana. It is the birthplace of famous Uzbek writers. Kokand is the city of poets and poetess. There is a beautiful market in Kokand. There are 3 gates in it. There is a historical museum in Kokand. Kokand is very beautiful city in the Ferghana region.

Ferghana is a beautiful city. It is situated at an altitude of 580 m. It borders on Kyrgyzstan in the South, on Tajikistan in the West, on Namangan region in the North, on the Andijan region in the East. Its territory is about 70 thousand sq. km. It has 15 districts. It was established in 1876. There are 2664.4 thousand inhabitants, 776.1 thousand people live in town settlements and 1888.3 thousand people live in rural places. The majority of the population are Uzbeks.

Ferghana is the administrative centre of the region. It is decorated with green plane trees. The 1st general- gubernatorial of the Ferghana region was comrade M.D.Skobelov. He was organized to plant plane - trees in every street of the city. Nowadays Ferghana is an important industrial centre of Uzbekistan. There are more than 40 large and medium sized industrial enterprises in Ferghana. The gate of city built in 1992. Its height is 14 m and its length is 26 meter.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

Ferghana is a pearl of Uzbekistan. There is a beautiful eight- storeied hotel "Ziyarat" in the centre of the city. There is also a tennis court which built in 1995. Every year international competitions satellite is held there. We celebrated the 1200 anniversary of the great scientist, astronomer Akhmad al- Farghoni in 1998.Ferghana state university, Ferghana politechnics institute and Medicine Academy are also in Ferghana. Ferghana state university is situated in Murabbilar Street, 19. Ferghana Polytechnics institute is situated in Ferghana Street, 86. There are many hospitals, 571 policlinics and 169 villages clinic departments, 717 libraries, 261 clubs, 11 museums, colleges, academic lyceums, schools, kindergartens, supermarkets, Internet cafes and others in Ferghana. There ia a large park named after A.al-Farghoni in Ferghana. It is very beautiful. You may see the monument of the greatest scientist Akhmad al- Fargoni in the centre of the park.

Today agriculture and industry are developing in Kuva. There are many gardens with grapes and pomegranates in Kuva. Ferghana is a very beautiful city. It is the city of flowers. There are many flowers in every street, square, alley and park. There are many plane- trees in every street. That's why the streets of Ferghana are not hot in summer.

References

1. АБДУҲАМИДОВА О. Р., ТОЖИБОЕВА Н. М. ТЕОРИЯ И ПРАКТИКА СОВРЕМЕННОЙ НАУКИ //ТЕОРИЯ И ПРАКТИКА СОВРЕМЕННОЙ НАУКИ Учредители: ООО" Институт управления и социально-экономического развития". – №. 2. – С. 9-10.
2. Kosimova F. K., Abdukhamidova O. R. LINGUOCULTUROLOGICAL ANALYSIS OF THE CONCEPT OF" PREGNANCY" IN UZBEK AND ENGLISH //ПЕРСПЕКТИВНЫЕ ОБЛАСТИ РАЗВИТИЯ НАУКИ И ТЕХНОЛОГИЙ. – 2019. – С. 10-11.
3. Kuchkarova Y., Nuriddinova S. ISSUES OF PERFECT PERSONAL EDUCATION //Galaxy International Interdisciplinary Research Journal. – 2021. – Т. 9. – №. 12. – С. 524-527.
4. Qo'Chqorova Y., Xojimatova S. PEDAGOGIKADA BOLALARNING progress. – 2022. – Т. 3. – №. 2. – С. 874-879.
5. Xasanova Y. Z., Ta'lim tizimi islohotlari va ularning xozirgi kundagi axamiyati. Научно-образовательный электронный журнал. «Образование и наука в XXI веке 2022 г
6. Xasanova Y.Z., Dars jarayonida sahna ko'rinishlaridan foydalanish., Journal of new century innovations OAK e'tirof etgan bazalarda indekslanadigan jurnal. Uzbekistan,24 marts,2022.
7. Jumaniyazova N. A. et al. KITOB TARIXI //Eurasian Journal of Academic Research. – 2021. – Т. 1. – №. 9. – С. 942-944.
8. Jumaniyazova N. A. O. MALAYZIYA TAASSUROTLARI (2002-2003-YILLARDAGI XIZMAT SAFARI ASOSIDA) //Scientific progress. – 2022. – Т. 3. – №. 2. – С. 868-873.
9. Jumaniyazova N. A. O., Mavlonova S. T. U. CHET TILINI O'RGATISHDA KOMMUNIKATIV PRINSIPLAR HAMDA YANGI PEDAGOGIK TEXNOLOGIYANING ROLI //Central Asian Academic Journal of Scientific Research. – 2022. – Т. 2. – №. 2. – С. 118-122.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

ISSN: 2349-7793 Impact Factor: 6.876., Volume: 16 Issue: 05 in May 2022

THE PROBLEMS IN TEACHING LANGUAGE

Jumaniyazova Nargiza Abdugofurovna
Teacher of English, Fergana State University

Mavlonova Shahzoda Turgunovna
Teacher of English, Fergana State University

Abstract: *In this article, we will talk about the methodology of teaching a foreign language, about modern types of techniques used in the methodology of teaching a foreign language, and about their use.*

Keywords: *communicative, principled, lexico-grammatical, stylistic, pedagogical technology.*

The most important aspect of the principles of modern methods of mastering foreign languages at the present time is the development of communicative skills and abilities.

A modern teacher of a foreign language should not rely only on his own language knowledge, knowledge of the laws of psychological and pedagogical development of a student's personality. In parallel, he needs to develop certain professional and communicative, that is, specific qualities, skills and abilities. They allow him, firstly, to manage the internal, "hidden" reserves of students in educational activities, and secondly, ensure that students learn foreign languages even at a minimal communicative level. In both cases, the psychological and methodological reserves of entering into communication depend on the ability to use a foreign language as a means of communication [1,2,3,4,5].

According to the calculations of psychologists, the acquisition of special communication skills increases the effectiveness of communication activities by 15-20%. Optimization of socio-psychological issues of the learning process, creation of an optimal psychological and pedagogical learning climate, creation of an atmosphere of "reading with interest" lead to the idea that ways to improve the effectiveness of professional training of future teachers of foreign languages should be sought in close cooperation with the psychology of communication. In the process of teaching a student professional pedagogical activity at the same time it is necessary to teach him the skills of professional and pedagogical communication.

When developing students' communication skills, the selected literature, information - the material that will be taught as a whole - should be such that it includes both lexico-grammatical and stylistic changes, and also reflects the structures of oral and literary speech [6,7,8,9].

Communication skills cannot be taught all at once. Let's divide the process of learning the skills of communicative learning into several stages.

At the first stage, it is necessary to organize purposeful observation and perception by students of the teacher's personal or professional activities in dynamically changing situations.

The task of the second stage is to perform professionally oriented exercises by students in the process of performing educational and communicative tasks developed by them together with teachers.

At the third stage, the organization of independent implementation of professionally-oriented communicative activities by students.

In the introductory conversation, which establishes the motivational basis for self-organization or mutual learning at the first stage, the teacher explains to students the content and essence of learning organized on the principles of communicative partnership and cooperation.

The teacher's speech is a model and a guideline for any student's speech activity. To set a good example to the student, the teacher should pay attention to his speech activity and follow:

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

1. First of all, don't be serious and arrogant in communication.

2. When introducing new material, solving problematic issues, do not comment on what is already familiar. Your task is to think with readers, not for readers.

3. Don't forget to ask one particular reader. The correct speech activity of the teacher is also the ability to listen, the ability to pronounce the means in time, which are not enough in the language.

4. Do not forget that in educational communication, simple, understandable speech to the student should consciously alternate with complex.

5. As far as possible, translate what has been said, let the reader try to understand you.

6. Your use of the following evaluative constructions of politeness, which are evaluative in nature: "as far as I know", "if I'm not mistaken", "I'm not one hundred percent sure, but", "if I remember", intellectually enriches your speech and allows students to get acquainted with frequently used speech means.

As you know, there are not enough class hours in the educational process to develop communication skills, especially when studying and teaching foreign languages. Therefore, extracurricular activities, optional class hours, classes with gifted students separately, with those who are poorly assimilating, play a big and important role in the study and teaching of the language in this regard. Extracurricular activities allow students to learn more about the traditions of foreign countries, flora and fauna, geography, holidays, the culture of conversion, literature and art, and other areas. Both the classroom hours allocated in the learning process and extracurricular activities contribute to a rapid increase in the level of knowledge, if they are conducted on the basis of new pedagogical technology, in an unconventional style.

The role of the teacher in this case boils down to the fact that during the lesson, the student should be able to purposefully comprehend the subject, master it, that is, the teacher controls the course of the lesson, corrects and supplements the student's mistakes. The use of various games, pictures, objects, songs, diagrams and films in the classroom will provide close support to both the teacher in teaching foreign languages and the student, who will easily and well assimilate the subject, effectively using visual aids.

One of the most effective methods of new pedagogical technologies is the process of conducting classes in groups. When dividing into groups, various methods can also be used. For example, taking a picture and dividing it into four, the pieces of the picture are distributed.

The students who received the pieces of the picture put the picture into a whole, and they participate in the lesson in one group.

After the students are divided into groups, they are given various tasks. For example, words such as "Ferghana, district, Uzbekistan" should make up the text of "Ferghana", consisting of 6-7 sentences.

Games are also widely used to test and strengthen memory, which are one of the techniques of the new pedagogical technology. For example, the first reader will say the phrase: I study at school. The second reader continues, repeating the same thing: I study at school. And am 14. Then the third, fourth student and so on...

Increasing vocabulary is also important when teaching foreign languages. One of these methods is: One student goes to the blackboard, the rest of the students use movements and facial expressions to show different situations. The student on the blackboard must express the action in words. For example, the reader shows a state of laughter.

The laugh.

Another reader picks up the book and shows the reading process.

Tom read and etc.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

Currently, the need for learning a foreign language in our country is increasing. Because no matter which area you choose, you will come across words of a foreign language, especially English. Contracts of various companies are also signed in English, computer, banking system, medicine, law, casting, international organizations are also largely tied to English.

In accordance with this, various methodological manuals and techniques are being developed in order to facilitate the study of foreign languages. The use of new pedagogical technologies gives positive results in learning a foreign language.

Thus, in conclusion, it can be said that extracurricular work and the effective use of new pedagogical technologies in the process of learning and teaching a foreign language increase interest in a foreign language and closely help in the process of language learning.

References

1. АБДУҲАМИДОВА О. Р., ТОЖИБОЕВА Н. М. ТЕОРИЯ И ПРАКТИКА СОВРЕМЕННОЙ НАУКИ //ТЕОРИЯ И ПРАКТИКА СОВРЕМЕННОЙ НАУКИ Учредители: ООО" Институт управления и социально-экономического развития". – №. 2. – С. 9-10.
2. Kosimova F. K., Abdukhamidova O. R. LINGUOCULTUROLOGICAL ANALYSIS OF THE CONCEPT OF" PREGNANCY" IN UZBEK AND ENGLISH //ПЕРСПЕКТИВНЫЕ ОБЛАСТИ РАЗВИТИЯ НАУКИ И ТЕХНОЛОГИЙ. – 2019. – С. 10-11.
3. Kuchkarova Y., Nuriddinova S. ISSUES OF PERFECT PERSONAL EDUCATION //Galaxy International Interdisciplinary Research Journal. – 2021. – Т. 9. – №. 12. – С. 524-527.
4. Qo'Chqorova Y., Xojimatova S. PEDAGOGIKADA BOLALARNING progress. – 2022. – Т. 3. – №. 2. – С. 874-879.
5. Xasanova Y. Z., Ta'lim tizimi islohotlari va ularning xozirgi kundagi axamiyati. Научно-образовательный электронный журнал. «Образование и наука в XXI веке 2022 г
6. Xasanova Y.Z., Dars jarayonida sahna ko'rinishlaridan foydalanish., Journal of new century innovations OAK e'tirof etgan bazalarda indekslanadigan jurnal. Uzbekistan,24 marts,2022.
7. Jumaniyazova N. A. et al. KITOB TARIXI //Eurasian Journal of Academic Research. – 2021. – Т. 1. – №. 9. – С. 942-944.
8. Jumaniyazova N. A. O. MALAYZIYA TAASSUROTLARI (2002-2003-YILLARDAGI XIZMAT SAFARI ASOSIDA) //Scientific progress. – 2022. – Т. 3. – №. 2. – С. 868-873.
9. Jumaniyazova N. A. O., Mavlonova S. T. U. CHET TILINI O'RGATISHDA KOMMUNIKATIV PRINSIPLAR HAMDA YANGI PEDAGOGIK TEXNOLOGIYANING ROLI //Central Asian Academic Journal of Scientific Research. – 2022. – Т. 2. – №. 2. – С. 118-122.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

METHODS OF USING FINE ARTS IN THE PROCESS OF DEVELOPING THE PROFESSIONAL COMPETENCIES OF FUTURE ARCHITECTS

Qozaqova Munojat Sharifjanovna

Namangan Engineering Construction Institute

Republic of Uzbekistan, Namanagan city, 12 Islam Karimov street.

Rakhimova Gulnora Elyor qizi

Namangan Engineering Construction Institute

Republic of Uzbekistan, Namanagan city, 12 Islam Karimov street.

Abstract: *To develop students' creative and independent thinking skills in the teaching of architecture and fine arts in higher education, based on the methods of working with pedagogical images in the organization and analysis of model lessons, and to ensure high educational efficiency.*

Keywords: *architecture, painting, pencil drawing, independent thinking.*

Today, the President of the Republic of Uzbekistan and many other decisions are being developed in order to provide employment for students. At the same time, students will be able to apply the theoretical knowledge, practical skills and abilities of future architects in our country in solving practical and theoretical problems encountered in everyday life. Nowadays, in the process of development of computer technology for architects, the use of textbooks prepared in modern computer technology to develop students' creative thinking skills in the fine arts remains an urgent task of today.

Today, all aspects of social life, including architecture and design, are developing rapidly. Huge construction sites based on the achievements of science and technology, modern architectural solutions show how wide the possibilities of human intelligence and thinking are. The services of highly qualified architects are undoubtedly invaluable in the implementation of high-level tasks in this area. Also, in the modern era, the profession of architecture and design can not imagine its development without modern computer technology. Because these technologies have great potential for drawing drawings, creating three-dimensional images. This has led to a variety of views and opinions on the teaching of "Pencil", "Painting" and "Sculpture" for students studying in these areas.

The demand of the present period is in fact the same. So, it follows that it is expedient to reconsider the issue of teaching the disciplines of "Pencil", "Painting" and "Sculpture" on the basis of modern requirements. It should be noted that it is not an easy task to abandon or change the teaching methods that have been used for many years in the teaching of fine arts in the field of architecture and design. But given the peculiarities of science, its goals and objectives, it is possible, of course, to use the most advanced methods of modern education in teaching it. In this regard, it is advisable to perform the following tasks:

- To correctly explain to students the importance of the fine arts in mastering the secrets of their profession. This is achieved not only through lectures or explanations, but also through the

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

performance of practical tasks, as well as through regular demonstrations of visual, audio and video materials prepared on the topic;

Other related disciplines in the teaching of "Pencil", "Painting" and "Sculpture"

Interaction with such disciplines as "Composition", "Architectural design";

focus on how each theme is related to architecture and design;

to take into account the views of students in the development of topics, to make the lessons more interesting for them;

more visual aids in the lessons of this discipline, the use of modern computer technology, the organization of "master classes" by qualified professionals;

to allow students to think freely and creatively in the classroom;

creating problem situations that serve to develop students 'artistic thinking in the classroom and teaching learners to find their solutions.

Of course, while the visual arts and its laws have not changed, attitudes toward teaching it are not rigid concepts, they can also change over time. The use of new pedagogical technologies in today's educational practice, improving the quality of education, abandoning the same patterns in the organization of lessons, as well as conducting experiments in these processes are also useful. At present, increasing the efficiency of training in all higher education institutions is a serious task. To do this, every professor is required to "... thoroughly know the most effective and modern pedagogical technologies of teaching their subject and constantly improve their professional skills by constantly studying the latest developments in this field." After all, improving the quality and efficiency of the educational process is the basis of our future development.

Opportunities for higher education have been significantly expanded through the opening of new fields of study and an increase in admission quotas.

The practical application of modern architecture and fine arts in the educational process gives good results in the educational process. One of the major problems in the teaching of architectural disciplines in higher education is the lack of time to provide students with information on a given topic.

The relevance of the topic in the teaching of architecture and fine arts as a database-oriented education - the development of students' knowledge and skills of creative thinking of their personal and professional requirements.

The main directions of development of the system of personnel training set out in the "National Program of Personnel Training" are "Development of the relationship between science and education", "Scientific study of the problems of continuing education in the implementation of the National Program of Personnel Training" and "Continuing Education". The concept of "creating a new generation of educational literature for the system" was implemented in the framework of the State scientific and technical programs "Stages of widespread use in the educational process" of the item "Stages of creation of electronic educational literature."

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

To develop students' creative and independent thinking skills in teaching architecture and fine arts in higher education on the basis of methods of working with pedagogical images in the organization and analysis of model lessons, and on this basis to ensure high educational efficiency.

Parallel use of modern computer technologies in the educational process leads to high educational efficiency without negating other pedagogical technologies.

In the teaching of architecture and fine arts will be developed scientific guidelines and methods for the practical and theoretical development of creative thinking skills of students, as well as a sample textbook on the use of fine arts in the development of professional competencies.

Based on the developed methodology, the role and importance of students in improving their mastery is determined.

In general, in order for a certain type of art to always exist, first of all, it needed an audience that would demand it, that would understand it, that would buy it. If there is a fan of the created work, it will live even if it is an example of mediocre creativity.

References:

1. Sharifjanovna, Q. M. (2021). Perpendicularity of a Straight Line to a Plane and a Plane to a Plane. International Journal of Innovative Analyses and Emerging Technology, 1(5), 70-71.
2. Abduraximovich, U. M., & Sharifjanovna, Q. M. (2021). Methods of Using Graphic Programs in the Lessons of Descriptive Geometry. International Journal of Discoveries and Innovations in Applied Sciences, 1(6), 149-152.
3. Комилов, С., & Козокова, М. (2015). Разработка вычислительного алгоритма решения гидродинамических задач управления процессами ПВ в неоднородных средах при условии использования этажной системы разработки. Молодой ученый, (11), 324-328.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

ISSN: 2349-7793 Impact Factor: 6.876., Volume: 16 Issue: 05 in May 2022

THE PLACE AND ROLE OF ENTERPRISE IN THE DEVELOPMENT OF THE NATIONAL ECONOMY

Shermatov G'.G'

Associate Professor Namangan Engineering Construction Institute

Doctor of Philosophy in Economics (Phd), Namangan, Republic of Uzbekistan

Annotation: *This article provides insights and reflections on the role and place of enterprise in the development of the national economy.*

Keywords*: private property, market relations, enterprise, economic activity.*

The independence of the Republic of Uzbekistan has led to quantitative and qualitative changes in our national economy. Today, the economy of our country is developing on the basis of a model specially developed for our country, the transition to market relations, aimed at democratization of society, strengthening the economic potential and making the country one of the developed countries. This model is based on five important principles of economic reform and is defined by the necessary legislation that protects the freedom of economic entities, private property and entrepreneurship.

In the implementation of these tasks, which are required for the development of the economy, enterprises play an important role, as they are the main production link of the economy, as well as meet the needs of consumers through the production of goods and services.

The basis of the national economy is enterprises. The material, social and spiritual goods necessary for all human beings are created in enterprises. Defines the structure, content, scale and level of development of enterprises, industries and sectors. From them network and territorial associations are formed, cities, districts, regions are formed. It should be noted that the number of registered legal entities (except for farmers and farms) amounted to 285.3 thousand units, of which 268.4 thousand are operating or 94.1% of the total number of registered legal entities.

When we talk about the purpose of the enterprise in most literatures, we observe one-sided views on the subject. That is, the purpose of the enterprise is to make a profit (income) from its activities. For example: AA Sergeev - "An enterprise is an independent entity established for the production of goods, works and services for profit" and states that "despite the large number of forms, enterprises acquire the same character for the purpose of making a profit" 1 . In fact, the more fully an enterprise meets the demand for its products, the higher its efficiency will be. In this regard, we consider it appropriate to cite the views of Henry Ford, the founder of the theory of "Fordism", which created the American automobile and "Philosophy of Practice".

G. Ford understood the purpose of entrepreneurship to be to serve society, and said, "Work done only for profit is the highest level of risk.

... The goal of an enterprise is not to make a profit or speculate, but to produce for consumption. If Bordiu realizes that the producer is not being served, his future will not be long. "2 In a memorandum, L.P. Bin, the head of Bin, a well-known entrepreneur, wrote the following thesis, which all workers and employees must follow: "The consumer is our king: We depend on the consumer, the consumer is not from us. No one has ever won anything by arguing with their consumer. The consumer is the one who brings us his demand. Our job is to meet their needs by benefiting ourselves and them. "

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

German scientists F.K.Bea, E.Dixtla, M.Shvaytasra in the textbook "Enterprise Economics" ("Economics of Enterprise" publishing house "INFRA-M", 1999.) put forward the idea that the effectiveness of the enterprise depends on the full satisfaction of demand through its proposal.

Industrial enterprises occupy one of the leading positions in the national economy of our country. One third of the gross domestic product is generated in the industrial sector.

Industrial enterprises equip all sectors of the economy with advanced, modern equipment. The technical and economic level of agriculture, construction, transport, communications and other spheres depends on the level of industrial development. Further development of the industrial sector is an important factor in strengthening the country's economy.

Along with the means of production, industrial enterprises also produce consumer goods and serve to increase the living standards of the population.

Industry, especially heavy industry, is the basis of reproduction in the national economy. It relentlessly reproduces the means of production for itself and for other sectors of the economy. It equips all branches of heavy industry, agriculture, communications, construction and trade with advanced techniques. The technical equipment of all branches of the national economy will serve to increase social labor productivity and expand the scale of production.

The industry processes agricultural products and produces the bulk of consumer goods. The level of provision of the population with consumer goods often depends on the development of industry.

The development of industry will contribute to the rational allocation of productive forces, the comprehensive growth of the country's economic regions, the targeted use of natural resources.

Professor E.X. According to Mahmudov, an enterprise has the status of a legal entity, an independent business entity that produces, sells or exchanges products (works, services) in order to meet the needs of consumers (buyers) and earn income (profit) based on the use of its property.

Owns separate property in its own property, economic or operational management and is liable for its obligations with this property, can own and exercise property or personal non-property rights on its own behalf, can fulfill obligations, is a plaintiff and responsible in court The receiving organization is a legal entity. Legal entities must have an independent balance sheet or budget.

The authors, led by Professor BA Abdukarimov, believe that the following description of the company is theoretically and practically expedient. An enterprise is a legal entity that produces, exchanges, and performs other work and services, makes decisions and is responsible for its activities, based on the use of private resources to meet the needs of the population and to benefit or perform other social functions. is a large-scale business entity.

The industrial capacity of each country, as well as the indicators of scientific and technological development and modernization of the economy are determined primarily by large enterprises. Therefore, we must not forget the role and place of large enterprises in the development of "small" economy, ie in opening the way for small and medium enterprises and micro-firms. In addition to the large number of employees, these enterprises have ample opportunities to implement scientific and technical achievements, produce high quality products, encourage labor and develop friendly partnerships (including with foreign companies and firms). Therefore, the convenience of large, medium and small enterprises is the most important task of science and economic practice, based on the requirements of public production and the prospects for the development of the national economy. Ways to solve this task in every sector and sector of the economy may not be similar or have the same description. It is necessary to act in accordance with the existing conditions and development advantages in each individual economic situation.

The activities of enterprises have a direct impact on the national economy and its sectors. The

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

better, more efficient and more profitable the enterprises, the higher the performance of the whole economy, including their own. It is believed that a market economy liberalizes the activities of enterprises, strengthens their independence and creates ample opportunities for the organization of production and achieving high profitability. Maybe it really is. However, how an enterprise, especially a state-owned enterprise, works, its benefits to society, the level of profitability, the employment of employees should be considered not only by the enterprises, but also by the state. For the same reason, the state not only creates great opportunities for enterprises, but also controls them in the prescribed manner. The "fate" of state-owned enterprises can not remain indifferent to the final results of their production activities. Bankrupt enterprises, loss-making production, economic insolvency - all this is a heavy burden for both the business community and the state.

World experience shows that in a market economy, not all enterprises can overcome competition and operate efficiently, as well as make a profit or profit. As a result, thousands of enterprises will be established, included in the scope of economic activity, and almost all of them will be liquidated for various reasons. Therefore, bankruptcy and liquidation of enterprises are common in a market economy, and it is necessary to be careful not to fall into this trap, but it is not necessary to make a tragedy out of it.

The role and importance of any enterprise in the national economy depends not only on the products produced, the amount of profit or income received, but also on the participation of this enterprise in the employment of the population. By providing employment to the population, in addition to performing their direct production functions, enterprises also contribute to the reduction of unemployment, and, consequently, to an increase in labor activity and an improvement in the social situation.

Here it is clear that everything does not depend only on the enterprise itself, of course. This is because in the process of carrying out its activities, the enterprise interacts with other enterprises that supply raw materials, equipment and other means of production or act as consumers of the product. Any shortcomings and deficiencies in this relationship, including untimely delivery of raw materials, materials and equipment, late payment, late payment of debts and other violations of business rules and obligations will lead to deterioration of the economic situation of the enterprise, its insolvency. Therefore, the need for effective and highly profitable activities of enterprises is inextricably linked with the discipline of all enterprises to properly organize production and strictly fulfill their obligations to their partners and the state.

There are many micro-firms, small and large manufacturing enterprises in Uzbekistan, which cover almost all sectors of the economy - from heavy industry to light industry, from processing of agricultural products to scientific production. In their activities, they use all the factors of production - land, natural and labor resources, equipment and technology, investment, the basis of production by modern science or a modern information system called the national wealth of the country. It is well known that wealth or potential is created through the actions of several generations and the whole of society. The task of enterprises is to preserve and effectively use this wealth. Even a slight deviation from these principles of management leads to a decrease in the efficiency of public production, homelessness and waste. Businesses are no exception.

REFERENCES

1. Хасанов, Б. У., Шерматов, Г. Г., Жалелов, М. А., & Ботиров, З. Л. (2016). ИННОВАЦИОННЫЕ ПРОЦЕССЫ И АКТУАЛЬНЫЕ ПРОБЛЕМЫ РАЗВИТИЯ ПРОФЕССИОНАЛЬНОГО ОБРАЗОВАНИЯ В РЕСПУБЛИКИ УЗБЕКИСТАН. In *WORLD SCIENCE: PROBLEMS AND INNOVATIONS* (pp. 421-423).

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

2. Shermatov G. G. SITUATIONAL APPROACHES TO EFFECTIVE LEADERSHIP //Экономика и социум. – 2021. – №. 3-1. – С. 278-280.
3. Шерматов Г.Г. Роль корпоративного управления в условиях рынка. Пятнадцатые международные плехановские чтения тезисы докладов. Москва-2002 год 390-392 стр.
4. Шерматов Г.Г. Основные аспекты совершенствования структуры управления в акционерных обществах. “Эканомический вестник Узбекистана” журнал. 2002 год №4 55-56 стр.
5. Shermatov G’.G’. THE CONCEPT AND FUNCTIONS OF INNOVATION MANAGEMENT. EPRA International Journal of Economics, Business and Management Studies (EBMS)|ISSN: 2347-4378|Journal DOI: 10.36713/epra1013|SJIF Impact Factor (2020): 7.035 EPRA JOURNALS DOI: https://doi.org/10.36713/epra1013 2020 year September, 64-69 pag.
6. Shermatov G. G. PRODUCTION TECHNOLOGIES - AS AN OBJECT OF MANAGEMENT //"Экономика и социум" №2(81) ч.1 2021 – С. 316-318.
7. Shermatov G. G. Innovative management. Общество с ограниченной ответственностью" Издательство" КноРус" (Москва) – 2021.
8. Bulturbayevich, M. B., & Baxromovna, B. L. (2022). INDIVIDUAL AND MARKET DEMAND. REVERSE DEMAND FUNCTION. *INTERNATIONAL JOURNAL OF SOCIAL SCIENCE & INTERDISCIPLINARY RESEARCH ISSN: 2277-3630 Impact factor: 7.429*, *11*(05), 32-40.
9. Bulturbayevich, M. B. (2022). TAXES AND THEIR TRANSFER. LOSS OF" DEAD" CARGO WHEN TAXED. *INTERNATIONAL JOURNAL OF SOCIAL SCIENCE & INTERDISCIPLINARY RESEARCH ISSN: 2277-3630 Impact factor: 7.429*, *11*(05), 22-31.
10. Bulturbayevich, M. B., & Baxromovna, B. L. (2022). PRICING. LIMITED INCOME LINES. ELASTICITY BY INCOME. *INTERNATIONAL JOURNAL OF SOCIAL SCIENCE & INTERDISCIPLINARY RESEARCH ISSN: 2277-3630 Impact factor: 7.429*, *11*(05), 41-50.
11. Bulturbayevich, M. B. (2022). IN PRIVATE ENTREPRENEURSHIP EMPLOYEE INCENTIVES ISSUES. *ASIA PACIFIC JOURNAL OF MARKETING & MANAGEMENT REVIEW ISSN: 2319-2836 Impact Factor: 7.603*, *11*(04), 21-27.
12. Bulturbayevich, M. B., Ikromjonovich, T. I., & Murodillo, S. (2022). CAREER STAGES. In *Conference Zone* (pp. 1-5).
13. Bulturbayevich, M. B., Ikromjonovich, T. I., Zohidjon ogli, N. M., & Hayrullo ogli, M. S. (2021, December). THE MAIN DIRECTIONS OF MODERN MANAGEMENT PSYCHOLOGY. In *Conference Zone* (pp. 292-294).
14. Bulturbayevich, M. B., Ikromjonovich, T. I., Xurshidjon og, M. A., & Narimanjon og, T. D. (2021, December). LEADERSHIP AND LEADERSHIP IN MANAGEMENT PSYCHOLOGY. In *Conference Zone* (pp. 271-276).
15. Bulturbayevich, M. B., Ikromjonovich, T. I., & Murodillo, S. (2022). CAREER STAGES. In *Conference Zone* (pp. 1-5).
16. Bulturbayevich, M. B., Ikromjonovich, T. I., Zohidjon ogli, N. M., & Hayrullo ogli, M. S. (2021, December). THE MAIN DIRECTIONS OF MODERN MANAGEMENT PSYCHOLOGY. In *Conference Zone* (pp. 292-294).
17. Bulturbayevich, M. B., Ikromjonovich, T. I., & Mahmudjon o’g’li, H. N. (2021, December). TYPES OF COMPETENCE. In *Conference Zone* (pp. 281-286).
18. Bulturbayevich, M. B., & Ikromjonovich, T. I. (2021, December). THE ROLE OF MANAGEMENT PSYCHOLOGY IN SOCIAL LIFE. In *Conference Zone* (pp. 265-267).
19. Bulturbayevich, M. B., & Ikromjonovich, T. I. (2021, December). REQUIREMENTS FOR MODERN MANAGEMENT PERSONNEL. In *Conference Zone* (pp. 260-264).

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

20. Bulturbayevich, M. B., Ikromjonovich, T. I., Xurshidjon og, M. A., & Narimanjon og, T. D. (2021, December). LEADERSHIP AND LEADERSHIP IN MANAGEMENT PSYCHOLOGY. In *Conference Zone* (pp. 271-276).
21. Bulturbayevich, M. B., & Ikromjonovich, T. I. (2021, December). HISTORY OF THE DEVELOPMENT OF MANAGEMENT THEORY AND PRACTICE. In *Conference Zone* (pp. 309-312).
22. Bulturbayevich, M. B., & Ikromjonovich, T. I. (2021, December). GENDER ISSUES IN GOVERNANCE. In *Conference Zone* (pp. 277-280).
23. Bulturbayevich, M. B., Ikromjonovich, T. I., & Ismoiljon o'g'li, A. A. (2021, December). MASTERY OF RHETORIC IN MANAGEMENT. In *Conference Zone* (pp. 287-291).
24. Jurayevich, M. B., & Bulturbayevich, M. B. (2021). The Role of Investment in Ensuring High Rates of Economic Growth. *Academic Journal of Digital Economics and Stability*, *11*, 39-43.
25. Bulturbayevich, M. B., & Ismatullayevich, S. I. (2021). THE IMPORTANCE OF THE IMPLEMENTATION OF VERTICAL INTEGRATION PROCESSES IN THE DEVELOPMENT OF INNOVATIVE ACTIVITIES IN INDUSTRIAL ENTERPRISES. *Web of Scientist: International Scientific Research Journal*, *2*(06), 220-228.
26. Bulturbayevich, M. B., & Jurayevich, M. B. (2020). The impact of the digital economy on economic growth. International Journal of Business, Law, and Education, 1(1), 4-7.
27. Jurayevich, M. B., & Bulturbayevich, M. B. (2020). Attracting Foreign Investment In The Agricultural Economy. International Journal of Business, Law, and Education, 1(1), 1-3.
28. Jo'rayevich, M. B., Baxritdinovich, I. R., & Bulturbayevich, M. (2020). The Role Of Regional Governance In The Development Of Small Business And Private Entrepreneurship. European Journal of Molecular & Clinical Medicine, 7(7), 705-711.
29. Jurayevich, M. B., & Bulturbayevich, M. B. (2020). The Impact of The Digital Economy on Economic Growth. International Journal on Integrated Education, 3(6), 16-18.
30. Batirovich, A. B., Yusufxonovich, K. P., & Bulturbayevich, M. B. (2021). Improving the Efficiency of Management of Vertically Integrated Industrial Enterprises in the Management of Innovative Activities of Enterprises. *Design Engineering*, 10605-10618.
31. Ismatullayevich, S. I., & Bulturbayevich, M. B. (2021). DEVELOPMENT OF SMALL BUSINESS AND PRIVATE ENTREPRENEURSHIP IN THE ECONOMY OF THE REPUBLIC OF UZBEKISTAN. *Academicia Globe: Inderscience Research*, *2*(6), 419-425.
32. Bulturbayevich, M. B. (2021). CHALLENGES IN DEVELOPING A DIGITAL EDUCATIONAL ENVIRONMENT. *Academic Journal of Digital Economics and Stability*, *2*, 1-9.
33. Jurabaevich, S. N., & Bulturbayevich, M. B. (2021). POSSIBILITIES OF USING FOREIGN EXPERIENCE TO INCREASE THE QUALITY OF EDUCATION IN REFORMING THE EDUCATION SYSTEM OF THE REPUBLIC OF UZBEKISTAN. *Web of Scientist: International Scientific Research Journal*, *1*(01), 11-21.
34. Bulturbayevich, M. B., Rahmat, A., & Murodullayevich, M. N. (2021). Improving Teacher-Student Collaboration And Educational Effectiveness By Overcoming Learning Challenges. *Aksara: Jurnal Ilmu Pendidikan Nonformal*, *7*(1), 153-160.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

ISSN: 2349-7793 Impact Factor: 6.876., Volume: 16 Issue: 05 in May 2022

EVALUATION OF THE WORK OF THE WORKING BODIES OF ROTARY AND COMBINED MACHINES

Otaxanov Bakhrom Sadirdinovich,
Namangan Engineering and Construction Institute, Associate Professor, Candidate of Technical Sciences. e-mail: baxromo1001@gmail.com

Qidirov Adxam Rustamovich,
Namangan Engineering and Construction Institute, teacher of the department "Technological machines and equipment" e-mail: aqidirov@gmail.com

Annotation: *The article analyzes the evaluation of the quality of work of rotary and combined machines for pre-sowing processing. The hypotheses of grinding solid materials from the point of view of tillage are considered and the advantages and disadvantages are determined. Based on the analysis, a method for assessing the quality of work of rotary and combined machines is proposed, based on determining the specific kinetic energy during soil cultivation, and a method for its determination is described.*

Key words: *seedbed preparation, loosening, harrowing, leveling, crumbling, specific work, formation of new surfaces, soil fractions, soil deformation, elastic deformation, plastic deformation, specific kinetic energy.*

Introduction.

To create favorable conditions for seed germination, pre-sowing soil treatment is used, which is a particularly significant technological process, which includes a number of technological operations, such as cultivation for loosening the surface layer of the soil, harrowing to preserve soil moisture and crushing lumps, rolling for compaction and leveling, which reduces the size of the unevenness of the soil surface [1]. According to the results of theoretical and experimental studies, it has been established that in the processes of rolling and leveling, which are performed at the final stage of pre-sowing cultivation, the soil surface is compacted in some cases due to the indentation of soil aggregates, as well as due to soil deformation up to certain factions. A high degree of deformation of soil aggregates is a negative factor that can lead to an increase in erosion-hazardous particles, which is unacceptable according to the requirements of the standard [2]. The quality of pre-sowing tillage is determined by measuring the depth of the treated layer, ridges, lumpiness of the surface, the degree of soil compaction, as well as the structure of the soil, the values of which affect the physical and technological properties of the soil. As a result of the analysis of scientific and technical literature, a single quality criterion has not been established that evaluates the work of tillage machines, both as separate working bodies and as part of combined units [3].

Crushing or crumbling is the main method of preparing the soil for sowing, in which, from a physical and agrotechnical point of view, the array is destroyed, crushed, and come to an optimal state for sowing, germination and growth of seeds of agricultural crops, and in the economic aspect, soil fertility increases. Such a factor as the degree of crumbling depends not only on the technological parameters of the machine-tractor unit, but also on the design features of the working bodies of tillage machines [4].

The development of a constructive-technological scheme of tillage tools with the inclusion of issues on improving the working bodies and the creation on this basis of a design that allows to reduce the speed of the working bodies without reducing the quality of crumbling is an urgent problem against the backdrop of the trend of saving energy [5].

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

Establishing relationships between energy costs and the dimensions of the final and initial pieces of material, their shape, physical and mechanical properties, etc. is the main issue in the theory of grinding [6].

According to the hypothesis of P. Rittinger (1867), the work during the grinding of the material is proportional to the area of the newly formed surface.

But Rittinger's Theory does not take into account changes in the shape of bodies during grinding. As a result, it is not suitable for describing crushing processes in cases where the finished product has a small specific surface area [7].

The theory of Kirpichev V.L. is known. (1874) and F. Kick (1885), in which it was established that the energy required for the same change in the shape of similar and homogeneous bodies is proportional to their volumes.

The considered grinding hypotheses reflect only a part of the complex processes occurring during grinding. The Kirpichev-Kik theory estimates the energy spent on the deformation of the material, and does not take into account the costs of the formation of new surfaces. It is advisable to use it for coarse and medium crushing, when the influence of newly formed surfaces is insignificant [8]. Rittinger's theory does not take into account the energy costs for the elastic deformation of the pieces. It is most applicable for fine crushing and grinding of materials.

In a real grinding process, the deformation of pieces and the formation of new surfaces occur simultaneously.

In this regard, many scientists sought to evaluate these phenomena in a complex. So, P.A. Rebinder (1940) and F. Bond (1951) proposed to determine the energy consumption during crushing, taking into account the work, both the deformation of the pieces and the formation of new surfaces [9].

Materials and methods.

Many researchers have worked on evaluating the effectiveness of the working bodies. The studies carried out by these researchers boiled down to substantiating the parameters of the working body, with various evaluation criteria. Among the works performed, special attention should be paid to the experiments carried out by R.I. Baimetov, on which the specific work for crushing was taken as the criterion for evaluating the work of the deformer [10, 11].

In [12], the assessment of the degree of destruction of soil aggregates by average size was carried out by comparing the data on the size before and after leveling the soil.

A method for evaluating the functioning of working bodies and machines for pre-sowing soil treatment, as well as a sieve method for determining the parameters of soil aggregates, was applied. Moreover, the average diameter of the soil aggregate in a single soil volume was determined by the expression

$$h_0(d_{s.a.}) = f(D_{s.a}). \quad (1)$$

where h_0 – defining characteristic of soil volume $V_{\text{п а.}}$, мм;

$d_{\text{п.а.}} = (d_{1\text{па}}, d_{2\text{п.а.}}, d_{3\text{па.}}, \dots, d_{n\text{па}})$– parameters of soil aggregates of soil volume $V_{\text{п.а}}$ in the form of a soil sample with an undisturbed structure, mm;

$d_{\text{п.а.}} = (d_{1\text{па}}, d_{2\text{п.а.}}, d_{3\text{па.}}, \dots, d_{n\text{па}})$ – parameters of soil aggregates of the average soil volume $V_{\text{п.а}}$, мм.

To directly calculate the average size of soil aggregates, they took their shape in the form of a ball and used data on particle size, quantity, and mass of each soil aggregate. They take this indicator as a basis [13]. Since the size of each soil aggregate is laborious to determine, recommendations are applied to determine the clodiness, structural coefficient [14, 15, 16].

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

Moreover, if there are appropriate standards and recommendations for soils and peat, then the determination of these indicators for soils does not have a single methodology.

Assuming that soil aggregates for the most part have the shape of a ball or as close as possible to it [17], it was proposed to determine the average size of averaged soil aggregates,

$$D_{\text{п.а}}^{\text{ср}} = \frac{\sum_{i=1}^{N} \frac{m_i}{d_{i\text{ф}}^2}}{2*\sum_{i=1}^{N}\left(d_{i\text{ф}}^2+d_{\text{п}a}^2\right)*(d_{\text{п.а.}+1}+d_{\text{п}a}} \text{,(2)}$$

where m_i– weight of the i-th fraction of soil aggregates, g;

$d_{i\text{ф}}$– actual diameter of soil aggregates, mm;

$d_{i\text{п}a}$–diameter of soil aggregates of the soil volume in the form of a soil sample with an undisturbed structure, mm.

The value of the average size of soil aggregates during soil deformation after the passage of active working bodies - cutters, cultivators - taking into account the presence of weeds, straw, stubble in the soil, with the formation of soil aggregates of the corresponding shape [18], can be determined by the expression

$$D_{\text{ф}} = \frac{m}{\sum_{i=1}^{N} \frac{m_i}{d_i}}. \qquad (3)$$

The presence of several indicators of the variable soil structure, taking into account the initial granulometric composition, as well as the type of soil, its physical, mechanical and technological properties, serves as the basis for determining the quality criterion of the leveling technological operation when comparing various technological processes and structures of working bodies for pre-sowing soil treatment. As a criterion, it is proposed to use the indicator [19], determined from the ratio

$$K_{quality} = \frac{D_{s.a}^{middle}}{D_{middle}}. \qquad (4)$$

Defined indicator $K_{\text{кач}}$ varies in the range from 0 to 1.0, and the more uniform the deformation of the soil profile, the closer the indicator $K_{\text{кач}}$ to the unit. When assessing innovative soil-cultivating working bodies of active, passive and combined action in laboratory conditions, the specified criterion is in the range of 0.80 ... 0.90, however, in the field it was found that the quality criterion is in within the range from 0.40 to 0.50 [20].

This evaluation method also allows only to compare the results of the work of the studied machine-tractor units in terms of the quality of processing, and does not take into account the energy intensity of the processing process.

The specific work for crushing and the method of the average size of the soil aggregate does not reveal the essence of the issue, it can only be used to compare the results of the work of the studied working bodies, because the specific crushing work will always decrease with an increase in speed, at which the degree of crumbling of soil clods increases [21]. Therefore, it is impossible to determine the optimal crushing speed. In addition, these works did not take into account the destructibility of soil clods depending on the size, moisture content and speed of impact of the working body. Considering the above shortcomings, a technique based on the determination of the energy expended on the newly formed surface has been developed [22].

Based on the above, it is necessary to determine the critical speed at which destruction begins, depending on the size of the soil clod, the optimal crushing rate, depending on the newly formed surfaces of crushed soil clods [23].

It is considered established that the general scheme of destruction of a solid body consists in successive elastic and plastic deformation and its rupture [24].

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

The work of the compression force of the sample is spent on elastic, plastic deformations and on the destruction of the sample. The total work of crushing can be represented as

$$A_{um} = A_{\text{y}} + A_{\text{п}}, \qquad (5)$$

where A_{y} - work expended on elastic deformation of the sample,

$A_{\text{п}}$ - the work expended on plastic deformation for the formation of new surfaces.

The work of elastic deformations is proportional to the deformed volume of the body, that is.

$$A_e = \frac{{\sigma_{\text{п}}}^2}{200 \cdot E} \cdot \Delta V = k \cdot \Delta V \qquad (6)$$

where $\sigma_{\text{п}}$ - voltage corresponding to the limit of proportionality, Pa;

E - modulus of elasticity, Pa;

k – loosening factor;

ΔV - deformed body volume, м^3.

The change in soil volume after processing is determined by the loosening coefficient

$$k = \frac{V_2}{V_1}, \qquad (7)$$

where V_1 - soil volume before tillage, м^3;

V_2 - soil volume after tillage, м^3.

The work expended on plastic deformations and on the formation of new surfaces [25] is assumed to be proportional to the value of the latter

$$A_p = \alpha \cdot \Delta S, \qquad (8)$$

where ΔS - the surface newly formed during the crushing of the material, which can be defined as the difference,

$$\Delta S = S_2 - S_1, \qquad (9)$$

where S_1 - total surface of the piece before crushing, м^2;

S_2 - total surface of all particles after crushing, м^2.

To determine the values of S2 and S1, we accept, as suggested by the authors of [26, 27, 28], that the pieces of crushed material before and after crushing consist of cubes, the dimensions of which are equal to the average diameter of the sample D and particles of the crushed product d.

Then the number of particles formed as a result of fragmentation of the sample

$$n = \frac{Q}{q} = \frac{D^3}{d^3} \qquad (10)$$

here, Q and qi - mass of pieces before and after crushing.

If we assume that particles of the same size are obtained as a result of crushing, then

$$S_1 = 6D^2 \quad \text{and} \quad S_2 = 6nd^2, \qquad (11)$$

Substituting the values of n, S1 and S2 in relation (9) we obtain

$$\Delta S = 6D^2 \left(\frac{D}{d} - 1\right) \qquad (12)$$

or, denoting $i = \frac{D}{d}$, then you can write

$$\Delta S = S_1(i - 1). \qquad (13)$$

Отсюда очевидно, что образовавшиеся в процессе дробления образцов новые surfaces are equal to the surface of the original sample, multiplied by the degree of grinding without unity.

Substituting the value of ΔS from equation (13) into (8), we obtain

$$A_p = 6\alpha \cdot D^2(i - 1). \qquad (14)$$

When crushing samples, crushed particles usually have different dimensional characteristics, which entails large errors in their averaging. This is especially noticeable if there are large pieces in

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

the fragmented product [29]. To take into account the heterogeneity of the grinding composition, the particles were divided into fractions and the newly formed surfaces were determined from them during the crushing process as follows:

$$\Delta S = S_2 - S_1 = \frac{q_1}{\gamma \cdot d_1^3} \cdot d_1^2 + \frac{q_1}{\gamma \cdot d_2^3} \cdot d_2^2 + \cdots \frac{q_1}{\gamma \cdot d_n^3} \cdot d_n^2 - 6D^2 =$$

$$6D^2 \left[\frac{D}{Q}\left(\frac{q_1}{d_1} + \frac{q_2}{d_2} + \cdots + \frac{q_n}{d_n} - 1\right)\right] = 6D^2 \left(\frac{D}{Q} \cdot \sum \frac{q_i}{d_i} - 1\right) \quad (15)$$

where Q – mass of soil clod, кг

q_i- mass of individual fractions, kg;

γ – fraction density, kg/m 3;

d_i = ($d_в$+$d_н$)/2 - average diameters of narrow classes, m;

$d_в$- upper fraction diameter, i.e. the size of the sieve opening through which the material passed;

$d_н$ - lower fraction diameter, i.e. the size of the sieve opening on which the material was retained.

In the same way, it can be easily shown that when crushing q' kilograms of bulk material [30], which consists of identical pieces with an initial size Dcp, the newly formed surfaces will be

$$\Delta S = \frac{6}{\gamma_0}\left(\sum \frac{q_i}{d_i} - \frac{q'}{D}\right). \quad (16)$$

However, if we assume $d_i = d_{ср}$, то, obviously Σq_i=q' then

$$\Delta S = \frac{6 \cdot q'}{\gamma_0}\left(\frac{1}{d_{midle}} - \frac{1}{D_{midle}}\right) \quad (17)$$

If pieces of material before and after crushing are taken as a ball, then the newly formed surfaces will be equal to

$$\Delta S_b = \frac{\pi}{6}\Delta S_i, \quad (18)$$

where, ΔS_b, ΔS_i - newly formed surfaces during crushing of samples of spherical and cubic shape.

We took samples and pieces of lumps after crushing as a cube for the following reasons:

a) we could not obtain samples with an exactly spherical surface;

b) there are always irregularities on the surface of the sample and pieces after crushing, which will increase the overall irregularity;

c) particles after crushing have an arbitrary shape.

Now substituting the values ΔS when splitting a single piece from formula (3.12) in (3.5), we obtain

$$A_П = 6\alpha D^2 \left(\frac{D}{Q}\sum \frac{q_i}{d_i} - 1\right). \quad (19)$$

The total crushing work is equal to the kinetic energy of the sample, which is determined from the formula

$$A_{общ} = \frac{Q \cdot \vartheta_р^2}{2g} \quad (20)$$

where, Q - sample weight, kg;

$\vartheta_р$ – working speed of the working body.

From formula (3.3) we have:

$$A_p = A_{um} - A_e. \quad (21)$$

If we substitute the values of their components into the last equality; then we get

$$\alpha \cdot \Delta S = \frac{Q \cdot \vartheta_i^2}{2} - k \cdot \Delta V. \quad (22)$$

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

From this expression, it is possible to determine the value of the specific work required for the formation of units of the newly formed surface during soil crushing

$$\alpha = \frac{Q \cdot \vartheta_i^2}{2\Delta S} - \frac{k \cdot \Delta V}{\Delta S} \text{ ёки } \alpha = \frac{1}{\Delta S}\left(\frac{Q \cdot \vartheta_i^2}{2} - k \cdot D^3\right). \qquad (23)$$

The task can be simplified if we determine the expended kinetic energy by the following well-known formula

$$\Delta T = T_1 - T_2 = \frac{m_1 \cdot m_2 \cdot \vartheta_i^2}{2(m_1 + m_2)}, \qquad (24)$$

where m_1 – weight of the working body, kg;

m_2 – mass of crushed soil, kg.

From the components of the formula, it can be seen that the increased mass and increased speed of the working body lead to an increase in the energy expended on crumbling the soil [31].

The kinetic energy of the expended energy per unit mass and newly formed surface can be determined by the formulas,

$$\alpha_m = k_n \frac{\Delta T}{m_2}, \ \alpha_S = k_n \frac{\Delta T}{\Delta S}. \qquad (25)$$

где $k_n = k_{опт}/k_ф$- soil moisture coefficient, buffer $k_{опт}$- optimal soil moisture, $k_ф$- actual soil moisture

When studying the rate of destruction of soil clods, the samples were adjusted to a spherical shape with a diameter of 10 mm to 110 mm in 10 mm increments to create the same test conditions.

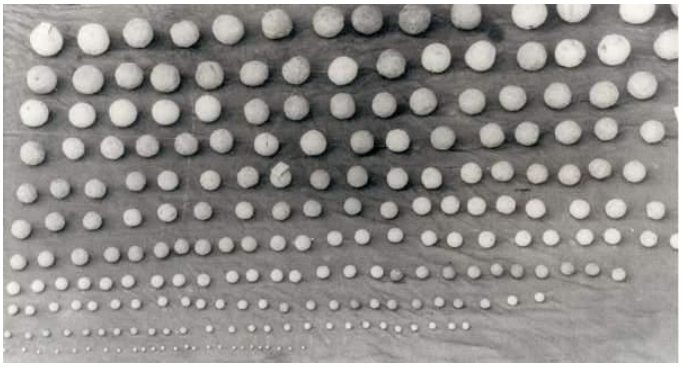


Fig.1. Samples prepared for testing.

The prepared samples were destroyed by impact in a pendulum device. Crushed soil clods were collected on a sail polyethylene film. The collected lumps were sifted through sieves with opening sizes of 50 mm, 25 mm, 10 mm and 5 mm. The sieved fractions were weighed to the nearest 0.1 gram.

On the basis of the data obtained, a three-dimensional dependence was constructed, displaying the response surface in Fig. 2. The response surface shows that at an impact speed of 5 and 6 m/s, with an increase in the sample size to 70 mm, an intensive decrease in the degree of crumbling of soil clods occurs. With a further increase in the diameter of the sample, the degree of crumbling of lumps does not change significantly. This, apparently, is due to the fact that the impact velocity is lower than the propagation velocity of plastic deformations. During the impact, very few cracks are formed along the cross sections of weak bonds, and the lumps are crushed into several pieces, the dimensions of which are larger than the boundary size (25 mm) of the degree of crumbling. This explains the sharp decrease in the degree of crumbling with an increase in their size to 70 mm.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

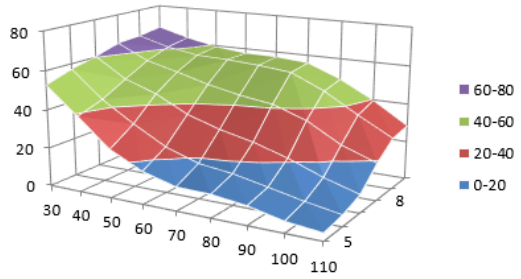


Fig. 2. Dependence of soil crumbling on size, impact speed at a moisture content of 9.4%.

At a speed of 7.8 m/s, the degree of crumbling of the samples changes almost in a straight line, which indicates that the impact speed is equal to or close to the speed of propagation of plastic deformations [32].

Starting from a speed of 8 m/s, and especially at a speed of 9, 10 m/s, the degree of crumbling of samples with a diameter of up to 80 mm changes slightly; with a further increase in the diameter of the samples, the curve of their degree of crumbling drops from 60% to 25%. In this case, what is assumed above also occurs. But due to the increase in speed beyond the limits of the propagation of plastic deformations, the intensity of crack formation increases, and the number of crushed soil pieces increases slightly. The shift in the intensity of the fall of the curve at an impact speed of 9 ... 10 m/s towards an increase in the diameter of the samples is explained by their mass or volume. Cracking in all sizes of soil clods is the same, but the sizes of crushed pieces are different, with small sample diameters, the size of crushed pieces is close to or less than the boundary size of the degree of crumbling, and with an increase in diameter, the size of the obtained pieces also increases and the degree of crumbling of the samples decreases [33].

The efficiency of the combined machine depends on the quality of crushing soil clods, which is largely affected by the speed of impact of the working bodies on the soil clods. The efficiency of the crushing process of soil clods can be characterized by the value of specific energy, i.e. the energy spent on crushing a unit mass of a lump [34].

Increasing the size of the lump will lead to an increase in the total energy consumption at all values of the impact velocity.

The specific energy consumption of crushing per unit mass of soil clods at the same impact speed almost does not change with an increase in the size of soil clods. This makes it possible to conclude that an increase in the impact velocity will always lead to an increase in the total energy intensity of destruction [35, 36].

Experimental data to determine the specific energy per unit of newly formed crushing surfaces are shown in fig. 3.

It can be seen from these data that the energy consumption for crushing large lumps (more than 80 mm) decreases when moving from static to dynamic impacts. This indicates that, at all impact velocities, the degree of crumbling of a large soil clod is insignificant [37].

When crushing lumps of smaller sizes (up to 60 mm), the specific energy consumption per unit of newly formed surfaces increases in a straight line, but with a lower intensity [38].

The dependence of the specific energy intensity for the formation of new surfaces on the size of soil clods only states the above conclusions and indicates that at lower speeds and with clod sizes over 90 mm, the energy intensity of crushing increases along a logarithmic curve [39, 40].

Based on the data obtained, it can be concluded that for crushing soil clods, from the point of view of energy consumption, the optimal impact speed is 7 ... 9 m / s.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

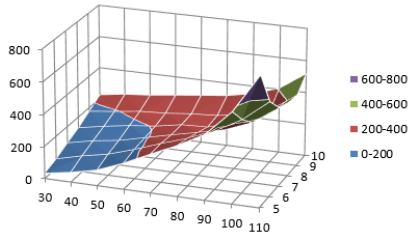


Fig.3. Dependence of the specific energy capacity on the size, impact velocity at a humidity of 9.4%.

The decrease in specific energy consumption during the transition from static to shock loads can be explained by a decrease in the yield zone. A further increase in energy intensity with an increase in the impact speed is explained by the fact that the temporary resistance of the soil increases with an increase in speed.

An increase in the size of soil clods at all moisture levels entails a decrease in the critical rate of destruction. A soil clod, when exposed to a shock load, is destroyed along the cross sections of weak bonds, which are usually more in large clods than in small clods. Therefore, in the destruction of small lumps, the impact velocity should be greater.

In the impact action of the working bodies on the material, the movement is reported only to the particles closest to the place of impact. The sharper and faster the impacts, the deformation penetrates to a shallower depth, i.e., the deformation in the material in this case has a local character. Therefore, to increase the degree of crumbling of large-sized clods, it is necessary to strike at a speed not exceeding the rate of propagation of plastic deformations of the soil.

Increasing the impact speed to 7...9 m/s contributes to an increase in the degree of crumbling of the soil clod, a further increase will entail an increase in the cost of specific energy for crushing the soil clod.

The results obtained during laboratory and field studies on soils by the method of formation of new surfaces for the evaluation of the tested tillage working bodies make it possible to more fully assess the deformations of the soil profile.

References:

1. ГОСТ 16265-89 Земледелие. Термины и определения. М.: Издательство стандартов, 1991. 23 с.

2. ГОСТ 26244-84 Обработка почвы предпосевная. Требования к качеству и методы определения. М.: Издательство стандартов, 1984. 5 с.

3. Эргашев, Ш. Т., Отаханов, Б. С., & Абдуманнопов, Н. А. (2021). МАЛОГАБАРИТНАЯ ЗЕРНОСУШИЛКА ДЛЯ ФЕРМЕРСКИХ ХОЗЯЙСТВ. Universum: технические науки, (6-1 (87)), 55-58.

4. Отаханов, Б. С. (2013). Расчет длины пути резания. Europaische Fachhochschule.,(4), 126.

5. Отаханов, Б. С., Замонов, Ж. Р., Тухлиев, Г. А., & Разаков, А. Я. (2014). Совершенствование процесса технологии фрезерования дорожных покрытий. Вестник развития науки и образования, (1), 24-27.

6. Байметов Р.И. О крошении почвы комбинированными орудиями предпосевной обработки // Механизация хлопководства. 1972, № 10. с. 4-5.

7. Отаханов, Б. С., Киргизов, Х. Т., & Хидиров, А. Р. (2015). Определение диаметра поперечного сечения синусоидально-логарифмического рабочего органа ротационной

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

почвообрабатывающей машины. Современные научные исследования и инновации, (11), 77-83.

8. Otahanov, B., Qidirov, A., & Nuriddinov, B. (2021). MILLING SPEED OPTIMIZATION. Innovative Technologica: Methodical Research Journal, 2(08), 15-27.

9. Тухтакузиев, А. Т., & Отаханов, Б. С. (2005). Траектория движения гибких рабочих органов. Фарғона политехника институти илмий-техника журнали, (2), 132.

10. Otakhanov, B. S. (2013). Opredelenie skorostnogo rezhima. Nauchnoe obozrenie, 2, 61-62.

11. Никифоров М.В., Голубев В.В. Определение критерия качества предпосевной обработки почвы при использовании различных почвообрабатывающих машин // Вестник ФГОУ ВПО «МГАУ имени В.П. Горячкина». 2018. N 6(88). С. 11-16. DOI 10.26897/1728-7936-2018-6-11-16.

12. ГОСТ 10650-2013 Торф. Методы определения степени разложения. М.: Стандартинформ, 2014. 13 с.

13. Otahanov, B. S., Pajziev, G. K., Fajziev, S. G., & Toshpulatov, B. B. (2018). Determination of the thickness of the beater blade when interacting with the rods of topremoving conveyor. Интерактивная наука, (6), 50-53.

14. Вадюнина А.Ф., Корчагина З.А. Методы исследования физических свойств почв. М.: Агропромиздат, 1986. 416 с.

15. Вадюнина А.Ф., Корчагина З.А. Методы определения физических свойств почв и грунтов (в поле и лаборатории). М.: Высшая школа, 1961. 344 с.

16. Голубев В.В. Обоснование коэффициента структурности почвы при возделывании мелкосеменных культур // Проблемы аграрной науки и образования: Сб. науч. тр. Тверь: Тверская ГСХА, 2008. С. 63-65.

17. Otahanov, B. S., Paiziev, G. K., & Khozhiev, B. R. (2014). Varianty vozdeistviia rabochego organa rotatsionnoi mashiny na pochvennye glyby i komki., 2, 75-78. M.: Nauchnaia zhizn.

18. Отаханов, Б. С., & Киргизов, Х. Т. (2014). Обоснование диаметра ротора бесприводного ротационного рыхлителя с гибким рабочим органом. Вестник развития науки и образования, (4), 8-10.

19. Отаханов, Б. С. (2014). ОБЪЕМ СВОБОДНОЙ ВЫГРУЗКИ ПОЧВЕННОЙ ФРЕЗЫ. Вестник развития науки и образования, (4), 11-13.

20. Никифоров М.В., Туманов И.В., Черненко Я.В. Методика и результаты лабораторных исследований выравнивателя почвы // Сб. тр. студентов и молодых ученых «Проблемы и направления развития предприятий АПК: взгляд молодых ученых». Тверь: ТГСХА, 2018. С. 148-150.

21. Отаханов, Б. С., Киргизов, Х. Т., Ашурбеков, Ж. К. У., & Мамажонов, Э. Х. У. (2018). Машина для обмолачивания створок маш ручной сборки. Интерактивная наука, (6 (28)), 50-53.

22. Отаханов Б.С. Обоснование параметров ведомого ротора ротационного бесприводного рыхлителя: дис. ...канд. техн. наук. - Ташкент, 2007. - с. 38-58.

23. Sadirdinovich, O. B., Kadyrovich, P. G., & Bahromjonovna, O. M. (2021). DEVELOPMENT OF STUDENTS'TECHNICAL THINKING ON THE BASIS OF INTERDISCIPLINARY INTEGRATION. Academicia Globe: Inderscience Research, 2(08), 43-47.

24. Otahanov, B. S., Kirgizov, H. T., Ashurbekov, Z. K., & Mamazhonov, E. H. (2018). The machine for trashing flaps of mung bean. Интерактивная наука, (6), 50-53.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

25. Отаханов, Б. С., Умаралиев, Ю. Ю., Тухлиев, Г. А., & Разаков, А. Я. (2013). Кинетическая энергия и скорость гибкого рабочего органа при ударе о комок. Научное обозрение: теория и практика, (2), 63-66.

26. Отаханов, Б. С. (2013). ОПРЕДЕЛЕНИЕ СКОРОСТНОГО РЕЖИМА ОБРАБОТКИ ПОЧВЫ РОТАЦИОННЫМИ МАШИНАМИ. Научное обозрение: теория и практика, (2), 61-62.

27. Отаханов, Б. С., Пайзиев, Г. К., & Хожиев, Б. Р. (2014). Варианты воздействия рабочего органа ротационной машины на почвенные глыбы и комки. Научная жизнь, (2), 75-78.

28. Отаханов, Б. С., Абдуманнопов, Н. А., Жураев, Ж. А. У., & Гиёсов, К. А. У. (2019). Работа на дробления почвенных глыб и комков. Интерактивная наука, (2 (36)), 43-45.

29. Rustamov, R., Xalimov, S., Otaxanov, B. S., Nishonov, F., & Xojiev, B. (2020). International scientific and scientific-technical conference" Collection of scientific works" on improving the machine for harvesting walnuts.

30. Отаханов, Б. С., Нажмиддинова, Ё. Р., Саидмахамадов, Н. М., & Тургунов, Б. (2014). Обоснование формы и параметров гибкого рабочего органа ротационной почвообрабатывающей машины. Научная жизнь, (4), 65-70.

31. Мансуров, М.Т., Отаханов, Б.С., Хожиев, Б.Р., и Нишонов, Ф.А. (2021). Адаптивная конструкция стриппера для уборки арахиса. Международный журнал инновационных анализов и новых технологий , 1 (4), 140-146.

32. Мансуров, М. Т., Отаханов, Б. С., Хожиев, Б. Р., & Нишанов, Ф. А. (2021). *АДАПТИВНАЯ КОНСТРУКЦИЯ ОЧЕСЫВАТЕЛЯ АРАХИСОУБОРОЧНОГО КОМБАЙНА. МЕХАНИКА ВА ТЕХНОЛОГИЯ ИЛМИЙ ЖУРНАЛИ*, (3), 62-68

33. Tolanovich, E. S., Sadirdinovich, O. B., Rustamovich, K. A., & Abdulkhakimovich, A. N. (2021). New Technology for Drying Grain and Bulk Materials. Academic Journal of Digital Economics and Stability, 9, 85-90.

34. Рустамов, Р. М., Отаханов, Б. С., Хожиев, Б. Р., & Нишанов, Ф. А. (2021). УСОВЕРШЕНСТВОВАННАЯ ТЕХНОЛОГИЯ УБОРКИ АРАХИСА. МЕХАНИКА ВА ТЕХНОЛОГИЯ ИЛМИЙ ЖУРНАЛИ, (3), 57.

35. Отаханов, Б. С., П айзиев, Г. К., Файзиев, Ш. Г. У., & Тошпулатов, Б. Б. У. (2018). Определение толщины лопасти битера при взаимодействии с прутками ботвоудаляющего транспортера. Интерактивная наука, (6 (28)), 54-58.

36. Нишонов, Ф. А., Мелибоев, М. Х., & Кидиров, А. Р. (2017). Тягово-сцепные показатели машинно-тракторных агрегатов. Science Time, (1 (37)), 292-296.

37. Пайзиев, Г. К., Файзиев, Ш. Г. У., & Кидиров, А. Р. (2020). Определение толщины лопасти ботвоприжимного битера картофелеуборочных машин. Universum: технические науки, (5-1 (74)), 51-55.

38. Кидиров, А. Агротехнические показатели машинно-тракторного агрегатов. ББК-65.32 я43 И, 665.

39. Отаханов, Б. С., Абдуманнопов, Н. А., Ёкубжонов, Н. Н. У., & Гиёсов, К. А. У. (2019). Оптимизация параметров ведомого ротора бесприводного ротационного рыхлителя. Интерактивная наука, (11 (45)), 49-51.

40. Отаханов, Б. С., Абдуманнопов, Н. А., Ёкубжонов, Н. Н., & Гиёсов, К. А. Engineering sciences. Интерактивная наука, 49.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

STUDY EVALUATION OF ADHESION BETWEEN POLYMER AND REINFORCING FILLERS

Khalimov Shukhrat Abdurahimovich

- Candidate of Technical Sciences, Associate Professor of the Department of Technological Machines and Equipment, Namangan Engineering and Construction Institute, Namangan,

Republic of Uzbekistan

Nurmuhammadov Ravshan

master's student, Namangan Engineering and Construction Institute, Namangan,

Republic of Uzbekistan

Sadikov Muhammad Akramzhanovich

undergraduate, Namangan Engineering and Construction Institute, Namangan,

Republic of Uzbekistan

Khasanov Mazhidkhan Mukhmudkhanovich

Intern-teacher of the Department of Technological machines and equipment, Namangan Engineering and Construction Institute, Namangan,

Republic of Uzbekistan

The results of the study composite material happen to in article receive discrete unidirectional filament, allowing get the material with raised dempfir abilities and high springy - an toughness characteristic.

It is known that one of the effective methods for increasing the strength of composite polymer materials for high-pressure gas cylinders is their reinforcement with fibrous fillers of different nature and geometric parameters [1].

At the same time, it is especially important to ensure high adhesion in the interfacial layer matrix-filler. Unfortunately, at present, there are practically no methods and instruments for quantitative assessment of the adhesion value in the interfacial layer [2].

In this regard, for an indirect and qualitative assessment of the adhesion of binders and reinforcing fillers, a logarithmic damping decrement was used, which characterizes internal energy losses [3, 4].

The influence of the level of shear strain during bending vibrations of rod specimens on the damping capacity of unidirectional hybrid composite materials (HCM) based on a system of continuous low-modulus and discrete high-modulus fibers was studied. The research results are shown in the table.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

It can be seen from the data in the table that with an increase in the level of cyclic loading, the logarithmic decrement of vibrations of unidirectional glass-carbon-plastics and organic-carbon-plastics based on continuous low-modulus and discrete high-modulus carbon fibers increases, and the nature of the amplitude dependence of the logarithmic decrement of vibrations changes in comparison with unidirectional glass-carbon-plastics and organic-carbon-plastics based on continuous fibers. With an increase in the content of high-modulus carbon fibers, the increase in the logarithmic decrement of vibrations in fiberglass based on discrete carbon fibers is higher compared to a material based on continuous fillers.

Table

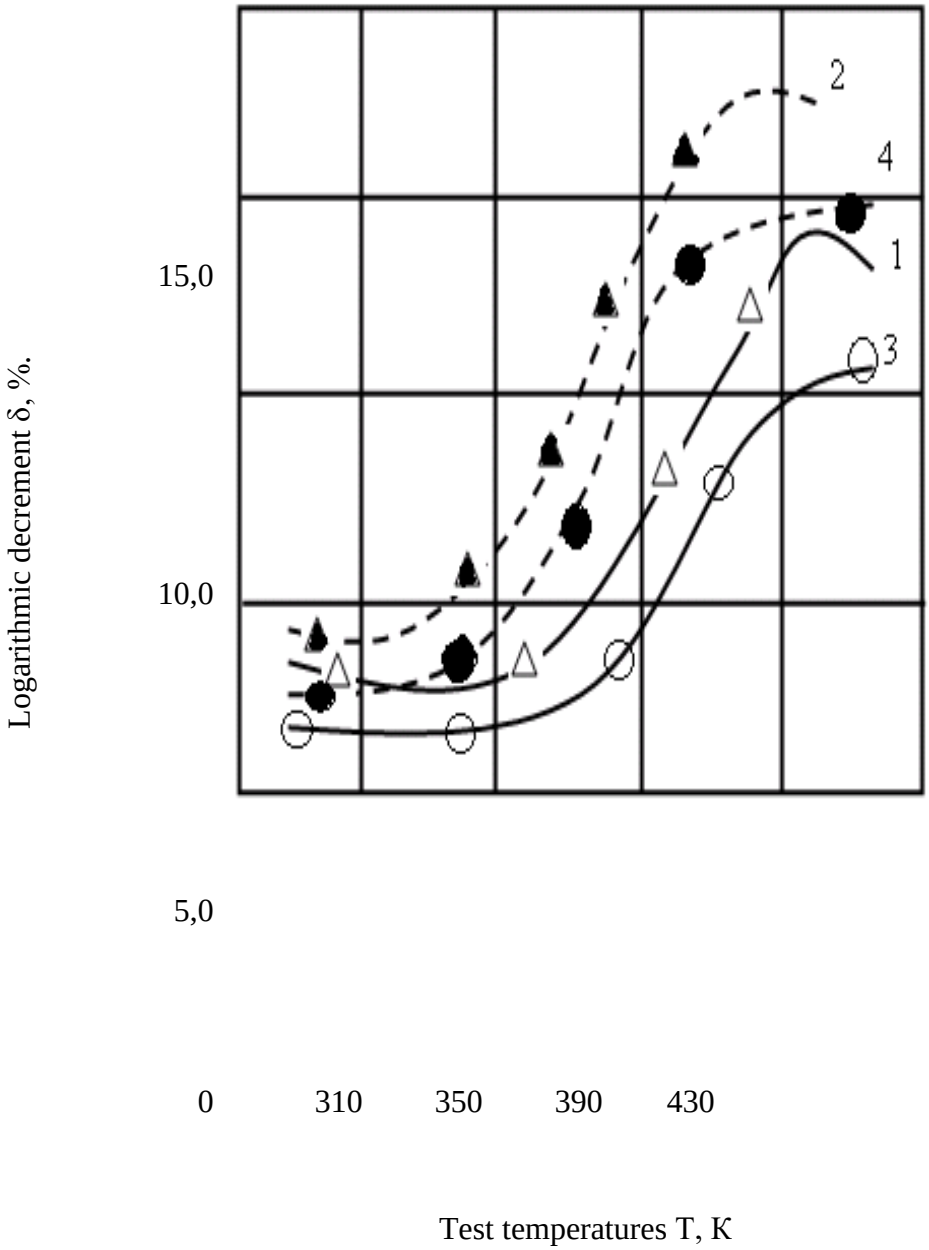
Dependence of the logarithmic decrement of vibrations of unidirectional hybrid composite materials based on the binder EDT-10 and fibers of different modulus with different discreteness on the level of relative deformation

Type and content of reinforcing fibers in the volume of GCM filler, %				Level of relative deformation, Eo 10^4				
				2,5	5,0	7,5	10,0	12,5
low modulus		Highly modular		Logarithmic decrement of fluctuations, %				
Glass IMPS, continuous	80	Carbon УКН-300, l_a=20мм	20	2,8	3,5	3,8	4,4	5,2
	65		35	3,0	3,8	4,6	5,2	5,5
	50		50	2,9	3,2	3,7	4,1	4,7
Organic CBM, continuous	80	Carbon УКН-300, l_a=20мм	20	2,1	2,4	2,9	3,6	3,9
	65		35	2,3	2,7	3,0	3,3	3,7
	50		50	2,5	3,1	3,9	4,7	5,1

In organocarbon fiber-based plastics CBM(ТУ 6-06-31-82-75) and УКН – 300(ТУ 6-06-31-282-80) an increase in the amplitude dependence of the logarithmic decrement of oscillations when creating discreteness of high-modulus fibers is significantly manifested at a higher content of carbon discrete fibers in the volume of the filler. So, in organocarbon fiber with a 50% content of carbon fibers in the volume of the filler, with an increase in the level of relative deformation by 5 times in a composite with l_a/l_p=1,0 (l_a- discrete fiber length, l_p- length of the working part of the sample, l_p=20 мм) logarithmically, the oscillation decrement increases by 1.5 times, and when l_a/l_p=0,25 (l_p=80 мм) the value of the logarithmic decrement of oscillations increases by more than 2 times.

The figure shows the temperature dependences of the logarithmic decrement of vibrations under bending loading of unidirectional glass-carbon plastics and organo-carbon plastics based on continuous low-modulus and high-modulus carbon fibers with different discreteness.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS



Rice. Dependence of the logarithmic decrement of oscillations of unidirectional hybrid composite materials based on the binder ED-16 and a system of multi-modulus fibers with different discreteness on the test temperature: la/lp=1,0; 2- fiberglass based on continuous fibers VMPS (65%) and fibers UKN - 300 (35%) with discreteness la/lp=0.25; 3 - organocarbon-plastic based on continuous SVM fibers (50%) and UKN-300 fibers (50%) with a resolution of la/lp=1.0; 4- organocarbon fiber based on continuous SVM fibers (50%) and UKN-300 fibers (50%) with a resolution of la/lp=0.25.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

As can be seen from the figures, when creating the discreteness of a high-modulus carbon filler in hybrid composites, along with an increase in the logarithmic decrement of vibrations in the region of normal temperatures, an increase in the height of the peak of mechanical losses in the region of the glass transition temperature of the binder is observed. In addition, for hybrid composites containing a discrete high-modulus phase, an increase in the slope of the curves of the temperature dependence of the logarithmic decrement and an expansion of the temperature region of the relaxation peak of mechanical losses are observed.

This is apparently due to an increase in the viscoelasticity of composite materials and their deformability with an increase in the degree of discreteness of a high-modulus rigid carbon filler, as well as an increase in mechanical losses in materials due to shear stresses arising at the end sections of high-modulus discrete fibers under cyclic loading, with an increase in the degree of discreteness of high-modulus carbon fillers. fibers in unidirectional hybrid composites, the properties of the polymer matrix, less heat-resistant low-modulus fibers, begin to manifest themselves to a greater extent in the region of elevated temperatures. The creation of discreteness of high-modulus carbon fibers leads to a decrease in thermal stresses in fiberglass at elevated temperatures, due to the difference in the coefficients of linear thermal expansion of the reinforcing fillers.

Such fibers are cotton fluffs (l=0.5 - 2 mm) and linters (l=1-5 mm), as well as waste from alkali processing facilities (l=5 - 30 mm). With the use of these discrete fibrous fillers, it is possible to reduce the content of the main continuous glass and carbon fibers, thereby not only reducing the cost of reinforced epoxy and furanoepoxy composite materials, but also reducing their own entire manufactured products from them due to the low density of such GCMs.

References:

1. Norkulov, A. A., & Khalimov, S. A. (2011). Features of the forming of the viscoelastic and strength properties of reinforced epoxy heterocomposites for high-pressure gas cylinders. *International Polymer Science and Technology*, *38*(6), 61-63.
2. Халимов, Ш., & Норкулов, А. А. (2008). Исследование прочностных свойств армированных эпоксидных гетерокомпозитов для газовых баллонов высокого давления. *Узбекский науч. тех. и производ. журнал" Композиционные материалы"-Ташкент*, (3), 25-27.
3. Норкулов, А. А., & Халимов, Ш. А. (2010). Особенности формования вязкоупругих и прочностных свойств армированных эпоксидных гетерокомпозитов для газовых баллонов высокого давления. *Пластические массы*, (2), 45-47.
4. Норкулов, А. А., & Халимов, Ш. А. (2010). Исследования вязкоупругих и прочностных свойств армированных эпоксидных гетерокомпозитов для газовых баллонов высокого давления. *Пластические массы*, (4), 43-45.
5. Халимов, Ш., & Джумабаев, А. Б. (2008). Исследование вязкоупругих и прочностных свойств армированных эпоксидных гетерокомпозитов при разных температурах. *Узбекский науч.-тех. и производ. журнал «Композиционные материалы*, (4), 11.
6. Халимов, Ш. А., Каримов, Б. Ю., & Абдурахимова, Г. Ш. (2017). Исследование прочностных свойств композиционных полимерных материалов для газовых баллонов. *Научное знание современности*, (4), 368-372

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

7. Халимов, Ш. А., Хожиев, Б. Р., & Абдурахимова, Г. Ш. (2017). Исследования физико-механических свойств армированных композционных полимерных материалов при разных температурах. *Научное знание современности*, (4), 373-378.
8. Дадаханов, Н. К., & Хасанов, М. (2021). Методика проведения исследований на приборах для изучения процесса изнашивания. Universum: технические науки, (4-2 (85)), 69-73.
9. Dadaxanov, N. K. (2020). Ҳар ҳил материалларнинг ейилиш жараёнини ўрганувчи қурилма. Acta of Turin Polytechnic University in Tashkent, 10(4), 9.
10. Отаханов, Б. С., Пайзиев, Г. К., & Хожиев, Б. Р. (2014). Варианты воздействия рабочего органа ротационной машины на почвенные глыбы и комки. Научная жизнь, (2), 75-78.
11. Rustamov, R., Xalimov, S., Otaxanov, B. S., Nishonov, F., & Xojiev, B. (2020). International scientific and scientific-technical conference" Collection of scientific works" on improving the machine for harvesting walnuts.
12. Мелибаев, М., Кидиров, А. Р., Нишонов, Ф. А., & Хожиев, Б. Р. (2018). ОПРЕДЕЛЕНИЕ ГЛУБИНЫ КОЛЕИ И ДЕФОРМАЦИИ ШИНЫ В ЗАВИСИМОСТИ ОТ СЦЕПНОЙ НАГРУЗКИ, ВНУТРЕННЕГО ДАВЛЕНИЯ И РАЗМЕРОВ ШИН ВЕДУЩЕГО КОЛЕСА. Научное знание современности, (5), 61-66.
13. Нишонов, Ф. А., Хожиев, Б. Р., & Қидиров, А. Р. (2018). ДОН МАХСУЛОТЛАРИНИ САҚЛАШ ВА ҚАЙТА ИШЛАШ ТЕХНОЛОГИЯСИ. Научное знание современности, (5), 67-70.
14. Хожиев, Б. Р., Нишонов, Ф. А., & Қидиров, А. Р. (2018). УГЛЕРОДЛИ ЛЕГИРЛАНГАН ПЎЛАТЛАР ҚУЙИШ ТЕХНОЛОГИЯСИ. Научное знание современности, (4), 101-102.
15. Худайбердиев, А. А., & Хожиев, Б. Р. (2017). Энергосберегающая технология проведения процессов нагревания нефтегазоконденсатного сырья и конденсации углеводородных паров. Научное знание современности, (4), 395-400.
16. Худайбердиев, А. А., & Хожиев, Б. Р. (2017). Влияние температуры на плотности нефти, газового конденсата и их смесей. Научное знание современности, (4), 389-394.
17. Киргизов, Х. Т., Саидмахамадов, Н. М., & Хожиев, Б. Р. (2014). Исследование движения частиц почвы по рабочей поверхности сферического диска. Вестник развития науки и образования, (4), 14-19.
18. Mansurov, M. T., Otahanov, B. S., Xojiyev, B. R., & Nishonov, F. A. (2021). Adaptive Peanut Harvester Stripper Design. International Journal of Innovative Analyses and Emerging Technology, 1(4), 140-146.
19. Mansurov, M. T., Otahanov, B. S., & Xojiyev, B. R. (2021). Advanced Peanut Harvesting Technology. International Journal of Innovative Analyses and Emerging Technology, 1(4), 114-118.
20. Mansurov, M. T., Nishonov, F. A., & Xojiev, B. R. (2021). Substantiate the Parameters of the Plug in the" Push-Pull" System. Design Engineering, 11085-11094.
21. Рустамов, Р. М., Отаханов, Б. С., Хожиев, Б. Р., & Нишанов, Ф. А. (2021). УСОВЕРШЕНСТВОВАННАЯ ТЕХНОЛОГИЯ УБОРКИ АРАХИСА. МЕХАНИКА ВА ТЕХНОЛОГИЯ ИЛМИЙ ЖУРНАЛИ, (3), 57.
22. Мансуров, М. Т., Отаханов, Б. С., Хожиев, Б. Р., & Нишанов, Ф. А. (2021). АДАПТИВНАЯ КОНСТРУКЦИЯ ОЧЕСЫВАТЕЛЯ АРАХИСОУБОРОЧНОГО КОМБАЙНА. МЕХАНИКА ВА ТЕХНОЛОГИЯ ИЛМИЙ ЖУРНАЛИ, (3), 62.
23. Отаханов, Б. С., Пайзиев, Г. К., Хожиев, Б. Р., Миркина, Е. Н., & Левченко, С. А. Технические науки. Интерактивная наука, 50.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

24. Дадаханов, Н. К., & Хасанов, М. (2021). Методика проведения исследований на приборах для изучения процесса изнашивания. Universum: технические науки, (4-2 (85)), 69-73.
25. Dadaxanov, N. K. (2020). Ҳар ҳил материалларнинг ейилиш жараёнини ўрганувчи қурилма. Acta of Turin Polytechnic University in Tashkent, 10(4), 9.
26. Нишонов, Ф. А., Мелибоев, М. Х., & Кидиров, А. Р. (2017). Требования к эксплуатационным качествам шин. Science Time, (1 (37)), 287-291.
27. Нишонов, Ф. А., Мелибоев, М. Х., & Кидиров, А. Р. (2017). Тягово-сцепные показатели машинно-тракторных агрегатов. Science Time, (1 (37)), 292-296.
28. Нишонов, Ф. А., Мелибоев, М., Кидиров, А. Р., & Акбаров, А. Н. (2018). Буксование ведущих колес пропашных трехколесных тракторов. Научное знание современности, (4), 98-100.
29. Мелибаев, М., Нишонов, Ф., & Кидиров, А. (2017). Тягово-сцепные показатели машинно-тракторного агрегата. SCIENCE TIME. Общество Науки и творчества.//Международный научный журнал.–Казань, (1), 292-296.
30. Мелибаев, М., Нишонов, Ф. А., & Кидиров, А. Р. (2017). Грузоподъёмность пневматических шин. Научное знание современности, (4), 219-223.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

ROLE OF NATIONAL AND CULTURAL CENTERS OF UZBEKISTAN IN PUBLIC LIFE

Ochilova Nigora Ruzimuratovna

Associate Professor of the Department of Social Sciences

Karshi Engineering and Economic Institute

Abstract: *From the first days of independence, given the multinational nature of Uzbekistan, special attention was paid to strengthening interethnic harmony and solidarity. Also, national-cultural centers are public organizations that serve the national-cultural needs of certain nationalities living in Uzbekistan.*

Keywords: *national cultural centers, national culture, language, customs, traditions, friendship, cooperation, cultural and educational relations, activities of centers*

From the first days of independence, given the multinational nature of Uzbekistan, special attention was paid to strengthening interethnic harmony and solidarity. The policy of the state in this area, the main directions of which are set out in the Constitution of the Republic of Uzbekistan on the basis of universally recognized universal values and principles.

National cultural centers are public organizations that serve the national cultural needs of certain nationalities living in Uzbekistan. National cultural centers voluntarily unite citizens of Uzbekistan interested in studying, preserving and developing the national culture, language, customs, traditions and customs inherent in a particular nation.It is based on the Law of the Republic of Uzbekistan "On non-governmental and non-profit organizations" (April 14, 1999). The charter is registered by the relevant judicial organizations (Ministry of Justice or regional and municipal departments of justice). Carries out its activities directly or through its branches in the territory of the Republic of Uzbekistan.

National Cultural Centers Some of the main national cultural centers living in Uzbekistan were established in 1989 by Koreans, Kazakhs, Jews and Armenians in the regions of the republic. was created in. The real development and prosperity of these centers began after Uzbekistan gained independence. In connection with the acquisition of independence by Uzbekistan, ample opportunities have been created for their effective work. As a result, the number of national cultural centers is growing every year.If in 1992 there were 10 national cultural centers, then in 1995 their number increased to 72, and in 2003 - to 135. They include cultural centers of the republic, regional, city, district cultural centers.

Ensuring the active participation of people of different nationalities living in the Republic of Uzbekistan in the public, spiritual and educational life of the republic is one of the important activities of national cultural centers. It is also aimed at strengthening friendship, cooperation, cultural and educational ties and commonwealth relations with related organizations in foreign countries, the Republican International Cultural Center, relevant ministries, departments, state and public organizations and creative associations. Help is one of the main tasks of the center. To achieve the goals and objectives set out in the Charter, the centers carry out the following activities: music and theater studios, native language, history, writing, literature, folklore, theater and painting, national traditions and crafts, national sports and games. creates study groups and Sunday schools in accordance with the current legislation; national culture, national language; seminars, conferences,

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

round tables, festivals and meetings for the study and promotion of national art and national traditions; choirs and creative groups. The coordination of the activities of national cultural centers is carried out by the Republican International Cultural Center, established by the Decree of the Cabinet of Ministers of the Republic of Uzbekistan dated January 13, 1992.

Decree of the President of the Russian Federation "On measures to further improve interethnic relations and friendly relations with foreign countries", adopted on May 19, 2017, opens up new prospects for organizing national and cultural events in the spirit of the times, expanding cultural and educational ties with foreign countries. countries [1].

The main goal of the further development of national culture is the formation of a harmoniously developed personality and the strengthening of social cohesion through the improvement of the cultural and social sphere.

The following are the main principles for the further development of national culture:

- freedom of creativity, equality in intercultural relations, human rights,

- respect for national and universal values and preservation of cultural diversity;

- ensuring the structure, scientific character and continuity of education in the field of culture and art;

- Achieving publicity and transparency of work on the further development of culture and art;

- to form a mood of intolerance towards ideas that negatively affect the psyche and maturity of a person [2].

The main way to achieve interethnic harmony and solidarity is the development and strengthening of the importance of national and universal values. Bukhara has long been a unique region of ethnic and religious tolerance. Currently, various ethnic groups and religious communities live peacefully in the oasis[3].

In 2002, about 15 thousand Tatars lived in our region, including more than 8 thousand in Bukhara. Glum Gibadullin, chairman of the National Cultural Center, said: “We live and work in peace with Uzbeks, Tajiks, Russians and representatives of other nationalities, like children of one family. We are careful. In achieving these noble goals, we are assisted by regional and city khokimiyats, as well as sponsoring organizations such as Pakhtasanoat JSC[4].

The Turkish National Center was founded on June 27, 1991. Registered by the Department of Justice of the Executive Committee of Bukhara on January 22, 1992. The center is headed by Shakhriev Kamal Suleimanovich.

The center is in contact with the Turkish state. The Turks sought to revive their customs and traditions, national songs and dances. The center celebrates the national holidays of Turkey.

Many young Turks often come to the center to learn about their national traditions.

They learn national songs and dances. The center also cooperates with other national centers in the region. The center is located on Rikova Street in Bukhara.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

One of the national cultural centers of our country, making a worthy contribution to improving interethnic harmony, is the Tajik national cultural center "Orieno".

The center was established in Tashkent on June 8, 1990. In a short time, the Center has done a lot to strengthen our independence and ensure interethnic stability. The main goal of the center is the preservation, development and study of the culture, language and traditions of the Tajik people, as well as the culture of other fraternal peoples [5].

USED LITERATURES:

1. Sh. Mirziyoyev. On measures for the further improvement of interethnic relations and friendly relations with foreign countries. Decree of the President of the Republic of Uzbekistan. Tashkent, May 19, 2017

2. The concept of further development of national culture in the Republic of Uzbekistan. APPENDIX 1 to the Decree of the President of the Republic of Uzbekistan dated November 28, 2018 No. PQ-4038.

3. Kurbonova M. B. Bukhara oasis-land of interethnic tolerance.// Prospects for modernization, innovative development and tolerance. Collection of materials of the Republican scientific conference. Book 3. T., 2010. - B. 5.

1. Akhmedova S. Joys of "Sabantoy - 2002". / Buxoronoma. 2002, July 6, No. 27, - B. 1.

2. Kudratov A. Created Tajik cultural center. / Truth of Bukhara. January 6, 1990

3. Ochilova N. THE MAIN FEATURES OF WESTERN EUROPE MEDIEVAL, MODERN PHILOSOPHY AND PHILOSOPHICAL VIEWS IN THE 9TH-12TH CENTURIES IN CENTRAL ASIA. Journal of Critical Reviews. ISSN-2394-5125 Vol 7, Issue 14, 2020 . Received: 04/09/2020. p-192-199

4. Ochilova N. THE DEVELOPMENT OF THINKING IN STUDENTS IN THE EDUCATIONAL PROCESS. International Engineering Journal For Research & Development. Vol.5 Issue 3 E-ISSN NO:-2349-0721 Impact factor : 6.193 www.iejrd.com 1-4 p

5. Ochilova N.R. HOW TO INFLUENCE YOUR ATTITUDE TO A PERSON. Academy.Scientific methodical magazine. No. 11 (50), 2019 18-21 Russian impact factor: 0.19 ISSN 2412-8236 (Print) ISSN 2542-0755 (Online)

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

Factors Affecting Cattle Milk Productivity.

B. J. Toshpulatov

Agricultural science, The institute of agrotechnology and innovational development, Termez

B. M. Rajabov

The assistant, The institute of agrotechnology and innovational development, Termez

Sh. B. Qurbanov

The assistant, The institute of agrotechnology and innovational development, Termez

Introduction. Cattle breeding is one of the leading branches of animal husbandry, providing the population with meat, dairy products and light industry, leather and other raw materials. 98-99% of milk and 63-65% of meat produced in Uzbekistan are cattle. Each of the cows bred in the country can produce an average of 3,000-3500 kilograms of milk, 200-250 kilograms of meat, 25-30 kilograms of skin and up to 10 tons of organic fertilizer per year. Cattle skin is used to make durable tag leather and other valuable leather raw materials. By-products of cattle slaughter include blood, bones, horns, wool, and so on. At the same time, in China, India, Pakistan and other countries, cattle are used as working animals in plowing, transportation and other agricultural activities. Cattle waste is widely used in agriculture as an organic fertilizer to increase soil fertility.

All of the above products and raw materials are digestible food plants in cattle - raw hay (alfalfa, hay, straw), weeds, silage and haylage, hay beet and cotton-oil industry wastes (shelukha) , kunjara, shrot, etc.). Natural pastures and hayfields are the most nutritious, nutritious and inexpensive fodder for cattle. In the foothills and mountainous regions of Uzbekistan, rich in natural pastures, in the dry hills, in the vast meadows of rivers and seashores, rich breeds of cattle are raised. Sersut and dairy-meat breeds of cattle are bred on collective, company, farm and private farms of adapted irrigated lands. In order to meet the demand of the population for meat and dairy products, it is important to accelerate the development of cattle breeding and increase its productivity.

Cows of different breeds give milk in different amounts and compositions. Some breeds have high milk yields and some have high dry matter content. Cows of different breeds differ in the amount of fat and protein in their milk. The Bushuyev and Swiss breeds bred in Uzbekistan are superior to other breeds (black-and-white, Holstein, red desert). In terms of fat and protein content of milk (4.1% fat, 3.6% protein), the Bushuyev breed ranks first, the Swiss breed (4.0 and 3.5%) second, and the red desert breed (3.8 and 3.4%) - third and black (3.4 and 3.2) last. The composition of cow's milk obtained from the crossbreeding of Angler and Red Denmark of red breeds, American and Austrian selection of brown breeds is positive, the technological properties are high. The fat and protein content of their milk is especially important among breeds. This ratio is 1: 1 in the black-and-white breed, 1: 0.9 in the Kostroma breed; red gorbatov breed - 1: 0.94, Simmental breed - 1: 0.90.

There is little difference in the acidity of the milk between the breeds, ie the difference between the breeds is 4.20. Similarly, casein fractions differ in weight and dispersion of casein micelles.

table-1

Quantity and composition of cow's milk of different breeds,%

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

People	The amount of milk during lactation is kg	Milk content,%				The ratio of protein to grams of fat	One kilogram of milk is nutritious
		Dry matter	Fat	Protein	Sugar		
Qora-ola	4250	12.18	3.42	3,25	4,90	95,0	70,4
Xolmagor	4850	12,53	3,68	3,28	4,95	89,1	753
Qizil cho'l	3396	12,68	3,82	3,48	4,66	91	744
Jersey	3038	15,40	5,87	4,08	4,78	69,5	981
Kostroma	4960	13,09	3,88	5,56	5,12	91,6	77,4
Simmental	3502	12,73	3,89	3,32	4,80	85,3	749
Bushuyev	3200	12,80	4,10	3,60	5,10	87,8	-
Qora-ola	380	11,80	3,40	3,20	5,20	94,1	-
Shvits	3000	13,40	4,00	3,50	5,20	87,5	-

The average diameter of casein micelles is 679 A, which varies from 630 (black) to 748 A (mouse). The mass of casein micelles is on average 132 million. in molecular units from 1.6 (black-and-white) to 171 million. can be up to a molecular unit (mouse)

Colostrum. It differs from ordinary milk in its composition, properties and effects on the body of the calf.

The first cow's milk has a sweeter taste, yellow in color, and after 3-4 days its organoleptic characteristics are similar to normal milk.

Table 2

Chemical composition of cow's milk (according to G.S. Inihov),%

From birth the next milking order	Total protein	Casein	Albumin and globulin	How is the milk?	Fat	Mineral matter lar	Sourness, 0T	Density 0A
1	14,9	5,1	8,4	4,0	6,3	1,01	53	40
2	9,9	4,1	4,8	4,3	5,7	0,96	42	39
3	6,6	3,4	2,3	4,5	5,5	0,83	42	38
4	5,9	4,5	1,7	4,8	5,2	0,87	40	36
5	5,0	3,1	0,8	4,7	4,9	0,82	32	38
10	4,5	3,2	0,6	4,8	4,7	0,80	28	34
15	4,2	3,0	0,5	4,7	4,8	0,77	25	32
20	4,0	3,0	0,6	4,7	4,2	0,71	22	32
25	3,8	2,9	0,4	4,4	4,2	0,77	21	30
30	3,6	2,5	0,5	4,6	3,9	0,77	20	30

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

The yellow color of colostrum is explained by its high content of carotene. Colostrum is thick, elongated, and sometimes granular.

It is characterized by an abundance of albumin and globulin, the amount of which gradually decreases. Albumin, and especially globulin, is involved in the formation of the immune system of young animals. Sometimes the total protein content is 23-24%, including albumin and globulin 20%. Colostrum is much higher in cow's milk because it is a source of energy for the calf. It decreases with each milking and returns to normal by the 30th milking. Milk sugar is low at first and reaches its norm in 3-4 days. The high density and especially high acidity (500 T) of the newborn animal creates a sour environment in the gastrointestinal tract and prevents the development of various unpleasant microorganisms that enter the body.

Colostrum is orange-yellow in color, as it contains a lot of carotene, 3.4-8.1 mg per kg, which is 10-20 times higher than in milk. . Colostrum also contains more vitamins D and A than milk.

Colostrum contains a lot of immune cells, antitoxins, enzymes and hormones, which increase its biological value.

Colostrum has important physiological properties, it is reminiscent of blood in its composition, so the newborn receives the nutrients that it consumes in the mother's womb. Its composition changes from day to day, from milk to milk, during which time the calf gets used to the new conditions and becomes more mature. Globulin is absorbed from the intestine and passed into the blood of calves, which do not yet have immune cells and protect against various bacteria.

Antitoxins, on the other hand, protect against various infectious diseases. Due to the high content of magnesium in colostrum, it accelerates bowel movements, resulting in the ability to excrete primary feces.

The composition of cow's milk depends on the type and level of feeding during the prenatal rest period, its duration (45-60) and fatness.

Colostrum has a sour-salty taste and is difficult to ferment or not fermented at all under the influence of milk enzymes. Therefore, it is not used directly as food or in the production of dairy products. If such cow's milk is added to the milk during the cheese making process, the biochemical processes during the cheese ripening process will be disrupted, and the cheese will be of low quality, so milk for cheese and butter is obtained 7 days after calving. Cow's milk is drunk from the cow's own calf, if the cow gives a lot of milk, it is drunk from her calf, if the cow gives a lot of milk, the rest of her calf is milked from other calves is drunk instead. In recent years, butter is made from cow's milk cream and used in medicine, but it can also be used for diarrhea of calves.

Depending on the individual characteristics of the cows, they begin to produce normal milk after 5-7 days, although the composition and properties of the milk change throughout lactation.

The first month of lactation is characterized by high milk density, high dry matter, high fat and protein content, and slightly low milk sugar.

References:

1.Nosirov U.N., Nosirov U.N. Qoramolchilik. Darslik. Toshkent, “O’zbekiston milliy entiklopediyasi” Davlat ilmiy nashriyoti – 2001 yil.

2.Nosirov U.N. Chorvachilikda klsik va zamonaviy usulllari. O’quv qo’llanma. Toshkent, ToshDAU tahririyat-nashriyoti – 2008 yil.

Ashirov M.E. Sutdor qoramollar selektsiyasi. O’quv qo’llanma. Toshkent, Navro’z – 2017 yil

Maqsudov I., Jo'raev J, Amirov Sh. “Chorvachilik asoslari” “Zarafshon” nashriyoti DK, Samarqand, 2013.

3.Maqsudov I, Amirov Sh.Q. Sutchilik fanidan laboratoriya mashg’ulotlarini o’tkazish uchun uslubiy qo’llanma. Samarqand, 2008.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT,

ENGINEERING AND SOCIAL SCIENCES

ISSN: 2349-7793 Impact Factor: 6.876., Volume: 16 Issue: 05 in May 2022

PROSPECTS FOR THE DEVELOPMENT OF TRUNK DIAGNOSTICS

Mansurov Mukhtorjon Toxirjonovich

Doctor of Technical Sciences, Associate Professor, Namangan Engineering Construction Institute, Namangan, Republic of Uzbekistan

M. Yusupjonova

Master student, Namangan Engineering Construction Institute

Namangan, Republic of Uzbekistan

Annotation: *The article provides a brief analysis of the formation and current status of the main gas pipeline diagnostics. The development of local defect detectors and the scope of their application in industry are shown, examples of the creation of external defect detection scanners for use in capital repairs are given. Data on standard and problematic sections of gas pipelines are provided in terms of the use of in-line fault detection. Depending on the diameter of the gas pipeline and the working pressure, the range of typical fault detection tools is indicated. The problems encountered in the use of modern in-line facilities in gas pipelines, including technical, economic and organizational aspects, are listed.*

Keywords. *Trunk pipe, diagnostics, defect, external defect, stress-deformation, EMAT*

In addition to the detection of in-line faults, the use of ground-based systems for contactless diagnostics is proposed, which allows the detection of spatial condition of pipes, insulation defects, current and magnetization parameters. The capabilities of such tools are demonstrated in terms of efficiency, diagnostic coverage of the entire gas pipeline and year-round performance, which increases the accuracy of the research and allows a rapid assessment of the reliability of the gas pipeline. area to the consumer. It was noted that the use of surface systems for the diagnosis of gas pipelines allows to inspect any sections of main and process gas pipelines at relatively low prices. The scope of their use in the implementation of relevant research and development work can be expanded, including the assessment of stress-strain state.

The concept of development of diagnostic work has been developed, the main purpose of which is to quickly obtain information on the technical condition of the entire gas pipeline, and on this basis to increase efficiency and reduce the cost of capital repairs. Approaches to gas pipeline diagnostics are proposed, including the principle of establishing priority criteria for online inspection of each gas pipeline, automated data processing, diagnostics and repair work online.

Trunk Pipe Diagnostics (MQ) is an integral part of maintenance and repair (TXK and T). However, the organization of diagnostic work in the domestic gas transmission system (GUT) has fundamental features compared to European gas pipelines due to its significant length and performance in areas with severe natural-climatic conditions. From a technological point of view, it should be noted that GUT operates in a single hydraulic mode, a large number of transit gas pipelines of large length (diameter 3-420 thousand km from the Far North to the central part) Features of gas pipeline design solutions it is necessary to highlight unequal sections, sharply curved rods, direct

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

connections, as well as a significant number of gas pipeline networks (about 36 thousand km). , including a single line. All of these factors necessitated the development of the concept of MQ diagnostics and technical solutions for its implementation, taking into account the unity of requirements for the reliability and safe operation of GUT.

The concept of diagnostics and its formation as a system is defined in the industrial program "Integrated system of diagnostics and technical inspection of main gas pipelines in Russia" developed in 1994 on the basis of practical domestic and foreign experience, analysis of research work. ITI and field research. The implementation of the program has allowed the transition from a separate variety of diagnostic work to a complex inspection in the industry, as shown in the diagram in the figure. one.

During the implementation of the program of diagnostic work, new topics were identified on the effectiveness of diagnostics, assessment of the performance of gas pipelines in the presence of defects and determining the service life of gas pipelines. These tasks were mainly implemented in the network program "Diagnostic repair and reliability of main gas pipelines, gas production and processing facilities."

Currently, the fleet of defect detectors includes third-generation devices that use magnetic and ultrasonic principles, including the detection of stress-corrosion cracks. One such device has a magnetic defect detector with a longitudinal magnetization diameter of 1420 mm. Scanners for external faults have also been developed to allow for pipeline diagnostics during major overhauls of gas pipeline sections (Figure 3).

A fleet of modern fault detection devices capable of inspecting standard sections is used to diagnose gas pipelines. However, in-line flaw detection (ITD) capabilities are limited, and the main difficulties in its application are related to the analysis of problem areas (Figure 4).

To assess the condition of the protective coating of the pipes, you should pay attention to the electromagnetic-acoustic technology (EMAT) defect detection devices provided at the bottom and the detection of high-precision defects to determine the geometry of the pipes. Subsequent calculation of stress-strain state (SSS) developed by ROSEN Group (Germany). These defect detectors expand the scope of VTD, but significantly increase the cost of diagnostic tests. The same company has also developed recommendations for selecting the type of fault detectors for diagnosing pipes of different diameters and operating pressures, as shown in the figure.

A separate component of the diagnostics is electrometry aimed at assessing the state of electrochemical protection of soil corrosion activity and predicting the risk of corrosion of individual plots. It should be noted the diversity of electrometric methods, including alternating and direct current, resistance, and electrochemical methods. Gazprom also monitors the condition of pipelines, route sections, analyzes possible erosion processes, examines gas pipelines in a helicopter using laser and thermal imaging systems for trench erosion, leak detection, video recording and analysis. conducts geotechnical diagnostic work to make. condition of protected areas and minimum safe distances [2].

Thus, from a technical point of view, the industry has developed a complex diagnostic system for main gas pipelines, which allows monitoring the status of the GTS.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

At the same time, the concept of developing diagnostic work based on the analysis and analysis of trunk pipelines should be considered in terms of increasing reliability and efficiency. In-line diagnostics has the following main limitations as a basis for testing:

About 40% of the gas pipelines (problem areas) used are not covered by VTD (Figure 4), and about 36,000 km of gas pipelines cannot be inspected by VTD methods;

the standard VTD range is limited by a pressure range of not less than 2 MPa, diameters and wall thickness (Fig. 5);

the use of improved VTDs, such as EMAT, involves costly measures (2-3 times more expensive than standard VTDs).

From an organizational perspective, the rapid link between diagnostics and repair planning is not sufficiently apparent. In practice, according to the results of diagnostics, priority areas for repair are selected, and there are shortcomings in the implementation of diagnostic work for a year or more, which significantly reduces their effectiveness.

Based on the diagnostic work, individual potentially hazardous areas are identified, but the assessment of the reliability of the gas pipeline in general - from the field to the consumer is not carried out.

Inspection of technical condition in transit gas pipelines or gas pipeline corridors is carried out by different executors using different technical means, which leads to errors both in connection of defects to the place of measurement and in their risk assessment.

Experience shows that the formation and evaluation of results (technical report) on the gas pipeline in general takes a long time, and this fact does not allow to get a true picture of the technical situation for the current year and makes planning difficult.

At present, from a technical and economic point of view, in-line diagnostics has reached its limit. In this regard, prospective diagnostic work using underground facilities, in addition to VTD, should be considered.

The concept of diagnostic work development is aimed at improving the level of diagnostics, its planning and reducing the cost of carrying out inspections and overhauls. The main goal of the concept - from the field to the consumer - is to provide knowledge about the reliability of each gas pipeline and to quickly provide information on the technical condition of gas pipelines to plan repairs.

To implement the concept, a new approach to diagnostic work should be applied, in particular:

implementation of work planning based on the principle of inspection of gas pipelines as a whole during one season using high-speed surface complexes and using standard VTD (if possible);

to determine the area and operation of underground facilities and VTD for concrete gas pipelines and to compile a register of diagnostic work under the GTS;

providing a fast link between diagnostics and repair planning based on automated data processing this season;

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

formation of priority criteria

based on the justification of diagnostic and repair work

and the planning of these works should be based on the principle of efficiency (online) and complex analysis.

The implementation of the above work will allow to cover all main and technological gas pipelines, gas pipeline networks and various problem areas with diagnostics, which, in turn, will improve the management system of technical condition and integrity of gas pipelines. GTS.

Thus, the development of a new concept of diagnostic work on gas pipelines will allow the formation of a rapid and economical system of monitoring the technical condition, with the main focus on assessing the reliability and safety of transit gas pipelines and corridors in general. - from the field to the consumer. At the same time, an effective basis for real-time repairs will be created, which will ultimately create conditions for optimizing gas transportation methods.

REFERENCES

1. Харионовский В.В. Диагностика газопроводов: цели и задачи // Газовая промышленность. 1991. № 5. С. 31–33.
2. Салюков В.В., Харионовский В.В. Магистральные газопроводы. Диагностика и управление техническим состоянием. М.: Недра, 2016. 213 с.
3. Методика оценки состояния защитных покрытий капитально отремонтированных, законченных строительством или реконструкцией трубопроводов с применением диагностического комплекса «Орион-3М». М., 2011. 50 с. [Электронный ресурс]. Режим доступа: http://asgink.ru/userfiles/file/Files_trash/Metodika_Orion-3M.PDF (дата обращения: 06.02.2018).
4. Мансуров, М. Т., & Расулов, А. Д. (2016). Теоретическое обоснование параметров выравнивателя-уплотнителя комбинированной машины по системе push-pull для предпосевной обработки почвы. Молодой ученый, (8), 256-259.
5. Mansurov Mukhtorjon Toxirjonovich, Nishonov Farkhodkhon Akhmatkhanovich, & Xojiev Bakhromxon Rakhmatullaevich. (2022). COMBINATION MACHINE FOR HARVESTING NUTS. Conference Zone, 19–21. Retrieved from
6. Mansurov Mukhtorjon Toxirjonovich, & Xojiev Bakhromxon Rakhmatullaevich. (2022). THE RESULTS OF A STUDY ON THE SELECTION OF THE WORKING PART THAT SEPARATES THE NUT PODS FROM THE HUSK. Conference Zone, 14–18. Retrieved from
7. Tuhtakuziev, A., & Mansurov, M. T. (2015). Issledovanie ustojchivosti traktora s orudijami perednej i zadnej naveski protiv bokovogo zanosa. Traktory i sel'hozmashiny,(9), 34-35.
8. Mansurov, M. T., & Nabijanov, M. M. Factors influencing the work of parts and its exclusion methods. In The collection includes scientific-materials of the International conference participants on the theme of “Innovation in mechanical engineering, energy saving technologies and increasing the efficiency of using resources”. Part (Vol. 1, pp. 28-29).
9. Mansurov, M. T., & Yusubjanova, M. Modern methods of diagnostics of main pipelines analysis. In The collection includes scientific-materials of the International conference participants on the theme of “Innovation in mechanical engineering, energy saving technologies and increasing the efficiency of using resources”. Part (Vol. 1, pp. 28-29).

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

10.Тухтакузиев, А., Мансуров, М. Т., & Тошпулатов, Б. У. (2019). ИССЛЕДОВАНИЕ РАВНОМЕРНОСТИ ГЛУБИНЫ ОБРАБОТКИ ПОЧВЫ ПОЧВООБРАБАТЫВАЮЩИМИ МАШИНАМИ. In ВКЛАД УНИВЕРСИТЕТСКОЙ АГРАРНОЙ НАУКИ В ИННОВАЦИОННОЕ РАЗВИТИЕ АГРОПРОМЫШЛЕННОГО КОМПЛЕКСА (pp. 382-387).

11.Отаханов, Б. С., Пайзиев, Г. К., & Хожиев, Б. Р. (2014). Варианты воздействия рабочего органа ротационной машины на почвенные глыбы и комки. Научная жизнь, (2), 75-78.

12.Эргашев, Ш. Т., Отаханов, Б. С., & Абдуманнопов, Н. А. (2021). МАЛОГАБАРИТНАЯ ЗЕРНОСУШИЛКА ДЛЯ ФЕРМЕРСКИХ ХОЗЯЙСТВ. Universum: технические науки, (6-1 (87)), 55-58.

13.Otahanov, B. S., Pajziev, G. K., Fajziev, S. G., & Toshpulatov, B. B. (2018). Determination of the thickness of the beater blade when interacting with the rods of topremoving conveyor. Интерактивная наука, (6), 50-53.

14.Otahanov, B. S., Kirgizov, H. T., Ashurbekov, Z. K., & Mamazhonov, E. H. (2018). The machine for trashing flaps of mung bean. Интерактивная наука, (6), 50-53.

15.Отаханов, Б. С. (2013). Расчет длины пути резания. Europaische Fachhochschule.,(4), 126.

16.Отаханов, Б. С. (2013). ОПРЕДЕЛЕНИЕ СКОРОСТНОГО РЕЖИМА ОБРАБОТКИ ПОЧВЫ РОТАЦИОННЫМИ МАШИНАМИ. Научное обозрение: теория и практика, (2), 61-62.

17.Отаханов, Б. С., Умаралиев, Ю. Ю., Тухлиев, Г. А., & Разаков, А. Я. (2013). Кинетическая энергия и скорость гибкого рабочего органа при ударе о комок. Научное обозрение: теория и практика, (2), 63-66.

18.Rustamov, R., Xalimov, S., Otaxanov, B. S., Nishonov, F., & Xojiev, B. (2020). International scientific and scientific-technical conference" Collection of scientific works" on improving the machine for harvesting walnuts.

19.Мелибаев, М., Кидиров, А. Р., Нишонов, Ф. А., & Хожиев, Б. Р. (2018). ОПРЕДЕЛЕНИЕ ГЛУБИНЫ КОЛЕИ И ДЕФОРМАЦИИ ШИНЫ В ЗАВИСИМОСТИ ОТ СЦЕПНОЙ НАГРУЗКИ, ВНУТРЕННЕГО ДАВЛЕНИЯ И РАЗМЕРОВ ШИН ВЕДУЩЕГО КОЛЕСА. Научное знание современности, (5), 61-66.

20.Нишонов, Ф. А., Хожиев, Б. Р., & Қидиров, А. Р. (2018). ДОН МАХСУЛОТЛАРИНИ САҚЛАШ ВА ҚАЙТА ИШЛАШ ТЕХНОЛОГИЯСИ. Научное знание современности, (5), 67-70.

21.Хожиев, Б. Р., Нишонов, Ф. А., & Қидиров, А. Р. (2018). УГЛЕРОДЛИ ЛЕГИРЛАНГАН ПЎЛАТЛАР ҚУЙИШ ТЕХНОЛОГИЯСИ. Научное знание современности, (4), 101-102.

22.Mansurov, M. T., Otahanov, B. S., Xojiyev, B. R., & Nishonov, F. A. (2021). Adaptive Peanut Harvester Stripper Design. International Journal of Innovative Analyses and Emerging Technology, 1(4), 140-146.

23.Mansurov, M. T., Otahanov, B. S., & Xojiyev, B. R. (2021). Advanced Peanut Harvesting Technology. International Journal of Innovative Analyses and Emerging Technology, 1(4), 114-118.

24.Mansurov, M. T., Nishonov, F. A., & Xojiev, B. R. (2021). Substantiate the Parameters of the Plug in the" Push-Pull" System. Design Engineering, 11085-11094.

25.Рустамов, Р. М., Отаханов, Б. С., Хожиев, Б. Р., & Нишанов, Ф. А. (2021). УСОВЕРШЕНСТВОВАННАЯ ТЕХНОЛОГИЯ УБОРКИ АРАХИСА. МЕХАНИКА ВА ТЕХНОЛОГИЯ ИЛМИЙ ЖУРНАЛИ, (3), 57-62

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

26.Мансуров, М. Т., Отаханов, Б. С., Хожиев, Б. Р., & Нишанов, Ф. А. (2021). АДАПТИВНАЯ КОНСТРУКЦИЯ ОЧЕСЫВАТЕЛЯ АРАХИСОУБОРОЧНОГО КОМБАЙНА. МЕХАНИКА ВА ТЕХНОЛОГИЯ ИЛМИЙ ЖУРНАЛИ, (3), 62-68

27.Нишонов, Ф. А., Мелибоев, М. Х., & Кидиров, А. Р. (2017). Тягово-сцепные показатели машинно-тракторных агрегатов. Science Time, (1 (37)), 292-296.

28.Нишонов, Ф. А., Мелибоев, М. Х., & Кидиров, А. Р. (2017). Требования к эксплуатационным качествам шин. Science Time, (1 (37)), 287-291.

29.Мелибаев, М., Нишонов, Ф., Расулов, Р. Х., & Норбаева, Д. В. (2019). Напряженно-деформированное состояние шины и загруженность ее элементов. In АВТОМОБИЛИ, ТРАНСПОРТНЫЕ СИСТЕМЫ И ПРОЦЕССЫ: НАСТОЯЩЕЕ, ПРОШЛОЕ, БУДУЩЕЕ (pp. 120-124).

30.Мелибаев, М., Кидиров, А. Р., Нишонов, Ф. А., & Хожиев, Б. Р. (2018). Определение глубины колеи и деформации шины в зависимости от сцепной нагрузки, внутреннего давления и размеров шин ведущего колеса. Научное знание современности, (5), 61-66.

31.Мелибаев, М., & Нишонов, Ф. А. (2017). Определение площади контакта шины с почвой в зависимости от сцепной нагрузки и размера шин и внутреннего давления. Научное знание современности, (3), 227-234..

32.Norkulov, A. A., & Khalimov, S. A. (2011). Features of the forming of the viscoelastic and strength properties of reinforced epoxy heterocomposites for high-pressure gas cylinders. International Polymer Science and Technology, 38(6), 61-63.

33.Халимов, Ш., & Норкулов, А. А. (2008). Исследование прочностных свойств армированных эпоксидных гетерокомпозитов для газовых баллонов высокого давления. Узбекский науч. тех. и производ. журнал" Композиционные материалы"-Ташкент, (3), 25-27.

34.Норкулов, А. А., & Халимов, Ш. А. (2010). Особенности формования вязкоупругих и прочностных свойств армированных эпоксидных гетерокомпозитов для газовых баллонов высокого давления. Пластические массы, (2), 45-47.

35.Норкулов, А. А., & Халимов, Ш. А. (2010). Исследования вязкоупругих и прочностных свойств армированных эпоксидных гетерокомпозитов для газовых баллонов высокого давления. Пластические массы, (4), 43-45.

36.Mansurov, M. T., & Yusubjanova, M. Modern methods of diagnostics of main pipelines analysis. In The collection includes scientific-materials of the International conference participants on the theme of “Innovation in mechanical engineering, energy saving technologies and increasing the efficiency of using resources”. Part (Vol. 1, pp. 28-29).

37.Mansurov, M. T., & Nabijanov, M. M. Factors influencing the work of parts and its exclusion methods. In The collection includes scientific-materials of the International conference participants on the theme of “Innovation in mechanical engineering, energy saving technologies and increasing the efficiency of using resources”. Part (Vol. 1, pp. 28-29).

38.Дадаханов Н. К., Хасанов М. МЕТОДИКА ПРОВЕДЕНИЯ ИССЛЕДОВАНИЙ НА ПРИБОРАХ ДЛЯ ИЗУЧЕНИЯ ПРОЦЕССА ИЗНАШИВАНИЯ //Universum: технические науки. – 2021. – №. 4-2 (85). – С. 69-73.

39.Abdulkhaev H, & Isamutdinov M. (2022). THEORETICAL SUBSTANTIATION OF THE UNIFORMITY OF THE DEPTH OF THE RIPPER STROKE OF THE MACHINE FOR PRE-SOWING TREATMENT OF RIDGES. Conference Zone, 22–26. Retrieved from

40.Sharifjanovna, Q. M. (2021). Perpendicularity of a Straight Line to a Plane and a Plane to a Plane. International Journal of Innovative Analyses and Emerging Technology, 1(5), 70-71.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

41.Abduraximovich, U. M., & Sharifjanovna, Q. M. (2021). Methods of Using Graphic Programs in the Lessons of Descriptive Geometry. International Journal of Discoveries and Innovations in Applied Sciences, 1(6), 149-152.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

DETERMINATION OF THE PRESSING FORCE OF THE HAULM TO THE BARS OF THE HAULM-REMOVING CONVEYOR WITH BEATER BLADES

Payziev Gaibulla Kadirovich

Namangan Engineering Construction Institute, Associate Professor of the Department "Technological Machines and Equipment"

Salokhiddinov Nurmuhammad Satimbaevich

Namangan Engineering Construction Institute, senior lecturer of the department "Technological machines and equipment"

Abstract: *In the article, on the basis of the theoretical studies carried out, the interaction of the blades of the bladed beater with the bars of the haulm-removing conveyor is given, analytical dependencies are derived to determine the length of the beater blade, the force of pressing the tops to the bars of the haulm-removing conveyor.*

To ensure reliable pressing of the tops when tearing off the tubers, it must be pressed by the beater blade against at least two bars (Fig. 1). For this length $l_л$ beater blade must satisfy the following condition

$$l_л > L + d, \qquad (1)$$

where L – center distance of the bars of the conveyor canvases, мм; d – bar diameter, mm.

The step between the bars of the rare-bar leaf toppers of existing potato harvesters for the bar blade on metal tracks is 162.2 mm, and for the bar blade on rubberized belts - 172 mm, and the diameter of the bars is 16 mm. Substituting these values of L and d into (1), we obtain that the length of the beater blade must be at least 188 mm. For further consideration ll accept 250 mm. Taking into account this and the diameter of the shaft, as well as the elements for attaching the blades to it, the diameter of the beater will be $D_б$ = 570 мм.

Width $B_л$ beater blades are taken equal to the width of the conveying web, i.e. 1000 mm

Located above the rare-bar conveyor, the beater blades bend and, due to elastic forces, presses the tops against the web bars (Fig. 2) or the club-tearing roller (Fig. 2). When tearing tubers with a roller, the tops should not be pulled off the bars and from under the beater blades.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

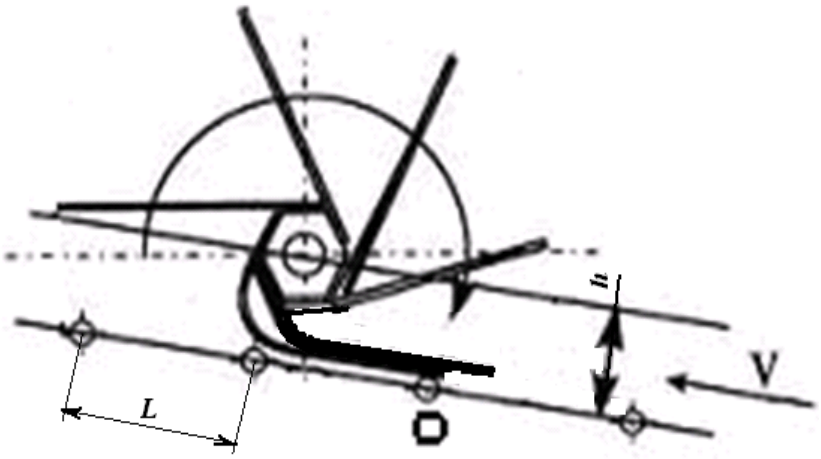


Fig.1. Scheme for determining the length of the beater blade

It is obvious that in order to prevent the haulm from shrinking, the friction force that occurs between the blade and the rod must be greater than the maximum force for the separation of the tuber from the stolon, i.e.

$$F > T_{\max} \qquad (2)$$

where F - frictional force between the rod and the blade

beater, H;

T_{max} - maximum force of separation of the tuber from the stolon, H.

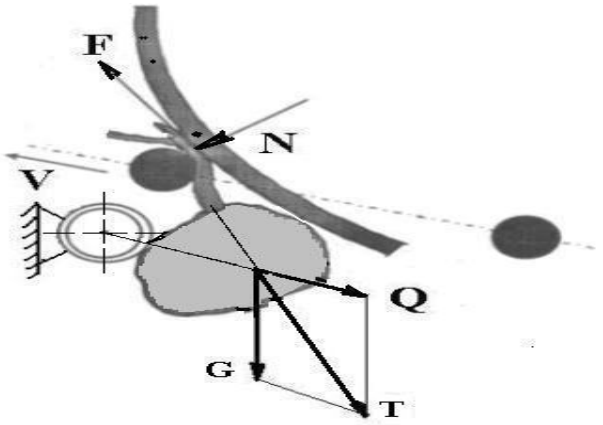


Fig.2. The scheme of separation of the tuber from the tops

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

Potato tubers, as shown by the practice of mechanized potato harvesting, as well as a number of studies, when passing through the separating body, are not completely separated from the tops, after passing up to 20-30% of tubers remain, for the separation of which additional devices are needed in the top removal working bodies.

Table 1.

The results of pulling potato bushes before and after undermining the reservoir

Variety	Humidity, %		Weight of tubers (kg) extracted from the soil	Weight of tubers (kg) not removed from the soil	Percentage of tubers extracted from the soil
	haulm	soil			
Before digging the formation					
Lorch	88,5	18,5	0,737	0,660	52,7
santa	70,3	16,1	0,480	1,073	30,9
After digging the layer					
Lorch	83,7	15,4	0,687	0,270	71,2
santa	52,4	17,2	0,580	0,340	63,0

Therefore, the study of the strength of stolons, as well as haulm stems, is of great interest in substantiating the parameters of the haulm-removing working body.

As can be seen from Table 2, the breaking force of the stolon itself, as well as the force of separation of the stolon from the roots, is greater than the force to separate the tuber from the stolon. Since it is necessary to tear off the tubers from the stolons when removing the tops from the combine, we are more interested in these data. The minimum value of the force of separation of tubers from the stolon was 0.8-1.0 N, and the maximum was 18.0-23.2 N.

table 2

The strength of stolons in relation to various parts of the plant

Variety	An effort, H								
	separation of the tuber from the stolon			detachment of the stolon from the roots			stolon rupture		
	Avg.	Mmak.	mmin.	Avg.	Mmak.	mmin.	Avg.	Mmak.	mmin.
Lorch	110,3	118,0	00,8	111,7	223,0	22,0	114,6	333,5	66,0
santa	111,1	223,2	11,0	112,2	330,0	44,0	220,8	334,0	66,0

Table 3 shows the breaking forces of the haulm stalk by average diameter. However, this is not enough to justify the parameters of the haulm-removing working body. More complete data are

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

needed, where the change in the rupture resistance of the haulm stem depending on the height of the stem section, and hence on the diameter, would be clarified.

Table 3

Breaking force of potato tops by average diameter

Variety	Average diameter, mm	Breaking force, N		
		среднее	maximum	minimum
Acrob	9,8	427	493	349
Lorh	8,4	417	433	349
Victoria	8,1	343	416	271
Cardinal	6,3	235	311	189
Sante	6,9	219	291	170

As is known

$$F = fN, \qquad (3)$$

where f - coefficient of friction of the material of the blade on the haulm;

N - the force of pressing the tops with the beater blade to the bars, N.

Taking into account (3), inequality (2) has the following form

$$fN > T_{\max} \qquad (4)$$

or

$$N > T_{\max} ctg\varphi_л, \qquad (5)$$

where $\varphi_л$ – angle of friction of the material of the blade on the haulm, deg.

In the process of work, several tubers are detached at the same time. With this in mind, expression (5) has the following form

$$N > nT_{\max} ctg\varphi_л, \qquad (5, a)$$

where n - the number of tubers cut at the same time.

The maximum number of tubers that can be pulled off at the same time can be determined by dividing the width of the beater blade by the average potato width, i.e.

$$n_{\max} = B_л / b_к, \qquad (6)$$

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

where $b_к$ - average width of potatoes, m.

Taking into account (6), expression (5, a) will have the following form

$$N > B_л T_{\max} ctg\varphi_л / b_к . \qquad (5,б)$$

Substituting the known values into this expression Вл = 1000 мм, Tmax = 23,2 Н, φл = 300 и bк = 51 мм, we obtain that to ensure the separation of tubers from the tops, the force (N) of pressing it with the blades of the beater to the rods must be at least 800 N.

On the basis of the theoretical studies of the interaction of the blades of the bladed beater with the bars of the haulm-removing conveyor, analytical dependencies were derived to determine the length of the beater blade, the force of pressing the haulm to the bars of the haulm-removing conveyor.

Calculations carried out according to the derived analytical dependencies showed that to ensure reliable pressing of the haulm to the bars of the haulm-removing conveyor and separation of tubers from the haulm, the length of the blade of the bladed beater must be at least 188 mm, the pressing force of the haulm to the bars of the haulm-removing conveyor is -800 N.

References:

1. Пайзиев Г.К. Некоторые свойства ботвы и клубней картофеля // Ўзбекистон қишлоқ хўжалиги журнали. –Ташкент, 2005.-№4. -С.33.
2. Пайзиев, Г. К., Файзиев, Ш. Г. У., & Кидиров, А. Р. (2020). Определение толщины лопасти ботвоприжимного битера картофелеуборочных машин. *Universum: технические науки*, (5-1 (74)), 51-55.
3. Отаханов, Б. С., Пайзиев, Г. К., & Хожиев, Б. Р. (2014). Варианты воздействия рабочего органа ротационной машины на почвенные глыбы и комки. Научная жизнь, (2), 75-78.
4. Rustamov, R., Xalimov, S., Otaxanov, B. S., Nishonov, F., & Xojiev, B. (2020). International scientific and scientific-technical conference" Collection of scientific works" on improving the machine for harvesting walnuts.
5. Mansurov, M. T., Otahanov, B. S., Xojiyev, B. R., & Nishonov, F. A. (2021). Adaptive Peanut Harvester Stripper Design. International Journal of Innovative Analyses and Emerging Technology, 1(4), 140-146.
6. Mansurov, M. T., Otahanov, B. S., & Xojiyev, B. R. (2021). Advanced Peanut Harvesting Technology. International Journal of Innovative Analyses and Emerging Technology, 1(4), 114-118.
7. Рустамов, Р. М., Отаханов, Б. С., Хожиев, Б. Р., & Нишанов, Ф. А. (2021). УСОВЕРШЕНСТВОВАННАЯ ТЕХНОЛОГИЯ УБОРКИ АРАХИСА. МЕХАНИКА ВА ТЕХНОЛОГИЯ ИЛМИЙ ЖУРНАЛИ, (3), 57-62
8. Мансуров, М. Т., Отаханов, Б. С., Хожиев, Б. Р., & Нишанов, Ф. А. (2021). АДАПТИВНАЯ КОНСТРУКЦИЯ ОЧЕСЫВАТЕЛЯ АРАХИСОУБОРОЧНОГО КОМБАЙНА. МЕХАНИКА ВА ТЕХНОЛОГИЯ ИЛМИЙ ЖУРНАЛИ, (3), 62-68

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

9. Кидиров, А. Агротехнические показатели машинно-тракторного агрегатов. ББК-65.32 я43 И, 665.

10. Otahanov, B., Qidirov, A., & Nuriddinov, B. (2021). MILLING SPEED OPTIMIZATION. Innovative Technologica: Methodical Research Journal, 2(08), 15-27.

11. Tolanovich, E. S., Sadirdinovich, O. B., Rustamovich, K. A., & Abdulkhakimovich, A. N. (2021). New Technology for Drying Grain and Bulk Materials. Academic Journal of Digital Economics and Stability, 9, 85-90.

12. Отаханов, Б. С., Киргизов, Х. Т., & Хидиров, А. Р. (2015). Определение диаметра поперечного сечения синусоидально-логарифмического рабочего органа ротационной почвообрабатывающей машины. Современные научные исследования и инновации, (11), 77-83.

13. Мелибаев, М., Кидиров, А. Р., Нишонов, Ф. А., & Хожиев, Б. Р. (2018). ОПРЕДЕЛЕНИЕ ГЛУБИНЫ КОЛЕИ И ДЕФОРМАЦИИ ШИНЫ В ЗАВИСИМОСТИ ОТ СЦЕПНОЙ НАГРУЗКИ, ВНУТРЕННЕГО ДАВЛЕНИЯ И РАЗМЕРОВ ШИН ВЕДУЩЕГО КОЛЕСА. Научное знание современности, (5), 61-66.

14. Киргизов, Х. Т., Саидмахамадов, Н. М., & Хожиев, Б. Р. (2014). Исследование движения частиц почвы по рабочей поверхности сферического диска. Вестник развития науки и образования, (4), 14-19.

15. Нишонов, Ф. А., Мелибоев, М., & Кидиров, А. Р. (2017). Тягово-сцепные показатели машинно-тракторных агрегатов. Science Time, (1), 292-296.

16. Отаханов, Б. С., Пайзиев, Г. К., Хожиев, Б. Р., Миркина, Е. Н., & Левченко, С. А. Технические науки. Интерактивная наука, 50.

17. Отаханов, Б. С., Киргизов, Х. Т., Ашурбеков, Ж. К. У., & Мамажонов, Э. Х. У. (2018). Машина для обмолачивания створок маш ручной сборки. Интерактивная наука, (6 (28)), 50-53.

18. Dadaxanov, N. K. (2020). Ҳар ҳил материалларнинг ейилиш жараёнини ўрганувчи қурилма. Acta of Turin Polytechnic University in Tashkent, 10(4), 9.

19. Нишонов, Ф. А., Мелибоев, М. Х., & Кидиров, А. Р. (2017). Требования к эксплуатационным качествам шин. Science Time, (1 (37)), 287-291.

20. Нишонов, Ф. А., Мелибоев, М. Х., & Кидиров, А. Р. (2017). Тягово-сцепные показатели машинно-тракторных агрегатов. Science Time, (1 (37)), 292-296.

21. Нишонов, Ф. А., Мелибоев, М., Кидиров, А. Р., & Акбаров, А. Н. (2018). Буксование ведущих колес пропашных трехколесных тракторов. Научное знание современности, (4), 98-100.

22. Мелибаев, М., Нишонов, Ф., & Кидиров, А. (2017). Тягово-сцепные показатели машинно-тракторного агрегата. SCIENCE TIME. Общество Науки и творчества.//Международный научный журнал.–Казань, (1), 292-296.

23. Мелибаев, М., Нишонов, Ф. А., & Кидиров, А. Р. (2017). Грузоподъёмность пневматических шин. Научное знание современности, (4), 219-223.

24. Дадаханов, Н. К., & Хасанов, М. (2021). Методика проведения исследований на приборах для изучения процесса изнашивания. Universum: технические науки, (4-2 (85)), 69-73.

25. Нишонов, Ф. А., Хожиев, Б. Р., & Қидиров, А. Р. (2018). ДОН МАХСУЛОТЛАРИНИ САҚЛАШ ВА ҚАЙТА ИШЛАШ ТЕХНОЛОГИЯСИ. Научное знание современности, (5), 67-70.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

26. Хожиев, Б. Р., Нишонов, Ф. А., & Қидиров, А. Р. (2018). УГЛЕРОДЛИ ЛЕГИРЛАНГАН ПЎЛАТЛАР ҚУЙИШ ТЕХНОЛОГИЯСИ. Научное знание современности, (4), 101-102.

27. Mansurov, M. T., Nishonov, F. A., & Xojiev, B. R. (2021). Substantiate the Parameters of the Plug in the" Push-Pull" System. Design Engineering, 11085-11094.

28. Худайбердиев, А. А., & Хожиев, Б. Р. (2017). Энергосберегающая технология проведения процессов нагревания нефтегазоконденсатного сырья и конденсации углеводородных паров. Научное знание современности, (4), 395-400.

29. Худайбердиев, А. А., & Хожиев, Б. Р. (2017). Влияние температуры на плотности нефти, газового конденсата и их смесей. Научное знание современности, (4), 389-394.

30. Эргашев, Ш. Т., Отаханов, Б. С., & Абдуманнопов, Н. А. (2021). МАЛОГАБАРИТНАЯ ЗЕРНОСУШИЛКА ДЛЯ ФЕРМЕРСКИХ ХОЗЯЙСТВ. Universum: технические науки, (6-1 (87)), 55-58.

31. Мелибаев, М., & Абдуманнопов, Н. (2018). (9-ТМЖ-16 гуруҳ талабаси). Ходовая часть тракторов-плодородие почвы-урожай. In " Инновационное научно-образовательное обеспечение агропромышленного комплекса". Материалы 69-ой международной научно-практической конференции. 25 апреля 2018 г.-Рязань, Издательство. Рязанского государственного агротехнологического университета (No. 11, p. 232).

32. Абдуманнопов, Н. А. (2018). Модернизация кольцевой печи для обжига строительного кирпича. Научное знание современности, (12), 25-29.

33. Бойбобоев, Н. Г., Хамракулов, А. К., & Хамзаев, А. А. (2016). АНАЛИЗ НОВОГО НАПРАВЛЕНИЯ СОВЕРШЕНСТВОВАНИЯ КОНСТРУКЦИИ ЭЛЕВАТОРОВ КОРНЕКЛУБНЕУБОРОЧНЫХ КОМБАЙНОВ. Science Time, (2 (26)), 63-69.

34. Салохиддинов, Н. С., & Рустамов, Р. М. (2020). ОБОСНОВАНИЕ ТЕХНОЛОГИЧЕСКОЙ СХЕМЫ КАРТОФЕЛЕКОПАТЕЛЯ-ПОГРУЗЧИКА КП-2. In АКТУАЛЬНЫЕ ВОПРОСЫ СОВЕРШЕНСТВОВАНИЯ ТЕХНИЧЕСКОЙ ЭКСПЛУАТАЦИИ МОБИЛЬНОЙ ТЕХНИКИ (pp. 258-263).

35. Рустамов, Р. М., & Салохиддинов, Н. С. (2021). ВЛИЯНИЕ РАЗМЕРА КЛУБНЯ НА ДВИЖЕНИЕ ЕГО В ПОДЪЁМНОМ ЦЕНТРОБЕЖНО-СЕПАРИРУЮЩЕМ ПРУТКОВОМ ЭЛЕВАТОРЕ. МЕХАНИКА ВА ТЕХНОЛОГИЯ ИЛМИЙ ЖУРНАЛИ, (1), 53.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

ISSN: 2349-7793 Impact Factor: 6.876., Volume: 16 Issue: 05 in May 2022

INVESTIGATION OF STABLE MOVEMENT OF THE IMPROVED CHISEL CULTIVATOR AT THE SPECIFIED PROCESSING DEPTH

Mansurov Mukhtorjon Toxirjonovich

Doctor of Technical Sciences, Associate Professor, Namangan Engineering Construction Institute, Namangan, Republic of Uzbekistan

B.U.Toshpulatov

PhD, Namangan Engineering Construction Institute

Namangan, Republic of Uzbekistan

Annotation: *In order to improve the quality of work and reduce energy consumption, an analytical expression is given, taking into account the factors that affect the performance of the improved chisel cultivator at a certain depth of cultivation and stable movement at this depth. The analysis of the obtained expression showed that the operation of the improved chisel cultivator at a set depth and stable movement at this depth is mainly provided by changing the vertical distance N_1 from its base plane to the lower hanging points.*

Keywords: *improved chisel-cultivator, processing depth, stable movement, softening claw, curved claw, lower hanging point, upper hanging point, traction resistance, working speed, open cutting conditions, closed cutting conditions.*

ChKU-4 and ChK-3.0 chisel cultivators are widely used in pre-sowing tillage in all regions of the country [1-3]. However, these chisel cultivators have been produced for a long time without any significant changes. For this reason, they do not meet modern requirements, such as efficient tillage of the soil, material and energy-intensive, and in many cases do not cultivate the soil to the required level in a single pass through the field. Based on this, our institute conducted research to increase the performance of chisel cultivators and reduce energy consumption, and on their basis developed an improved chisel cultivator [4-7]. The use of this developed chisel-cultivator improves the quality of tillage and reduces energy consumption for tillage.

It is known that if the depth of tillage is at the required level and its stability is ensured, that is, if the crops are evenly developed and matured and high yields are obtained, otherwise uneven growth and maturation of plants is observed, yield decreases by 12-15%. This has been proven in many studies conducted in our country and in other countries. For this reason, there are strict requirements and restrictions for each tillage machine on the depth of tillage and its deviations (unevenness) [8, 9].

The scheme and parameters of connection of all tillage machines (including plows) to the tractor in the longitudinal-vertical plane are determined mainly on the condition that they sink to the specified depth and ensure a smooth (stable) movement at that depth [10-12].

This article presents the complex results of the research conducted on the basis of the research on the operation of the improved chisel cultivator at a certain depth and to ensure its stable movement at this depth and to determine its overall traction resistance.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

For the improved chisel cultivator to sink to the specified depth and move steadily at this depth, the condition Nu> 0 must be met [2, 3, 8, 10] (where Nu is the total reaction force exerted by the soil on the base wheels of the chisel cultivator). 1-расмда келтирилган схемадан фойдаланиб қуйидагига эга бўлинди:

$$N_y = \sqrt{1+\mu^2} \times$$

$$\times\left\{\left[qBg+(\frac{B}{2a_k}+1)(K_{ю}+E_{ю}V^2)b_{ю}htg\psi_{ю}+\frac{B}{a_k}\eta(K_{ў}+E_{ў}V^2)b_{ў}htg\psi_{ў}\right]\Delta+\right.$$

$$+qBgl_2-\left[(\frac{B}{2a_k}+1)(K_{ю}+E_{ю}V^2)b_{ю}h+\frac{B}{a_k}\eta(K_{ў}+E_{ў}V^2)b_{ў}h\right]\Delta+$$

$$+(\frac{B}{2a_k}+1)(K_{ю}+E_{ю}V^2)b_{ю}h\left\{\left[h_1(ctg\alpha_{ю}+ctg\psi_{ю})-l_1\right]tg\psi_{ю}-H_1\right\}+$$

$$+\frac{B}{a_k}\eta(K_{ў}+E_{ў}V^2)b_{ў}(mh)\left\{\left[L_1+h_2(ctg\alpha_{ў}+ctg\psi_{ў})-l_1\right]tg\psi_{ў}-\left[H_1-h(1-m)\right]\right\}+$$

$$\left.+\frac{B}{a_k}\eta(K_{ў}+E_{ў}V^2)b_{ў}h(1-m)\left\{\left[L_1+l_2+h_3(ctg\alpha_{ў}+ctg\psi_{ў})-l_1\right]tg\psi_{ў}-H_1\right\}\right\}:$$

$$:\Delta-l_T+\mu\{\Delta+H_1-h-0{,}5d_T\}\};\qquad(1)$$

If $\Delta=\dfrac{H_2\sqrt{l_б^2-(H_3+h-H_1)^2}\left(\sqrt{l_б^2-(H_3+h-H_1)^2}-X_B\right)}{(H_2-Z_B)\sqrt{l_б^2-(H_3+h-H_1)^2}-(H_3+h-H_1)X_B}$;

$$E_{ю}=\rho\sin\alpha_{ю}tg(\alpha_{ю}+\varphi_1)(1+\frac{W}{100});$$

$$E_{ў}=\rho\frac{\sin^2\gamma_{ў}[\sin\alpha_{ў}+tg\varphi_1\sin\gamma_{ў}(ctg\gamma_{ў}+\cos\alpha_{ў})]}{ctg\alpha_{ў}-\sin\gamma_{ў}tg\varphi_1}(1+\frac{W}{100});$$

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

μ – improved rolling resistance coefficient of the chisel-cultivator support wheels; q – mass of the improved chisel-cultivator corresponding to the width of each meter of coverage, kg / m; V - coverage width of the improved chisel-cultivator, m; g - acceleration of free fall, m / s^2; $K_{ю}$, $K_{ў}$ – the relative resistance of the soil to the softening and axial claws, respectively, Pa; V - speed of movement, m / s; h - processing depth, m; ē is a coefficient that takes into account the effect of the improved chisel-cultivator on the resistance to traction when working in open cutting conditions; l2 is the horizontal distance from the lower hanging points of the improved chisel cultivator to its center of gravity, m; N1 - vertical distance from the base plane of the improved chisel-cultivator to the lower hanging points, m; N2 is the bottom and top of the improved chisel cultivator

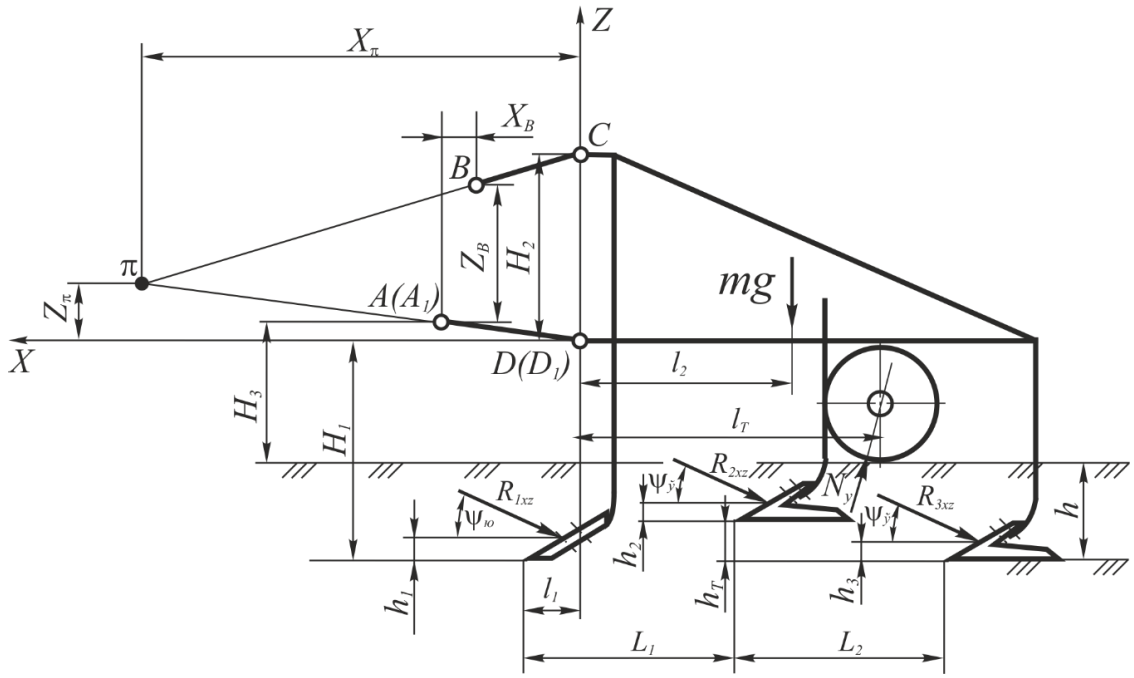


Figure 1. Scheme for determining the total reaction force acting on the support wheels of the improved chisel cultivator

vertical distance between hanging points, m; N3 is the vertical distance from the base plane of the tractor to the fixed hinges A (A1) of the lower traction of the suspension mechanism, m; l1 is the longitudinal distance from the lower hanging points of the improved chisel-cultivator to its working bodies located in the first row, ie to the blade of the softening claws, m; psyu, pso - directional (deflection) angles of the forces R1xz, R2xz, R3xz acting on the softening and axial claws of the taco-milled chisel-cultivator, degrees; R1xz, R2xz, R3xz - equal influences of resistance forces acting on the working bodies located in the first, second and third rows of the chisel-cultivator, respectively, improved, N;

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

L1, L2 - longitudinal distances between the working bodies of the improved chisel-cultivator, m; lT is the longitudinal distance from the lower hanging points of the improved chisel-cultivator to the center of rotation of the base wheels, m; dT is the diameter of the improved chisel-cultivator support wheels, m; lb is the length of the lower traction of the tractor suspension mechanism, m; r is the density of the soil, kg / m3; W - soil moisture,%;

ph1 is the external friction angle of the soil, degrees.

(1) shows that the total reaction force acting on the base wheels of a chisel-cultivator improved by the soil is their location and diameter, the weight of the chisel-cultivator and the point at which it is placed, the parameters of the chisel-cultivator and its working bodies. forces and their directions and set points, depending on the size and parameters of the processing device, the suspension of the chisel-cultivator and the mechanism of suspension of the tractor. However, the size and parameters of the tractor hoisting mechanism and the distance between the lower and upper hanging points of the chisel-cultivator hoisting device are standardized and known to the tractor, the size and parameters of the chisel cultivator and its working bodies Given that the performance of the improved chisel-cultivator sinks to a specified depth and is stable at this depth, the vertical distance from its base plane to the lower hanging points is ensured mainly by changing N1.

To determine the value of N1 that satisfies the condition Nu> 0, a graphical link Nu = f (H1) was constructed according to expression (1) (Fig. 2) bottom suspension

it was determined that the vertical distance to the points should be at least 46.8 cm.

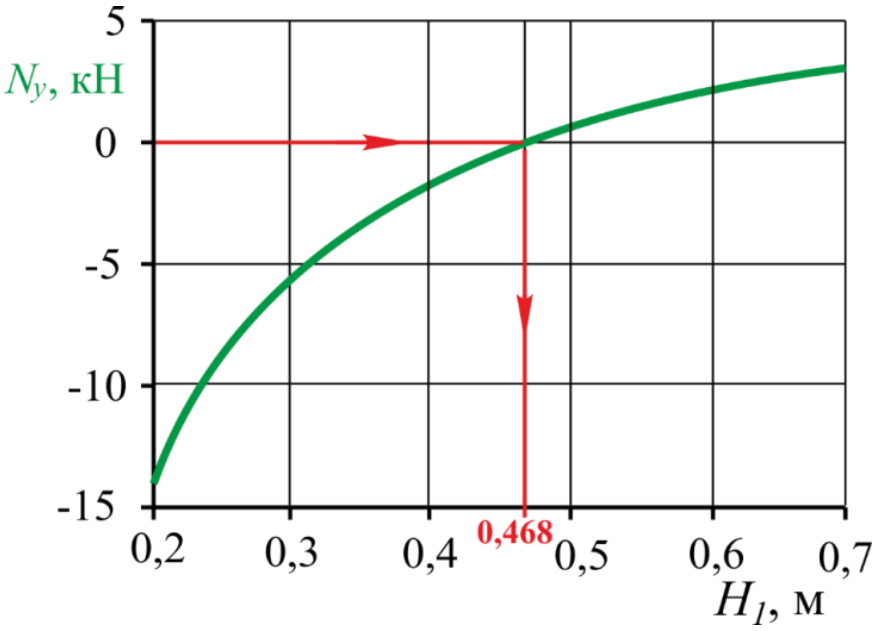


Figure 2. Graph of change of N_y depending on H_1

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

The total resistance of the improved chisel cultivator to traction is equal to the sum of the resistance of the working bodies to traction and rolling of the support wheels and can be determined by the following expression:

$$R_y = (\frac{B}{2a_k} + 1)b_ю h(K_ю + E_ю V^2) + \frac{\eta B}{a_k} b_ў h(K_ў + E_ў V^2) + \mu \frac{N_y}{\sqrt{1+\mu^2}} \qquad (2)$$

Taking into account expression (1), calculations on expression (2) showed that the total tensile strength of the improved chisel cultivator at a speed of 1.7-2.2 m / s is 26.08-26.74 kN.

REFERENCES

1. 2016-2020 йиллар учун қишлоқ хўжалиги экинларини парваришлаш ва маҳсулот етиштириш бўйича намунавий технологик карталар. – Тошкент, 2016. – 136 б.

2. Тўхтақўзиев А., Мансуров М.Т., Тошпўлатов Б.У. Чизел-култиватор-нинг технологик иш жараёнини такомиллаштиришнинг илмий-техник асослари: Монография. – Тошкент: Adast poligraf, 2022. – 122 б.

3. Тўхтақўзиев А., Мансуров М.Т., Набихўжаева Н.Т. Юқори қувватли тракторларга кенг қамровли чизел-култиватор ишлаб чиқшнинг илмий-техник асослари: Монография. – Тошкент: Adast poligraf, 2022. – 98 б.

4. Тўхтақўзиев А., Тошпўлатов Б.У. Такомиллаштирилган чизел-култиватор // “Фан-техника, таълим ва технологиялар: долзарб муаммолар ва ривожланиш тенденциялари” мавзусидаги илмий-амалий анжумани материаллари тўплами (2-қисм). − Жиззах, 2017. – Б.337-339.

5. Тухтакузиев А., Тошпулатов Б.У. Усовершенствованный чизель-культиватор // Механизация и электрификация сельском хозяйстве. – Москва, 2017. – №4. – С. 34-35.

6. Tukhtakuziev A., Toshpulatov B. U. Substantiating the parameters of operating elements of the enhanced chisel-cultivator // European science review.
– Austria, 2017. – №3. – P. 296-297.

7. Ўзбекистон Республикасининг № FAP 01310 фойдали моделга патенти. Тупроққа ишлов берувчи курол / Тўхтақўзиев А., Мансуров М.Т., Тошпўлатов Б.У. / Расмий ахборотнома. – 2018. – №7.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

8. Тухтакузиев, А., Мансуров, М. Т., & Тошпулатов, Б. У. (2019). ИССЛЕДОВАНИЕ РАВНОМЕРНОСТИ ГЛУБИНЫ ОБРАБОТКИ ПОЧВЫ ПОЧВООБРАБАТЫВАЮЩИМИ МАШИНАМИ. In *ВКЛАД УНИВЕРСИТЕТСКОЙ АГРАРНОЙ НАУКИ В ИННОВАЦИОННОЕ РАЗВИТИЕ АГРОПРОМЫШЛЕННОГО КОМПЛЕКСА* (pp. 382-387).

9. Тухтакузиев, А., Мансуров, М., Расулжонов, А., & Каримова, Д. Научные основы обеспечения равномерности глубины работы почвообрабатывающих машин. *Ташкент: Издательство TURON-IQBOL.–2020*.

10. Синеоков Г.Н., Панов И.М. Теория и расчет почвообрабатывающих машин. – Москва: Машиностроение, 1977. – 328 с.

11. Мансуров, М. Т. (2018). Научно-технические решения агрегатирования почвообработывающих машин, состоящих из рабочих частей, навешиваемых спереди и сзади на колесные тракторы. Автореферат дисс.... доктора техн. наук (DSc).

12. Mansurov, M. T., & Nabixo'jaeva, N. T. (2021). SUBSTANTIATE THE COVERAGE WIDTH OF A COMPREHENSIVE CHISEL CULTIVATOR. *ResearchJet Journal of Analysis and Inventions*, *2*(08), 6-11.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

New approaches in teaching listening for ESL and EFL learners

Jurakulova Hurshida
Teacher of FSU

Abstract: *This article describes different interesting and useful ways and innovative methods of teaching listening comprehension skills in a foreign language using a modern approach, and the importance and differences in teaching it in comparison with other language skills. This article may serve as an additional resource for teachers of English in teaching both ESL and EFL students.*

Key words: *listening skills, new teaching methods, listening strategies, individual abilities.*

The reform in the field of education is becoming the most urgent problem, the solution of which will determine our future. So, we all realize that the achievement of the great objectives, such as the renewal of society, efficiency of our reforms, our intention is closely connected, first of all, with problem of training highly qualified personnel, specialists who meet the requirements of the time. Moreover, we are all becoming aware of one more truth. Only a well- educated person is able to value human dignity preserve national awareness, fight self-sacrificing the right to live in a free society, so that our independent state could win a decent and respectable place in the world community.

At the present great importance is attached to the study and teaching of foreign languages. No doubt, it happens not without purpose. Today, the importance of our people's perfect knowledge of foreign languages can scarcely be exaggerated as our country aspires to win a decent place in the world community, because our people see their great future as a life in mutual accord and cooperation with their foreign partners. However, it is necessary to remember always that the study of foreign languages should not be carried out at the expense of oblivion to the mother tongue. It is necessary to provide Uzbek children with all the necessary conditions for the access to this amazing world of foreign languages. We should prepare in our country in the shortest time the methods of intensive foreign languages learning based on our national peculiarities [2,3,4,5].

Nowadays if we look through new textbooks for school pupils we can notice that they are written on the base of new teaching methods especially their authors pay more attention to listening comprehension and speaking, for developing pronunciation, speech and understanding at the same time of speaking or listening.

Listening is very important. Conversations will take place only when we can understand what our interlocutor says; listening is also an important input. Listening ability is crucial for second language learners as its equality important to native speakers too. Listening activities are not common for the students. When they come to university, they cannot adjust their study habits very quickly. They still rely on their eyes instead of their ears to learn English. In fact, reading is different from listening, like writing is different from speech. Furthermore, when English-speaking people speak English, they usually speak at a normal speed. However, it is too fast for non- native learners to follow. Therefore, we should think about the problems of low level students' listening comprehension and intend to find out what can be done to help them improve their listening skills [6,7,8,9].

Listening skills are very important for each person. This is because the listening skills will not only help us in our professional life, but also in our personal life, when we are talking to our friends and relatives. The skills in listening that we have will be able to help us to pick out various subtle that other people give out when they talk will not only be useful, but these might help you to strengthen your friendship. Listening is one of the most important skills we can have. How well we listen has a

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

major impact on our job effectiveness, and on the quality of our relationship with others. In our daily life we can usually listen to somebody or something for following reasons:

- We listen to obtain information
- We listen to understand
- We listen for enjoyment
- We listen to learn

Listening is a skill that we can all benefit from improving. By becoming a better listener, you will improve your productivity, as well as your ability to influence, persuade and negotiate. What's more, you will avoid conflict and misunderstanding. All of these are necessary for workplace success. Good communication skills require a high level of self-awareness. By understanding your personal style of communicating, you will go a long way towards creating good and lasting impressions with others. The way to become a better listener is to practice 'active listening'. This is where you make a conscious effort to hear not only the words that another person is saying but also, more importantly, try to understand the complete message being sent. In order to do this you must pay attention to the other person very carefully. You cannot allow yourself to become distracted by whatever else may be going on around you, or by forming counter arguments that you will make when the other person stops speaking. Nor can you allow yourself to get bored, and lose has focus on what the other person is saying. All of these contribute to a lack of listening and understanding. If you are finding it particularly difficult to concentrate on what someone is saying, try repeating their words mentally as they say them-this will reinforce their message and help you stay focused. To enhance your listening skills, you need to let the other person know that you are listening to what he or she is saying. To understand the importance of this, ask yourself if you have ever been engaged in a conversation when you wondered if the other person was listening to what you were saying. You wonder if your message is getting across, or if it's even worthwhile continuing to speak. It feels like talking to a brick wall and it's something you want to avoid.

Many people talk in different accents, though the same language is being spoken. The change in the accent can make you to lose focus and not listen. Learning the accent or making a very serious attempt to understand the accent will help you to listen effectively.

As we know, any language is learnt in four directions: writing, reading, speaking and listening. One cannot be the best learner without any of them. At first, letters then words after then phrases and sentences create in one's mind.

Using audio cassettes, prepare recordings, two to three minutes in length, of foreign accents; this can be done individually or in pair or groups. The recordings should consist of short interviews with speakers who are not very proficient in the target language. In a country where the target language is not locally spoken, it makes sense to use as interviewees natives of this country, but other accents may be use in addition.

So, there are some methods of different listening strategies suggested by different scholars that can improve the subjects' abilities in listening comprehension. They are the followings:

Alberding (2001) asserted that in order to strengthen students listening comprehension instructors must focus on the process of listening rather than on its product [1]. Teachers should develop students' awareness of the listening process and listening strategies by asking students to think and talk about how they listen in their native language. Teachers should allow students to practice the full repertoire of listening strategies by using authentic listening tasks. For sure the authentic listening assignments are crucial for building students competence in listening ability. So, this is the main component of the researcher's study too. In his investigation it's also mentioned about one-way and two-way communication types. They are described as follows:

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

- **One- way Communication** help students identify the listening goal to obtain specific information to decide whether to continue listening to understand most or the entire message and outline predictable sequences in which information may be presented.
- **In authentic two-way Communication** the listener focuses on the speaker's meaning rather than the speaker's language. The focus shifts to language only when meaning is not clear.

Field J. found that teaching listening skills is one of the most difficult tasks for any ESL teacher. This is because successful listening skills are acquired over time and with lots of practice. He argues that the key to helping students improve their listening skills is to convince them that not understand is OK. Another important point explaining students that they need to listen to English as often as possible, but for short periods of time. As he suggested students should get a film or listen to an English radio station, but not to watch an entire film or listen for two hours. Students should often listen, but they should listen for short periods five to ten minutes. This should happen four or five times a week. Even if they don't understand anything, five to ten minutes is a minor investment. Some teachers find this tactic very useful, and suggest practicing it to their students outside of the lesson. However, for this strategy to work, students must not expect improved understanding too quickly. The brain is capable of amazing things if given time students must have the patience to wait for the results. He believes that if students continue this exercise over two to three months, their listening comprehension skills will greatly improve.

Most importantly, a pleasant and supportive classroom atmosphere plays a vital role in English class because it reduces students' anxiety and inhibition so that they are motivated to achieve listening tasks.

I believe that if several listening strategies are introduced to the students, they will for sure use the most favored and effective one which fits for their own individual abilities and would benefit by doing well in further listening activities.

Reference:

1. Alberding. M. «Implementing Listening strategies in the classroom» 2001. p 196-201.
2. АБДУҲАМИДОВА О. Р., ТОЖИБОЕВА Н. М. ТЕОРИЯ И ПРАКТИКА СОВРЕМЕННОЙ НАУКИ //ТЕОРИЯ И ПРАКТИКА СОВРЕМЕННОЙ НАУКИ Учредители: ООО" Институт управления и социально-экономического развития". – №. 2. – С. 9-10.
3. Kosimova F. K., Abdukhamidova O. R. LINGUOCULTUROLOGICAL ANALYSIS OF THE CONCEPT OF" PREGNANCY" IN UZBEK AND ENGLISH //ПЕРСПЕКТИВНЫЕ ОБЛАСТИ РАЗВИТИЯ НАУКИ И ТЕХНОЛОГИЙ. – 2019. – С. 10-11.
4. Kuchkarova Y., Nuriddinova S. ISSUES OF PERFECT PERSONAL EDUCATION //Galaxy International Interdisciplinary Research Journal. – 2021. – Т. 9. – №. 12. – С. 524-527.
5. Qo'Chqorova Y., Xojimatova S. PEDAGOGIKADA BOLALARNING progress. – 2022. – Т. 3. – №. 2. – С. 874-879.
6. Xasanova Y. Z., Ta'lim tizimi islohotlari va ularning xozirgi kundagi axamiyati. Научно-образовательный электронный журнал. «Образование и наука в XXI веке 2022 г
7. Xasanova Y.Z., Dars jarayonida sahna ko'rinishlaridan foydalanish., Journal of new century innovations OAK e'tirof etgan bazalarda indekslanadigan jurnal. Uzbekistan,24 marts,2022.
8. Jumaniyazova N. A. et al. KITOB TARIXI //Eurasian Journal of Academic Research. – 2021. – Т. 1. – №. 9. – С. 942-944.
9. Jumaniyazova N. A. O. MALAYZIYA TAASSUROTLARI (2002-2003-YILLARDAGI XIZMAT SAFARI ASOSIDA) //Scientific progress. – 2022. – Т. 3. – №. 2. – С. 868-873.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

10. Jumaniyazova N. A. O., Mavlonova S. T. U. CHET TILINI O'RGATISHDA KOMMUNIKATIV PRINSIPLAR HAMDA YANGI PEDAGOGIK TEXNOLOGIYANING ROLI //Central Asian Academic Journal of Scientific Research. – 2022. – Т. 2. – №. 2. – С. 118-122.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

MODERN PEDAGOGICAL AND INFORMATION-COMMUNICATION TEACHING A FOREIGN LANGUAGE USING TECHNOLOGY

Uraimov Sanjarbek,
Head of the Department of Exact and Natural Sciences, Fergana State University
Kuchkarova Yokutkhon,
a teacher at the Department of Exact and Natural Sciences, Fergana State University
Kochkorova Olimakhon,
teacher of the Department of Exact and Natural Sciences, Fergana State University

Annotation. *The following article devoted to the one of the issues of modern teaching-deeping learning foreign languages and using (them) interactive methods in the process of teaching with the aim of forming knowledge, skills and habits and skills of oral speech among the students.*

Keywords: *National model of training, modern pedagogical and information communication technologies, interactive methods, oral speech development, practical English.*

Since the early days of independence, a number of reforms have been implemented in the field of education. The National Model of Brave, Independent, Creative Thinking, Qualified, Educated Specialist, as well as Personally Qualified Personnel, which can ensure the modern development of Uzbekistan in accordance with international standards, reflected in the Law "On Education" and the "National Training Program" has been consistently implemented. is coming. As a logical continuation of the ongoing work, the President of the Republic of Uzbekistan Sh.M.Mirziyoev adopted on May 19, 2021 the resolution No. PP-5117 "On measures to further improve the system of learning foreign languages." This resolution radically improves the system of teaching foreign languages to the younger generation, training specialists fluent in these languages through the introduction of advanced methods of teaching using modern pedagogical and information and communication technologies, and on this basis, their achievements of world civilization, world information resources [1]. The aim is to create conditions and opportunities for their widespread use, development of international cooperation and dialogue.

According to the resolution, using modern pedagogical and information and communication technologies, using advanced methods of teaching a foreign language, we need to prepare the younger generation to speak these languages fluently, pronounce and translate the necessary texts and understand their content. It is necessary to find and use in the educational process the necessary materials for students to speak fluently in a foreign language, as well as to teach students poems, wise sayings, proverbs and riddles in foreign languages, the culture of speaking a foreign language and speech etiquette [2,3,4,5,6].

This, in turn, requires the constant search of foreign language teachers and scholars involved in foreign language teaching, as well as the creation of modern textbooks and manuals, as well as the search for new ways to increase the effectiveness of education, as well as modern teaching. providing methodological complexes and teaching in classrooms equipped with electronic equipment.

Today, it is a vital necessity to increase the interest of students in foreign languages in shaping their worldview.

Studying and observing foreign language textbooks shows that the diversity of topics covered, that is, the wide range of information about the life, customs, national holidays, culture and celebrities of young people in the country where the language is studied, also expands students' worldview. For example, in the text "Great Britain" British life, in the text "Holidays in Great Britain"

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

traditions, national holidays, in the text "Sports in Great Britain" British sports and its achievements are explained with concrete examples. In the process of studying this text, students become acquainted with the way of life and culture of that country and in turn compare the cultures of the two countries. This plays an important role in shaping students 'worldviews. Of course, it is necessary to use electronic exhibitions, videos and various pictures in teaching a foreign language these positive qualities [7,8,9,10].

It is known that teaching foreign languages brings different peoples closer together, strengthens friendly relations between them, as well as serves to enrich their worldview. Developing their speech is also a key direction in shaping students 'worldviews. The ability to use words and phrases and to form independent sentences, small dialogues, memorize songs and poems with their participation also creates a lesson speech situation. The importance of the conversational method in language teaching is immeasurable.

Effective use of modern pedagogical and information and communication technologies in the process of teaching a foreign language further increases the interest of students in the language and leads to a high level of knowledge, skills and abilities in the field of language. Advanced pedagogical technology is a set of psychological and pedagogical guidelines that define a specific set of forms, methods, techniques, spiritual and educational tools of education, which means the pursuit of full achievement of pre-planned and set results of teaching.

The peculiarity of modern pedagogical technologies is that they design and implement a learning process that guarantees the achievement of learning objectives. The goals and objectives of education should be defined in such a way that the general society should ensure that the learning goals and the specific goals and objectives of each stage are interrelated. In the current period of modernization, the use of modern computer and telecommunication technologies in the implementation of improvements in the educational process will dramatically change the content and function of the teacher in the learning process.

The teacher carefully organizes each lesson in order to effectively organize the scientific and practical activities of their students in the classroom, to direct them to a specific goal - to create an independent text, to organize the lesson on the basis of modern pedagogical technologies It is extremely useful to conduct the lesson in the spirit of intergroup competition. The teacher will need to constantly encourage students to express their views on the topic, to positively understand the suggestions and comments made by them, their efforts to demonstrate their talents, to constantly encourage such creative, exploratory activities, to create conditions and opportunities for them.

The centers of pedagogical technology in the education system of Western countries have long been engaged in scientific and practical activities. They are developing advanced methods and tools for the effective use of information technology and other didactic tools in the education system. Modern "lesson-discussion", "lesson-trial", "lesson-point of view", "lesson-communication", "lesson-information", "mental attack" To collect and popularize advanced technological methods, such as "debate-lesson", "critical thinking", "training", "auction", "linguistic discovery" lessons, to introduce these pedagogical technologies directly into the teaching process through the system of teacher retraining and professional development, Efforts are being made to manage student and teacher activities in an interactive way.

- Private programs from European countries include seminars and trainings: "parliamentary debates", psychological tests, etc. In our independent republic, the training of business and entrepreneurial personnel has led to a large-scale development and progress. Thousands of students became participants of the seminar, trainings based on interactive methods.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

- The use of new pedagogical technologies in practical training in foreign language teaching is showing its positive results. The use of new pedagogical methods facilitates the process of teaching not only students but also the teacher.
- If each method is used in its place in solving a specific goal, it is undoubtedly active. Pedagogical technologies are aimed at achieving a predetermined goal based on ensuring a high level of student activity.
- Interactive methods are based on the active, free and independent thinking of each student involved in the learning process. When using these methods, learning becomes a fun activity for the student. When interactive methods are used, students gain the skills and abilities to work independently with the help and collaboration of teachers. Students acquire new knowledge on the basis of scientific research, experiments. The principle of acquiring knowledge through science is followed.
- Participants in the learning process work in small groups. Learning assignments are given to all members of a small group, not to an individual student. Each member of the microgroups tries to contribute to the task. This situation builds a sense of community in the students and increases their initiative. The main form of organization of the educational process is the lesson. At present, various non-traditional forms of teaching are being introduced. Such lessons develop students 'creative abilities, strengthen their mental capacity, broaden their scientific outlook, and develop skills and abilities to absorb every innovation quickly and fully. The use of innovative technologies in the classroom arouses students' interest in scientific research, develops creativity and ingenuity. As a result, the acquired knowledge, skills and abilities are applied in practice, the quality of mastering increases. To do this, the teacher must be competent and plan the lesson correctly according to the content of the topics, to ensure that all students work actively and consciously during the lesson.
- The following interactive methods can be used to reinforce new words given during the lesson:

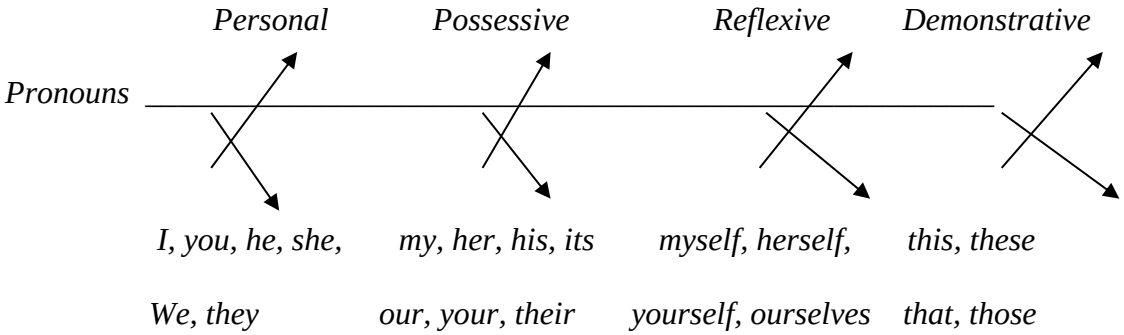
• The teacher moves one student back to the board to the chair. The second student puts it on the board and that student has to write any word on the board on the board or draw a picture of that word. The students sitting on the board with the picture or word he draws try to explain their explanation in the foreign language they are learning to the student sitting behind them. Using the comments given by the students, the student sitting back on the board will have to find out what word is written on the board. As a result of this process, students develop the skills and abilities to write words correctly, pronounce them correctly, speak and listen. For example, if we take the word "boxing," students may have different interpretations of the word.

- *1. It is a sport, in which two fighters 'battle with their fists.*
- *2. They wear heavily padded gloves and fight in the ring.*
- *3. They exercise with a punching ball and punching bag.*
- *4. They train in a special hall.*
- *The word is found using the comments above. The spelling of the word written on the board is then checked. The transcription of the word is taught.*
- *• In order to reinforce the new words given during the lesson, it is possible to play on the example of the house "word sanjiri". A student who can't give an example immediately leaves the house: sport-tennis-swimming-gymnastics-soccer-regby-…*

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

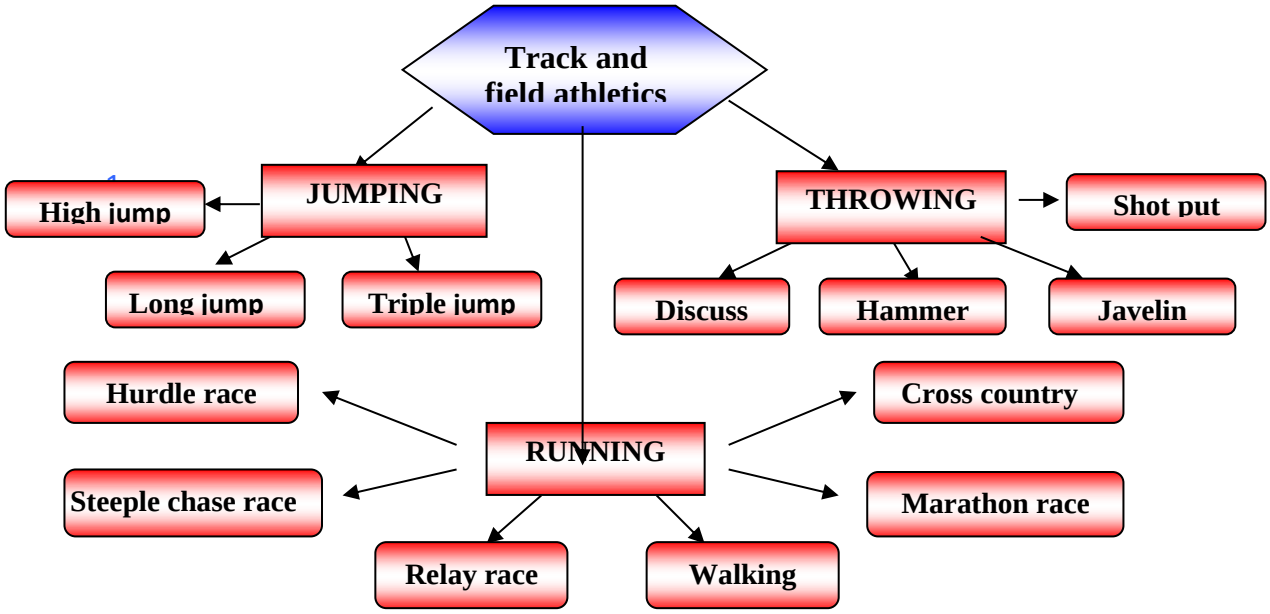
- *• Another interactive method is for students to work in pairs. Students will be given a single text. In the text of each student in the pair, different parts of speech will be omitted. Their task is to ask questions to these omitted parts of speech, to find the omitted words in the text, to make the text complete, and to translate it. Only in this way do students improve their writing, reading, and listening skills, and at the same time learn to correct their mistakes and complete their tasks together. The purpose of this is to reinforce the topic of grammar-related "Types of questions" by asking questions about the omitted words in the text.*
- *• The formation of a system of concepts that serve to reveal the essence of the subject under study, the method of "fifth (sixth, seventh, ...) plus" from the interactive methods; to achieve the emergence of four (five, six, ...) and one non-relevant concept from the resulting system; assign students the task of identifying a concept that is not relevant to the topic and removing it from the system; encourage students to comment on the nature of their actions (in order to reinforce the topic, students should be asked to comment on the concepts that remain in the system and to justify the logical connection between them). For example:*
- *From the text of "Boxing":*
- *1. fists, punches, battle, library, guard*
- *2. punching bag, jog, swim, gloves, blocking*
- *3. amateurs, ring, boxing hall, punching ball, republic*

• When a new grammar topic is announced in a lesson, the teacher should explain it in different ways, such as drawing different diagrams on the board, demonstrating them with actions, comparing them with previous ones, and engaging students in thinking with reinforcing questions. For example, in the "fish skeleton" scheme, the upper part of the "bone" is marked with the problem within the problem, and the lower part is filled with the facts confirming the existence of the problem within the problem.



- • You can use the cluster method to transfer a new topic. This method helps students to delve deeper into a topic, to network their concepts in a coherent way, and to visualize and memorize a new topic by listening to it graphically.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS



From our own experience, in conclusion, we can say that the use of the above-mentioned interactive methods gave good results in the third stage of learning a foreign language.

In short, modern pedagogical technologies expand the method of teaching in foreign languages and improve the quality of the lesson. Only then can the effectiveness of the educational process be achieved.

References

1. Ўзбекистон Республикаси Президенти Ш.М.Мирзиёевнинг 2021-йил 19-майда қабул қилинган «Чет тилларни ўрганиш тизимини янада такомиллаштириш чора-тадбирлари тўғрисида»ги ПҚ-5117-сонли қарори.
2. АБДУҲАМИДОВА О. Р., ТОЖИБОЕВА Н. М. ТЕОРИЯ И ПРАКТИКА СОВРЕМЕННОЙ НАУКИ //ТЕОРИЯ И ПРАКТИКА СОВРЕМЕННОЙ НАУКИ Учредители: ООО" Институт управления и социально-экономического развития". – №. 2. – С. 9-10.
3. Kosimova F. K., Abdukhamidova O. R. LINGUOCULTUROLOGICAL ANALYSIS OF THE CONCEPT OF" PREGNANCY" IN UZBEK AND ENGLISH //ПЕРСПЕКТИВНЫЕ ОБЛАСТИ РАЗВИТИЯ НАУКИ И ТЕХНОЛОГИЙ. – 2019. – С. 10-11.
4. Kuchkarova Y., Nuriddinova S. ISSUES OF PERFECT PERSONAL EDUCATION //Galaxy International Interdisciplinary Research Journal. – 2021. – Т. 9. – №. 12. – С. 524-527.
5. Qo'Chqorova Y., Xojimatova S. PEDAGOGIKADA BOLALARNING progress. – 2022. – Т. 3. – №. 2. – С. 874-879.
6. Xasanova Y. Z., Ta'lim tizimi islohotlari va ularning xozirgi kundagi axamiyati. Научно-образовательный электронный журнал. «Образование и наука в XXI веке 2022 г
7. Xasanova Y.Z., Dars jarayonida sahna ko'rinishlaridan foydalanish., Journal of new century innovations OAK e'tirof etgan bazalarda indekslanadigan jurnal. Uzbekistan,24 marts,2022.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

8. Jumaniyazova N. A. et al. KITOB TARIXI //Eurasian Journal of Academic Research. – 2021. – T. 1. – №. 9. – C. 942-944.
9. Jumaniyazova N. A. O. MALAYZIYA TAASSUROTLARI (2002-2003-YILLARDAGI XIZMAT SAFARI ASOSIDA) //Scientific progress. – 2022. – T. 3. – №. 2. – C. 868-873.
10. Jumaniyazova N. A. O., Mavlonova S. T. U. CHET TILINI O'RGATISHDA KOMMUNIKATIV PRINSIPLAR HAMDA YANGI PEDAGOGIK TEXNOLOGIYANING ROLI //Central Asian Academic Journal of Scientific Research. – 2022. – T. 2. – №. 2. – C. 118-122.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

ISSN: 2349-7793 Impact Factor: 6.876., Volume: 16 Issue: 05 in May 2022

SELF-EDUCATION THROUGH MOBILE APPLICATIONS

Djurayev Iqbol Ilyosovich
Lecturer of Kokand State Pedagogical Institute
Faculty of Physics and Mathematics

Abstract: *In the article we research that Intelligent mobile applications has brought tremendous changes to mobile learning. Open multimedia learning resources are a powerful supplement to traditional printed books. Differentiated teaching materials also give students many choices and stimulate their enthusiasm for learning; rich and easy-to-use online teaching resources have a great influence on traditional teaching resources. Knowledgeable people are no longer the only teachers, and students can follow and choose what they need to learn flexibly according to their needs and weaknesses. Using app to assist learning, teaching can improve learning effects and stimulate students' interest in learning. With the popularity and the continuous development of mobile learning applications, applications have become an important part of our daily lives.*

Key words: *Educational mobile Apps, multimedia, E-Learning, audio-Visual….*

Educational mobile Apps directly target the psychology of the students which helps students to understand and grab the information from a different perspective. The app makes them understand the concepts by giving them challenging tasks, puzzles, and educational games Educational mobile Apps directly target the psychology of the students which helps students to understand and grab the information from a different perspective. The app makes them understand the concepts by giving them challenging tasks, puzzles, and educational games.

A mobile learning app is a standalone software application that is downloaded onto a mobile device and used as an entry point for training content.

Benefits of Mobile Apps in Education - Learning and Innovation go hand in hand. In this Era of Innovation, a lot of things are getting evolved and so is education.

Learning is a continuous process and does not have any end no matter how much you learn or understand there are still things left that you can still explore but the only thing you require is information.

Benefits of Mobile Apps in Education for Students. Access to any information from anywhere at any time makes the learning process convenient and easy. In these changing times, access to information is at the fingertips through mobile phones.

A mobile phone can make a lot of your tasks easy for you and also saves a lot of time. Visiting the library and selecting books, data collection is no more a challenge.

Similarly, the trend in education is changing there is a digitalization wave into education. E-Learning is the new need for the students. E-Learning mobile apps are getting popular day by day and that is due to its uniqueness of making learning fun for students.

We may learn some best advantages of using educational apps and identify the importance of educational mobile in today's world: Educational mobile Apps directly target the psychology of the students which helps students to understand and grab the information from a different perspective. The app makes them understand the concepts by giving them challenging tasks, puzzles, and educational games. The audio-Visual form of education is been liked by most of the students. This newness in the universe of learning makes them excited and eager to learn. 24/7Access: Educational Mobile applications are accessible anywhere anytime. It is not time-bound. Study when you feel to study is the concept it follows.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

Effective parent - student - teacher communication: Educational mobile Apps are also helping teachers to keep appropriate track of student performance and report due to its special automated grading, attendance feature. Not only teachers but parents are also able to connect with teachers easily through an app where they can share the queries and concerns anytime and anywhere. Comprehensive and systematic approach: Education Apps helps students to analyze what they have been taught and what is the source of it which makes them curious to know more but in a systematic way where they know how, when and what to explore. This overall process helps the students to learn practically and not theoretically. Saves time: Students save a lot of time through educational apps. No need to travel so it saves traveling time. Getting references, class notes is easy just download it so it also saves time. Features like instant updates, Portability, unlimited learning, etc. Saves a lot of time. Cost-effective: The Educational apps are cost-effective and you wide range of payment options which allow the student to pay in installments or maybe per class.

The best part about e-learning apps is that they are enabling the development of an overall learning environment, wherein the students are not liable to wait for the opening of schools, availability of books, or teacher's presence. Even the teachers do not have to stay dependent on schools for salaries.

Mobile learning first started in the United States and developed relatively early and matured abroad. It pays more attention to research and can collect more evidence and application examples. At first, Carnegie Mellon University started a research project called Wire Andrew [1], and then, teachers and students on the campus experienced the convenience of wireless learning supported by wireless technology in this research project. Especially in the context of the rapid development of wireless communication technology, mobile learning has developed rapidly, making mobile learning applicable to all areas of life. These include education, especially basic education, higher education, and lifelong learning. The European research project “Next-Generation Mobile Learning” based on vocational training aims to promote work-based learning and solve practical problems. The mobile learning courses of the Human-Computer Interaction Laboratory at the University of California, Berkeley, are suitable for elementary and secondary education. The research content is to improve the effectiveness of classroom communication between teachers and students and the influence of external learning, which shows that foreign research on mobile learning is based on experience and application-based research [2.3].

App is the abbreviation of the word application and refers to third-party applications that can be used on mobile smart terminals. According to the product format of the network and the new multimedia application system, applications can be mainly divided into local applications, page applications, and hybrid applications. It can not only provide users with various entertainment services, such as local services, online shopping, and games but also provide many educational service functions, such as interaction, learning, and sharing [4].

Intelligent mobile terminals have quietly and profoundly affected people’s way of life and changed people’s way of learning. Among them, smartphones have the most profound and extensive impact on human beings. Smart mobile terminal is user centered and is developing in the direction of more intelligent and environmental protection, involving more and more fields. Mobile intelligent terminal can enable students to carry out mobile learning and expand the scope of teaching activities to a broader field. Students can start learning activities anytime and anywhere according to their own needs, can make full use of all kinds of free time to learn, can improve students’ interest in learning, and can use a variety of teaching resources to learn and carry out teaching-related activities [5,6]. In terms of technical operation and implementation, these mobile terminals include multimedia

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

functions, such as audio and video, and are smart tools that support data transmission and information processing capabilities.

Private information is a kind of personal information that has nothing to do with the interests of the group and users do not want others to know. Privacy leakage is to illegally obtain or disclose the user's private information without the user's permission [7]. In the past, mobile phones were people's only communication tools, which only stored personal information such as address books or short messages, and people performed more network activities on PCs. Now, with the rapid development of the mobile Internet, mobile devices represented by mobile phones and tablets are playing an increasingly important role in people's lives. Mobile phones no longer only have the functions of making calls and sending text messages, but have more and more the same functions as PCs, and they also have advantages that PCs cannot match. People are relying more and more on mobile phones for office work and entertainment, so more and more private information is stored in mobile phones [8,9].

According to the time that students use the app and use different learning tasks to learn, so as to judge the basic process of classroom activities and then infer the percentage of available time from the teacher's guidance and students' autonomous learning using the mobile app. In the research of the continuous development and improvement of information technology and the tremendous development of network communications, mobile learning using emerging technologies has a lot of room for development. In the future, mobile learning will pay more attention to human-computer interaction and learning intelligence. With the introduction of "Internet + education," this thinking about the Internet has caused great changes in traditional education. Education pays more attention to students' problem-solving abilities and cultivating their own learning abilities. Teachers are no longer just sources of knowledge, and students are no longer just recipients of knowledge.

Intelligent mobile terminals and their applications have brought tremendous changes to mobile learning. Open multimedia learning resources are a powerful supplement to traditional printed books. Differentiated teaching materials also give students many choices and stimulate their enthusiasm for learning; rich and easy-to-use online teaching resources have a great influence on traditional teaching resources. Knowledgeable people are no longer the only teachers, and students can follow and choose what they need to learn flexibly according to their needs and weaknesses. Using smartphone app to assist learning, teaching can improve learning effects and stimulate students' interest in learning. With the popularity of smartphones and the continuous development of mobile learning applications, smartphone applications have become an important part of our daily lives.

The best app for self study, Free: RefME – Android/iOS/Web, StudyBlue – Android/iOS, Evernote – Android/iOS/Web, Oxford Dictionary – Android/iOS, Dragon Dictation – iOS, GoConqr – Android/iOS/Web, Office Lens – Android/iOS/Windows, myHomework Student Planner – Android/iOS/Windows. ABCmouse.com - Early Learning Academy. Epic! - Unlimited Books for Kids. Mathway - Math Problem Solver.

From the perspective of technology, mobile learning in the future, under the background of the integration of various wireless network technologies, relying on the ubiquitous "ubiquitous network," the communication service objects will gradually expand from people to anything, with stronger human-computer interaction and diversified development of wearable electronic devices. At the same time, mobile terminals will develop in the direction of more intelligent, multiscreen, and ubiquitous applications. Mobile learning will provide more abundant mobile learning resources for learners, and technology will support future schools. From the perspective of education development, after the integration of modern technology into traditional education, all aspects of traditional

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

education are changing. The purpose and focus of education will be more focused on the cultivation of learners' learning ability, which is more in line with learners' own characteristics. Learning is no longer static words, but flexible pictures and real situations. Teachers are no longer the imparters of knowledge. It is the tutor and helper of learning, and learners can find and solve problems actively through the guidance of teachers.

REFERENCES:

1. M. Tentori, L. Escobedo, and G. Balderas, "A smart environment for children with autism," IEEE Pervasive Computing, Evol. 14, no. 2, pp. 42–50, 2015.View at: Publisher Site | Google Scholar
2. K.-L. A. Yau, D. Chieng, J. Qadir, and Q. Ni, "Towards enhancement of communication systems, networks and applications for smart environment," Journal of Ambient Intelligence and Humanized Computing, vol. 10, no. 4, pp. 1271–1273, 2019.View at: Publisher Site | Google Scholar
3. J. Chin, V. Callaghan, and S. B. Allouch, "The internet-of-things: reflections on the past, present and future from a user-centered and smart environment perspective," Journal of Ambient Intelligence and Smart Environments, vol. 11, no. 1, pp. 45–69, 2019.View at: Publisher Site | Google Scholar
4. V. B. M. F. Koy and O. Rodrigues, "Developing smart environment at tourism spots in Jetisharjo RW. 07, Yogyakarta," ARTEKS : Jurnal Teknik Arsitektur, vol. 4, no. 1, pp. 25–32, 2019.View at: Publisher Site | Google Scholar
5. S. L. Lim, P. J. Bentley, N. Kanakam, F. Ishikawa, and S. Honiden, "Investigating country differences in mobile app user behavior and challenges for software engineering," IEEE Transactions on Software Engineering, vol. 41, no. 1, pp. 40–64, 2015.View at: Publisher Site | Google Scholar
6. J. Dahne, C. Lejuez, J. Kustanowitz et al., "Moodivate: a self-help behavioral activation mobile app for utilization in primary care—development and clinical considerations," The International Journal of Psychiatry in Medicine, vol. 52, no. 2, pp. 160–175, 2017.View at: Publisher Site | Google Scholar
7. O. Sert, S. Elik, and E. Baran, "The affordances of mobile-app supported teacher observations for peer feedback," International Journal of Mobile and Blended Learning, vol. 10, no. 2, pp. 36–49, 2018.View at: Google Scholar
8. Y. Wang and M. S. Christiansen, "An investigation of Chinese older adults' self-directed english learning experience using mobile apps," International Journal of Computer-Assisted Language Learning and Teaching, vol. 9, no. 4, pp. 51–71, 2019.View at: Publisher Site | Google Scholar
9. G. Aceto, D. Ciuonzo, A. Montieri, and A. Pescapé, "Multi-classification approaches for classifying mobile app traffic," Journal of Network and Computer Applications, vol. 103, pp. 131–145, 2018.View at: Publisher Site | Google Scholar
10. V. F. Taylor, R. Spolaor, M. Conti, and I. Martinovic, "AppScanner: automatic fingerprinting of smartphone apps from encrypted network traffic," in Proceedings of the 2016 IEEE European Symposium on Security and Privacy (EuroS&P), IEEE, Saarbruecken, Germany, March 2016.View at: Google Scholar
11. G. Aceto, G. Bovenzi, D. Ciuonzo et al., "Characterization and prediction of mobile-app traffic using markov modeling," IEEE Transactions on Network and Service Management, vol. 18, no. 1, pp. 907–925, 2021.View at: Publisher Site | Google Scholar

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

12. K. F. Hashim, F. B. Tan, and A. Rashid, "Adult learners' intention to adopt mobile learning: a motivational perspective," British Journal of Educational Technology, vol. 46, no. 2, pp. 381–390, 2015.View at: Publisher Site | Google Scholar

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT,

ENGINEERING AND SOCIAL SCIENCES

ISSN: 2349-7793 Impact Factor: 6.876., Volume: 16 Issue: 05 in May 2022

DEVELOPMENT OF ARTIFICIAL INTELLIGENCE

Djurayev Iqbol Ilyosovich
Lecturer of Kokand State Pedagogical Institute
Faculty of Physics and Mathematics

Annotation: *In this topic, we are going to provide an essay on Artificial Intelligence. This long essay on Artificial Intelligence will cover more than 1000 words, including Introduction of AI, History of AI, Advantages and disadvantages, Types of AI, Applications of AI, Challenges with AI, and Conclusion. This long essay will be helpful for students and competitive exam aspirants.*

Key words: *Artificial Intelligence, algorithm, software, machine….*

Artificial Intelligence is a combination of two words Artificial and Intelligence, which refers to man-made intelligence. Therefore, when machines are equipped with man-made intelligence to perform intelligent tasks similar to humans, it is known as Artificial Intelligence. It is all about developing intelligent machines that can simulate the human brain and work & behave like human beings.

Artificial Intelligence is a branch of computer science that emphasizes the development of intelligent machines that would think and work like humans.

Artificial Intelligence is categorized in two types based on capabilities and functionalities. Based on capabilities, AI includes Narrow AI (weak AI), General AI, and super AI. Based on functionalities, AI includes Relative Machines, limited memory, theory of mind, self-awareness.

Simply put, AI allows organizations to make better decisions, improving core business processes by increasing both the speed and accuracy of strategic decision-making processes.

Artificial intelligence (AI) is the ability of a computer or a robot controlled by a computer to do tasks that are usually done by humans because they require human intelligence and discernment.

Prominent examples of AI software used in everyday life include voice assistants, image recognition for face unlock in mobile phones, and ML-based financial fraud detection. AI software usually involves just downloading software with AI capabilities from an online store and requires no peripheral devices.

Artificial Intelligence is an approach to make a computer, a robot, or a product to think how smart human think. AI is a study of how human brain think, learn, decide and work, when it tries to solve problems. And finally this study outputs intelligent software systems.

The combination of AI and human intelligence will lead to the development of sophisticated cybersecurity innovations in the future. AI will enable an efficient battle against the rising cyberattacks and crimes. AI has a lot to offer to the transportation and manufacturing sectors.

Modern Artificial Intelligence systems can capture and 'understand' their environment in real time; they can make optimal decisions, based on multiple signals, in milliseconds. With applications ranging from self-driving cars to healthcare, AI is already changing our world.

Artificial intelligence (AI) is a wide-ranging tool that enables people to rethink how we integrate information, analyze data, and use the resulting insights to improve decision making—and already it is transforming every walk of life. In this report, Darrell West and John Allen discuss AI's application across a variety of sectors, address issues in its development, and offer recommendations for getting the most out of AI while still protecting important human values.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

Most people are not very familiar with the concept of artificial intelligence (AI). As an illustration, when 1,500 senior business leaders in the United States in 2017 were asked about AI, only 17 percent said they were familiar with it.[1] A number of them were not sure what it was or how it would affect their particular companies. They understood there was considerable potential for altering business processes, but were not clear how AI could be deployed within their own organizations.

Despite its widespread lack of familiarity, AI is a technology that is transforming every walk of life. It is a wide-ranging tool that enables people to rethink how we integrate information, analyze data, and use the resulting insights to improve decisionmaking. Our hope through this comprehensive overview is to explain AI to an audience of policymakers, opinion leaders, and interested observers, and demonstrate how AI already is altering the world and raising important questions for society, the economy, and governance.

In order to maximize AI benefits, we recommend nine steps for going forward:
Encourage greater data access for researchers without compromising users' personal privacy, invest more government funding in unclassified AI research, promote new models of digital education and AI workforce development so employees have the skills needed in the 21st-century economy, create a federal AI advisory committee to make policy recommendations, engage with state and local officials so they enact effective policies, regulate broad AI principles rather than specific algorithms, take bias complaints seriously so AI does not replicate historic injustice, unfairness, or discrimination in data or algorithms, maintain mechanisms for human oversight and control, and penalize malicious AI behavior and promote cybersecurity.

Although there is no uniformly agreed upon definition, AI generally is thought to refer to "machines that respond to stimulation consistent with traditional responses from humans, given the human capacity for contemplation, judgment and intention."[3] According to researchers Shubhendu and Vijay, these software systems "make decisions which normally require [a] human level of expertise" and help people anticipate problems or deal with issues as they come up.[4] As such, they operate in an intentional, intelligent, and adaptive manner.
Artificial intelligence algorithms are designed to make decisions, often using real-time data. They are unlike passive machines that are capable only of mechanical or predetermined responses. Using sensors, digital data, or remote inputs, they combine information from a variety of different sources, analyze the material instantly, and act on the insights derived from those data. With massive improvements in storage systems, processing speeds, and analytic techniques, they are capable of tremendous sophistication in analysis and decisionmaking.
AI generally is undertaken in conjunction with machine learning and data analytics.[5] Machine learning takes data and looks for underlying trends. If it spots something that is relevant for a practical problem, software designers can take that knowledge and use it to analyze specific issues. All that is required are data that are sufficiently robust that algorithms can discern useful patterns. Data can come in the form of digital information, satellite imagery, visual information, text, or unstructured data.

Artificial intelligence refers to the simulation of human intelligence in a machine that is programmed to think like humans.
Advantages and Disadvantage of Artificial Intelligence.

Advantages of artificial intelligence Disadvantages of artificial intelligence

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

1. It defines a more powerful and more useful computers

1. The implementation cost of AI is very high.

There are several advantages to AI, such as taking on tasks that are too complex for the human mind; completing tasks rapidly compared to humans; reduce errors and defects, and to discover trends and meanings in data. AI has the capacity to make life simpler, easier, and more advanced.
Now, AI is only as good as the data it is trained on. This might effectively mean that it is too premature to speculate about AI as a self-sufficient and self-managing system that collects data on everything to exercise control.

To summarize, the world is on the cusp of revolutionizing many sectors through artificial intelligence and data analytics. There already are significant deployments in finance, national security, health care, criminal justice, transportation, and smart cities that have altered decisionmaking, business models, risk mitigation, and system performance. These developments are generating substantial economic and social benefits. Yet the manner in which AI systems unfold has major implications for society as a whole. It matters how policy issues are addressed, ethical conflicts are reconciled, legal realities are resolved, and how much transparency is required in AI and data analytic solutions.[74] Human choices about software development affect the way in which decisions are made and the manner in which they are integrated into organizational routines. Exactly how these processes are executed need to be better understood because they will have substantial impact on the general public soon, and for the foreseeable future. AI may well be a revolution in human affairs, and become the single most influential human innovation in history.
To better prepare for the future society in which artificial intelligences (AI) will have much more pervasive influence on our lives, a better understanding of the difference between AI and human intelligence is necessary. Human and biological intelligence cannot be separated from the process of self-replication.

REFERENCES:

1. Luke Dormehl, Thinking Machines: The Quest for Artificial Intelligence—and Where It's Taking Us Next (New York: Penguin–TarcherPerigee, 2017).
2. Shubhendu and Vijay, "Applicability of Artificial Intelligence in Different Fields of Life."
3. Portions of this paper draw on Darrell M. West, The Future of Work: Robots, AI, and Automation, Brookings Institution Press, 2018.
4. PriceWaterhouseCoopers, "Sizing the Prize: What's the Real Value of AI for Your Business and How Can You Capitalise?" 2017.
5. Dominic Barton, Jonathan Woetzel, Jeongmin Seong, and Qinzheng Tian, "Artificial Intelligence: Implications for China" (New York: McKinsey Global Institute, April 2017), p. 1.
6. Executive Office of the President, "Preparing for the Future of Artificial Intelligence," October 2016, pp. 30-31.
7. Mark Purdy and Paul Daugherty, "Why Artificial Intelligence is the Future of Growth," Accenture, 2016.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

ISSN: 2349-7793 Impact Factor: 6.876., Volume: 16 Issue: 05 in May 2022

STATEMENT AND STUDY OF A BOUNDARY VALUE PROBLEM FOR A THIRD-ORDER EQUATION OF PARABOLIC-HYPERBOLIC TYPE IN A MIXED PENTAGONAL DOMAIN, WHEN THE SLOPE OF THE CHARACTERISTIC OF THE OPERATOR THE FIRST ORDER IS GREATER THAN ONE

MIRZA MAMAJONOV

Associate professor of Kokand State pedagogical institute

XILOLA SHERMATOVA

Lecturer of Ferghana state university

hilola-1978@mail.ru

Annotation: *In this paper, we pose and study one boundary value problem for a third-order parabolic-hyperbolic equation of the form* $\left(a\frac{\partial}{\partial x}+b\frac{\partial}{\partial y}+c\right)(Lu)=0$ *in the pentagonal region, when the characteristic of the operator* $a\frac{\partial}{\partial x}+b\frac{\partial}{\partial y}+c$ *more than one. The unique solvability of the problem posed is proved using the method of constructing a solution.*

Key words*: Boundary value problem, parabolic-hyperbolic type, unique solvability, solution construction methods, continuous derivatives, boundary conditions, gluing conditions.*

Introduction

It is known that mixed equations of the second order of elliptic-hyperbolic type were initially studied. Fundamental research on such equations began in the 1920s by the Italian mathematician Tricomi [1] and developed by Gellerstedt [2], AV Bitsadze [3, 4], KI Babenko [5], IL Karol [6], FI Frankl [7], MM Smirnov [8], MS Salakhitdinov [9] and others.

Investigations of the equations of elliptic-parabolic and parabolic-hyperbolic types of the second order began in the 50-60s of the last century. In 1959, IM Gel'fand [10] pointed out the need for joint consideration of equations in one part of the region of parabolic, and in the other part, of hyperbolic type. He gives an example related to the movement of a gas in a channel surrounded by a porous medium: in a channel, the movement of a gas is described by a wave equation, outside it - by a diffusion equation.

Then, in the 70-80s of the twentieth century, research began on equations of the third and higher orders of parabolic-hyperbolic type. Boundary value problems for such were posed and studied for the first time by TD Djuraev [11] and his students [12], [13].

Formulation of the problem

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

ISSN: 2349-7793 Impact Factor: 6.876., Volume: 16 Issue: 05 in May 2022

In this work, one boundary value problem is posed and investigated for a third-order parabolic-hyperbolic equation of the form

$\left(a\frac{\partial}{\partial x}+b\frac{\partial}{\partial y}+c\right)(Lu)=0$ in the pentagonal area G of the plane xOy, where

$$Lu=\begin{cases}u_{xx}-u_y, & (x,y)\in G_1,\\ u_{xx}-u_{yy}, & (x,y)\in G_i \quad (i=2),\end{cases}$$

$a,b,c\in R$, $\gamma=\frac{b}{a}$, $1<\gamma<+\infty$, a $G=G_1\cup G_2\cup G_3\cup J_1\cup J_2$, $G_1=\{(x,y)\in R^2: 0<x<1,\ 0<y<1\}$,

$G_2=\{(x,y)\in R^2: -1<y<0,\ -1-y<x<1+y\}$, $G_3=\{(x,y)\in R^2: -1<x<0,\ 0<y<1\}$,

$J_1=\{(x,y)\in R^2: y=0,\ -1<x<1\}$, $J_2=\{(x,y)\in R^2: x=0,\ 0<y<1\}$,

that is G_1- rectangle with vertices at points $A(0;0)$, $B(1;0)$, $B_0(1,1)$, $A_0(0,1)$; G_2- triangle with vertices at points B, $C(0,-1)$, $D(-1,0)$;

G_3- rectangle with vertices at points A, A_0, $D_0(-1,1)$, D;

J_1- open line segment with vertices at points B, D;

J_2- open line segment with vertices at points A, A_0.

Here in this work, since $\gamma=\frac{b}{a}$ and $1<\gamma<+\infty$, then without loss of generality we can assume $a>0$, $b>0$. For equation (1), the following problem is posed:

Problem 1. You want to find a function $u(x,y)$, which 1) is continuous in $\overline{G}$ and in the area $G\setminus J_1\setminus J_2$ has continuous derivatives involved in equation (1), Moreover u_x and u_y continuous in G up to part of the area boundary G specified in the boundary conditions; 2) satisfies Eq. (1) in the region $G\setminus J_1\setminus J_2$ 3) satisfies the following boundary conditions:

$$u(1,y)=\varphi_1(y),\quad 0\le y\le 1, \qquad (2)$$

$$u(-1,y)=\varphi_2(y),\ 0\le y\le 1, \qquad (3)$$

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

$$u_x(-1,y)=\varphi_3(y),\ 0\le y\le 1, \tag{4}$$

$$u|_{BC}=\psi_1(x),\ 0\le x\le 1, \tag{5}$$

$$u|_{DF}=\psi_2(x),\ -1\le x\le -1/2, \tag{6}$$

$$\left.\frac{\partial u}{\partial n}\right|_{BC}=\psi_3(x),\ 0\le x\le 1, \tag{7}$$

$$\left.\frac{\partial u}{\partial n}\right|_{CD}=\psi_4(x),\ -1\le x\le 0 \tag{8}$$

And 4)following gluing conditions:

$$u(x,+0)=u(x,-0)=T(x),\ -1\le x\le 1, \tag{9}$$

$$u_y(x,+0)=u_y(x,-0)=N(x),\ -1\le x\le 1, \tag{10}$$

$$u_{yy}(x,+0)=u_{yy}(x,-0)=M(x),\ -1\le x\le 1, \tag{11}$$

$$u(+0,y)=u(-0,y)=\tau_3(y),\ 0\le y\le 1, \tag{12}$$

$$u_x(+0,y)=u_x(-0,y)=\nu_3(y),\ 0\le y\le 1, \tag{13}$$

$$u_{xx}(+0,y)=u_{xx}(-0,y)=\mu_3(y),\ 0<y<1, \tag{14}$$

where

$$T(x)=\begin{cases}\tau_1(x), & если\ \ 0\le x\le 1,\\ \tau_2(x), & если\ \ -1\le x\le 0;\end{cases}$$

$$N(x)=\begin{cases}\nu_1(x), & если\ \ 0\le x\le 1,\\ \nu_2(x), & если\ \ -1\le x\le 0;\end{cases}$$

$$M(x)=\begin{cases}\mu_1(x), & если\ \ 0<x<1,\\ \mu_2(x), & если\ \ -1<x<0,\end{cases}$$

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

$\varphi_j\left(j=\overline{1,3}\right)\psi_i\left(i=\overline{1,4}\right)$, given sufficiently smooth functions, $\tau_i, \nu_i, \mu_i \ (i=1,2,3)$ - unknown yet sufficiently smooth functions, $n-$ intrinsic normal to a straight line $x+y=0$ or $x-y=1$ and the point F has coordinates $F\left(-1/2,-1/2\right)$

II. Research task

Theorem. IF $\psi_1\in C^3\left[0,1\right]$, $\psi_2\in C^3\left[-1,-1/2\right]$, $\psi_3\in C^2\left[0,1\right]$, $\psi_4\in C^2\left[-1,0\right]$, $\varphi_1\in C^3\left[0,1\right]$, $\varphi_2\in C^3\left[0,1\right]$, $\varphi_3\in C^2\left[0,1\right]$, and the matching conditions are satisfied

$\varphi_1\left(0\right)=\psi_1\left(1\right)$, $\varphi_2\left(0\right)=\psi_2\left(-1\right)$, $\psi_3'\left(0\right)=-\psi_4'\left(0\right)$, then problem-1 admits a unique solution.

Evidence. We prove the theorem by the method of constructing a solution. For this, we rewrite equation (1) in the form

$$u_{1xx}-u_{1y}=\omega_1\left(bx-ay\right)e^{-\frac{c}{b}y},\ \left(x,y\right)\in D_1, \tag{15}$$

$$u_{ixx}-u_{iyy}=\omega_i\left(bx-ay\right)e^{-\frac{c}{b}y},\ \left(x,y\right)\in D_i\quad\left(i=2,3\right), \tag{16}$$

where the notation is introduced

$u\left(x,y\right)=u_i\left(x,y\right),\ \left(x,y\right)\in D_i\ \left(i=\overline{1,3}\right)$, moreover $\omega_i\left(bx-ay\right)\left(i=\overline{1,3}\right)-$ unknown so far sufficiently smooth functions to be determined.Let's look at the area first. We write down the solution to equation (16) $\left(i=2\right)$, satisfying conditions (9) and (10):

$$u_2\left(x,y\right)=\frac{1}{2}\left[T\left(x+y\right)+T\left(x-y\right)\right]+\frac{1}{2}\int\limits_{x-y}^{x+y}N\left(t\right)dt-\frac{1}{2}\int\limits_0^y e^{-\frac{c}{b}\eta}d\eta\int\limits_{x-y+\eta}^{x+y-\eta}\omega_2\left(b\xi-a\eta\right)d\xi\ . \tag{17}$$

Substituting (17) into conditions (7) and (8), after some transformations, we find

$$\omega_2\left(bx-ay\right)=-\sqrt{2}\psi_3'\left(\frac{bx-ay-a}{b-a}\right)e^{\frac{c\left(bx-ay-b\right)}{b\left(b-a\right)}},\ a\le bx-ay\le b,$$

$$\omega_2\left(bx-ay\right)=\sqrt{2}\psi_4'\left(\frac{bx-ay-a}{b+a}\right)e^{-\frac{c\left(bx-ay+b\right)}{b\left(b+a\right)}},\ -b\le bx-ay\le a.$$

These equalities imply $\psi_3'\left(0\right)=-\psi_4'\left(0\right)$.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

Substituting (17) into (5), after some calculations, we have

$$T'(x)+N(x)=\alpha_1(x),\ -1\le x\le 1, \tag{18}$$

where

$$\alpha_1(x)=\psi_1'\left(\frac{x+1}{2}\right)+\int_0^{\frac{x-1}{2}} e^{-\frac{c}{b}\eta}\omega_2\left(bx-(b+a)\eta\right)d\eta \quad .\ \tau_2'(x)+\nu_2(x)=\alpha_1(x),\ -1\le x\le 0. \tag{19}$$

Substituting (17) into (6), after some calculations, we obtain

$$\tau_2'(x)-\nu_2(x)=\delta_1(x),\ -1\le x\le 0, \tag{20}$$

where

$$\delta_1(x)=\psi_2'\left(\frac{x-1}{2}\right)+\int_0^{-\frac{x+1}{2}} e^{-\frac{c}{b}\eta}\omega_2\left(bx+(b-a)\eta\right)d\eta .$$

From (19) and (20) we find

$$\tau_2'(x)=\frac{1}{2}\left[\alpha_1(x)+\delta_1(x)\right],\quad \nu_2(x)=\frac{1}{2}\left[\alpha_1(x)-\delta_1(x)\right]. \tag{21}$$

Integrating the first of equalities (21) from -1 to x, we find

$$\tau_2(x)=\frac{1}{2}\int_{-1}^{x}\left[\alpha_1(t)+\delta_1(t)\right]dt+\psi_2(-1) .$$

And for $0\le x\le 1$ equation (18) takes the form

$$\tau_1'(x)+\nu_1(x)=\alpha_1(x),\ 0\le x\le 1. \tag{22}$$

Equation (1) can be rewritten as

$$au_{1xxx}+bu_{1xxy}+cu_{1xx}-au_{1xy}-bu_{1yy}-cu_{1y}=0 .$$

Passing in the last equation and in the equation

(16) $(i=2)$ to the limit at

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

$y \to 0$, we have relations between unknown functions $\tau_1(x)$, $\nu_1(x)$ и $\mu_1(x)$:

$$a\tau_1'''(x)+b\nu_1''(x)+c\tau_1''(x)-a\nu_1'(x)-b\mu_1(x)-c\nu_1(x)=0,\ 0\le x\le 1, \quad (23)$$

$$\tau_1''(x)-\mu_1(x)=\omega_2(bx),\ 0\le x\le 1. \quad (24)$$

Eliminating from (22), (23), and (24) the functions

$\nu_1(x)$, $\mu_1(x)$ and integrating the resulting equation from 0 to x, we arrive at the equation

$$\tau_1''(x)+\left(1-\frac{c}{b-a}\right)\tau_1'(x)-\frac{c}{b-a}\tau_1(x)=\alpha_2(x)+k_1,\ 0\le x\le 1, \quad (25)$$

where

$$\alpha_2(x)=\frac{1}{b-a}\left\{b\alpha_1'(x)-a\alpha_1(x)+\int_0^x\left[b\omega_2(bt)-c\alpha_1(t)\right]dt\right\},$$

while k_1 – the unknown is constant.

When solving equation (25), there can be three cases:

1°. $c\ne-(b-a)$, $c\ne 0$;

2°. $c=-(b-a)$;

3°. $c=0$.

In case 1 °, the characteristic equation of equation (25) has two different real roots:

$\lambda_1=-1$, $\lambda_2=\frac{c}{b-a}$.

In the case of 2 °, the characteristic equation of equation (25) has one double real root: $\lambda_{1,2}=-1$

.

In the case of 3 °, the characteristic equation of equation (25) has two different real roots:

$\lambda_1=-1$, $\lambda_2=0$.

Consider case 1 °. Solving equation (25) under the conditions

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

$$\tau_1(0)=\frac{1}{2}\int_{-1}^{0}\left[\alpha_1(t)+\delta_1(t)\right]dt+\psi_2(-1),$$

$$\tau_1'(0)=\frac{1}{2}\left[\alpha_1(0)+\delta_1(0)\right],\quad \tau_1(1)=\varphi_1(0), \quad (26)$$

find

$$\tau_1(x)=\frac{b-a}{c+b-a}\int_0^x\left[e^{\frac{c(x-t)}{b-a}}-e^{t-x}\right]\alpha_2(t)\,dt+$$
$$+\frac{b-a}{c+b-a}k_1\left[\frac{b-a}{c}\left(e^{\frac{cx}{b-a}}-1\right)-\left(1-e^{-x}\right)\right]+k_2e^{-x}+k_3e^{\frac{cx}{b-a}},$$

where

$$k_3=\frac{b-a}{2(b-a+c)}\left\{\int_{-1}^{0}\left[\alpha_1(t)+\delta_1(t)\right]dt+2\psi_2(-1)+\alpha_1(0)+\delta_1(0)\right\},$$

$$k_2=\frac{c}{2(b-a+c)}\left\{\int_{-1}^{0}\left[\alpha_1(t)+\delta_1(t)\right]dt+2\psi_2(-1)-\alpha_1(0)-\delta_1(0)\right\},$$

$$k_1=\left[\frac{b-a}{c}\left(e^{\frac{c}{b-a}}-1\right)-\left(1-e^{-1}\right)\right]^{-1}\left\{\frac{b-a+c}{b-a}\left[\varphi_1(0)-k_2e^{-1}-k_3e^{\frac{c}{b-a}}\right]-\right.$$
$$\left.-\int_0^1\left[e^{\frac{c(1-t)}{b-a}}-e^{t-1}\right]\alpha_2(t)\,dt\right\}.$$

Consider case 2 °. Solving equation (25) under conditions (26), we have

$$\tau_1(x)=\int_0^x(x-t)e^{t-x}\alpha_2(t)\,dt+k_1\left[1-(1+x)e^{-x}\right]+(k_2+k_3x)e^{-x},$$

where

$$k_2=\frac{1}{2}\int_{-1}^{0}\left[\alpha_1(t)+\delta_1(t)\right]dt+\psi_2(-1),\quad k_3=k_2+\frac{1}{2}\left[\alpha_1(0)+\delta_1(0)\right],$$

$$k_1=\frac{1}{e-2}\left[\varphi_1(0)e-k_2-k_3-\int_0^1(1-t)e^{t-1}\alpha_2(t)\,dt\right].$$

Finally, consider case 3 °. In this case, Eq. (25) has the form

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

$$\tau_1''(x)+\tau_1'(x)=\alpha_2(x)+k_1,\ 0\le x\le 1.$$

Integrating this equation from 0 to x, we arrive at the equation

$$\tau_1'(x)+\tau_1(x)=\alpha_3(x)+k_1x+k_2,\ 0\le x\le 1,$$

where

$$\alpha_3(x)=\int_0^x\alpha_2(t)dt.$$

Solving the last equation under conditions (26), we have

$$\tau_1(x)=\int_0^x e^{t-x}\alpha_3(t)dt+k_1\left(x-1-e^{-x}\right)+k_2\left(1-e^{-x}\right)+k_3e^{-x},$$

where

$$k_3=\frac{1}{2}\int_{-1}^{0}\left[\alpha_1(t)+\delta_1(t)\right]dt+\psi_2(-1),$$

$$k_2=k_3+\frac{1}{2}\left[\alpha_1(0)+\delta_1(0)\right],$$

$$k_1=\varphi_1(0)e-k_2(e-1)-k_3-\int_0^1 e^t\alpha_3(t)dt.$$

Now we go to the area G_3. Passing in equations (16) $(i=3)$ and (16) $(i=2)$ to the limit at $y\to 0$, get

$$\omega_{31}(bx)=\omega_2(bx),\ -1\le x\le 0.$$

Changing the argument bx to $bx-ay$, we have

$$\omega_{31}(bx-ay)=\omega_2(bx-ay),\ -b\le bx-ay\le 0.$$

Here it is set

$$\omega_3(bx-ay)=\begin{cases}\omega_{31}(bx-ay), & -b\le bx-ay\le 0,\\ \omega_{32}(bx-ay), & -b-a\le bx-ay\le -b.\end{cases}$$

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

Consider the following problem:

$$\begin{cases} u_{3xx} - u_{3yy} = \omega_3(bx - ay)e^{-\frac{c}{b}y}, \\ u_3(x,0) = \tau_2(x),\ u_{3y}(x,0) = \nu_2(x),\ -1 \le x \le 0, \\ u_3(-1,y) = \varphi_2(y),\ u_{3x}(-1,y) = \varphi_3(y),\ u_3(0,y) = \tau_3(y),\ 0 \le y \le 1. \end{cases}$$

We will seek a solution to this problem in the form

$$u_3(x,y) = u_{31}(x,y) + u_{32}(x,y) + u_{33}(x,y), \tag{27}$$

where $u_{31}(x,y)-$ the solution to the problem

$$\begin{cases} u_{31xx} - u_{31yy} = 0, \\ u_{31}(x,0) = \tau_2(x),\ u_{31y}(x,0) = 0,\ -1 \le x \le 0, \\ u_{31}(-1,y) = \varphi_2(y),\ u_{31}(0,y) = \tau_3(y),\ 0 \le y \le 1; \end{cases} \tag{28}$$

$u_{32}(x,y)-$ the solution to the problem

$$\begin{cases} u_{32xx} - u_{32yy} = 0, \\ u_{32}(x,0) = 0,\ u_{32y}(x,0) = \nu_2(x),\ -1 \le x \le 0, \\ u_{32}(-1,y) = 0,\ u_{32}(0,y) = 0,\ 0 \le y \le 1; \end{cases} \tag{29}$$

$u_{33}(x,y)-$ the solution to the problem

$$\begin{cases} u_{33xx} - u_{33yy} = \omega_3(bx - ay)e^{-\frac{c}{b}y}, \\ u_{33}(x,0) = 0,\ u_{33y}(x,0) = 0,\ -1 \le x \le 0, \\ u_{33}(-1,y) = 0,\ u_{33}(0,y) = 0,\ 0 \le y \le 1. \end{cases} \tag{30}$$

Using the continuation method, we find solutions to problems (28) - (30). They look like

$$u_{31}(x,y) = \frac{1}{2}\left[T_2(x+y) + T_2(x-y)\right], \tag{31}$$

Where

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

$$T_2(x)=\begin{cases}2\varphi_2(-1-x)-\tau_2(-2-x), & -2\le x\le -1,\\ \tau_2(x), & -1\le x\le 0,\\ 2\tau_3(x)-\tau_2(-x), & 0\le x\le 1;\end{cases}$$

$$u_{32}(x,y)=\frac{1}{2}\int_{x-y}^{x+y}N_2(t)\,dt, \qquad (32)$$

Where

$$N_2(x)=\begin{cases}-\nu_2(-2-x), & -2\le x\le -1,\\ \nu_2(x), & -1\le x\le 0,\\ -\nu_2(-x), & 0\le x\le 1;\end{cases}$$

It has the form $u_{33}(x,y)$

$$u_{33}(x,y)=-\frac{1}{2}\int_0^y e^{-\frac{c}{b}\eta}d\eta\int_{x-y+\eta}^{x+y-\eta}\Omega_3(b\xi-a\eta)\,d\xi. \qquad (33)$$

The first two conditions of problem (30) are satisfied automatically. Satisfying the third of the conditions of problem (30), after simplification, we obtain

$$\int_0^y e^{-\frac{c}{b}\eta}\Omega_3\left(b(-1-y)+(b-a)\eta\right)d\eta=-\int_0^y e^{-\frac{c}{b}\eta}\Omega_3\left(b(y-1)-(b+a)\eta\right)d\eta. \qquad (34)$$

Changing variables in integrals (34) and differentiating the resulting equation, after some transformations, we obtain

$$\frac{b}{b-a}\Omega_3(b(-1-y))-\frac{2a^2}{b^2-a^2}\Omega_3(-b-ay)-\frac{2a^2c}{(b+a)^2(b-a)}\int_0^y\Omega_3(-b-at)e^{-\frac{c(by+at)}{b(b+a)}}dt=$$

$$=-\frac{b}{b+a}\omega_{31}(b(y-1))+\frac{2abc}{(b+a)^2(b-a)}\int_{-1}^{y-1}\omega_{31}(bz)e^{-\frac{c(y-1-z)}{b+a}}dz. \qquad (35)$$

Setting in (33) $x\to 0$, after some transformations, we have

$$\int_0^y e^{-\frac{c}{b}\eta}\Omega_3\left(by-(b+a)\eta\right)d\eta=-\int_0^y e^{-\frac{c}{b}\eta}\Omega_3\left((b-a)\eta-by\right)d\eta. \qquad (36)$$

Changing variables in the integrals of equality (36) and differentiating the resulting equation, after long transformations, we find

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

$$\Omega_3(by)=\frac{2a^2}{b(b-a)}\omega_{31}(-ay)e^{-\frac{c}{b}\eta}-\frac{b+a}{b-a}\omega_{31}(-by)-\frac{2ac}{(b-a)^2}\int_{\frac{a}{b}y}^{y}e^{-\frac{c(y-z)}{b-a}}\omega_{31}(-bz)dz \quad . \quad (37)$$

Substituting (31), (32), and (33) into (27), we have

$$u_3(x,y)=\frac{1}{2}\left[T_2(x+y)+T_2(x-y)\right]+\frac{1}{2}\int_{x-y}^{x+y}N_2(t)dt-\frac{1}{2}\int_0^y e^{-\frac{c}{b}\eta}d\eta\int_{x-y+\eta}^{x+y-\eta}\Omega_3(b\xi-a\eta)d\xi \quad . \quad (38)$$

Differentiating this solution with respect to x, we have

$$u_{3x}(x,y)=\frac{1}{2}\left[T_2'(x+y)+T_2'(x-y)\right]+\frac{1}{2}\left[N_2(x+y)-N_2(x-y)\right]-$$

$$-\frac{1}{2}\int_0^y e^{-\frac{c}{b}\eta}\Omega_3\left(b(x+y)-(b+a)\eta\right)d\eta+\frac{1}{2}\int_0^y e^{-\frac{c}{b}\eta}\Omega_3\left(b(x-y)+(b-a)\eta\right)d\eta \quad . \quad (39)$$

Letting x tend to unity in (39), after long calculations and transformations, we find

$$\Omega_3(-b-ay)=\left\{\frac{b+a}{a}\left[\tau_2''(y-1)+\nu_2'(y-1)-\varphi_2''(y)-\varphi_3'(y)\right]-\frac{b}{a}\omega_{31}(b(y-1))-\right.$$

$$\left.-\frac{c}{a}\left[\tau_2'(y-1)+\nu_2(y-1)-\varphi_2'(y)-\varphi_3(y)\right]\right\}e^{\frac{c}{b}y} \quad .$$

Substituting the last equality in (35), we find

$$\Omega_3(b(-1-y))=\left\{\frac{2a}{b}\left[\tau_2''(y-1)+\nu_2'(y-1)-\varphi_2''(y)-\varphi_3'(y)\right]-\frac{2a}{b+a}\omega_{31}(b(y-1))-\right.$$

$$\left.-\frac{2ac}{b(b+a)}\left[\tau_2'(y-1)+\nu_2(y-1)-\varphi_2'(y)-\varphi_3(y)\right]\right\}e^{\frac{c}{b}y}-\frac{b-a}{b+a}\omega_{31}(b(y-1))+$$

$$+\frac{2c}{b+a}\int_0^y\left[\tau_2''(t-1)+\nu_2'(t-1)-\varphi_2''(t)-\varphi_3'(t)\right]e^{\frac{c(t-y)}{b+a}}dt-\frac{2bc}{(b+a)^2}\int_0^y\omega_{31}(b(t-1))e^{\frac{c(t-y)}{b+a}}dt-$$

$$-\frac{2c^2}{(b+a)^2}\int_0^y\left[\tau_2'(t-1)+\nu_2(t-1)-\varphi_2'(t)-\varphi_3(t)\right]e^{\frac{c(t-y)}{b+a}}dt+\frac{2ac}{(b+a)^2}\int_{-1}^{y-1}\omega_{31}(bz)e^{-\frac{c(y-1-z)}{b+a}}dz \quad .$$

Now, letting x tend to zero in (33), taking into account (36), after long calculations and transformations, we obtain the relation

$$\nu_3(y)=\tau_3'(y)+\beta_1(y), \quad (40)$$

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

Where

$$\beta_1(y)=\tau_2'(-y)-\nu_2(y)+\frac{b}{b-a}\int_{\frac{a}{b}y}^{y} e^{-\frac{c(y-z)}{b-a}}\omega_{31}(-bz)\,dz .$$

Now go to G_1. Passing in equation (15) to the limit at $y\to 0$, we find

$$\omega_{12}(bx)=\tau_1''(x)-\nu_1(x),\ 0\le x\le 1, \qquad (41)$$

where it should be

$$\omega_1(bx-ay)=\begin{cases}\omega_{11}(bx-ay),\ -a\le bx-ay\le 0,\\ \omega_{12}(bx-ay),\ 0\le bx-ay\le b.\end{cases}$$

And passing in equations (15) and (16) $(i=3)$ to the limit at $x\to 0$, we obtain the relations

$$\mu_3(y)-\tau_3'(y)=\omega_{11}(-ay)e^{-\frac{c}{b}y},\qquad \mu_3(y)-\tau_3''(y)=\omega_{31}(-ay)e^{-\frac{c}{b}y}.$$

Eliminating the function from these relations, we obtain

$$\omega_{11}(-ay)=\left[\tau_3''(y)-\tau_3'(y)\right]e^{\frac{c}{b}y}+\omega_{31}(-ay).$$

Next, we write down the solution of equation (15) satisfying conditions (2), (9), (12):

$$u_1(x,y)=\int_0^y\tau_2(\eta)G_\xi(x,y;0,\eta)\,d\eta-\int_0^y\tau_3(\eta)G_\xi(x,y;1,\eta)\,d\eta+\int_0^1\tau_1(\xi)G(x,y;\xi,0)\,d\xi-$$

$$-\int_0^y e^{-\frac{c}{b}\eta}d\eta\int_0^{\frac{a}{b}\eta}\omega_{11}(b\xi-a\eta)G(x,y;\xi,\eta)\,d\xi-\int_0^y e^{-\frac{c}{b}\eta}d\eta\int_{\frac{a}{b}\eta}^1\omega_{12}(b\xi-a\eta)G(x,y;\xi,\eta)\,d\xi,$$

where $\left.\begin{matrix}G(x,y;\xi,\eta)\\ N(x,y;\xi,\eta)\end{matrix}\right\}=\frac{1}{2\sqrt{\pi(y-\eta)}}\sum_{n=-\infty}^{+\infty}\left\{\exp\left[-\frac{(x-\xi-2n)^2}{4(y-\eta)}\right]\mp\exp\left[-\frac{(x+\xi-2n)^2}{4(y-\eta)}\right]\right\}$ - Green's functions of the first and second boundary value problems for the Fourier equation.

Differentiating this solution with respect to x and tending x to zero, taking into account (40), (41) and (42) after lengthy calculations and transformations, we obtain the Volterra integral equation of the second kind with respect to the unknown function $\tau_3'(y)$:

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

$$\tau_3'(y)+\int_0^y K(y,\eta)\tau_3'(\eta)d\eta = g(y), \qquad (43)$$

where $K(y,\eta)$, $g(y)-$ -known functions, and the kernel $K(y,\eta)$ has a weak singularity $\left(\frac{1}{2}\right)$, and $g(y)-$ is continuous. Therefore, equation (45) admits a unique solution in the class of continuous functions. Solving this equation, we find the function $\tau_3'(y)$ and thus the functions $\tau_3(y)$, $\nu_3(y)$, $\omega_{11}(bx-ay)$, $u_1(x,y)$, $u_3(x,y)$.

Thus, we have determined the solution to Problem 1 completely.

Comment. Similar problems for equations of the third and fourth orders were studied in [14] - [18].

Literature

1. Tricomi F. On linear second order partial differential equations of mixed type. M.-L., Gostekhizdat, 1947, 190 p.

2. Gellerstedt S. Sur un probleme aux limites pour une equation lineare aux derivees partielles du second ordre de tipe mixte. Theis uppsala, 1935.

3. Bitsadze A.V. Mixed type equations. Results of Science (2). Phys.-mat. Sciences. M., 1959, 164 p.

4. Bitsadze A.V. Some classes of partial differential equations. M., Nauka, 1981, 448 p.

5. Babenko K.I. On the theory of equations of mixed type. Doctoral dissertation (Library of the Mathematical Institute of the Academy of Sciences of the USSR, 1952).

6. Karol I.L. On a boundary value problem for an equation of mixed elliptic-hyperbolic type. DAN SSSR, 88, 2, 1953, p. 197-200.

7. Frankl F.I. On Chaplygin's problems for mixed sub- and supersonic flows. Izv. Academy of Sciences of the USSR, series of mat. 9, 2, 1945, p. 126-142.

8. Smirnov M.M. Mixed type equations. M., Nauka, 1970, 296 p.

9. Salakhitdinov M.S.Mixed-compound equations. Tashkent, Fan,1974,156 p.

10. Gelfand I.M. Some questions of analysis and differential equations. UMN, v. XIV, no. 3 (87), 1959, p. 3-19.

11. Dzhuraev TD, Sopuev A., Mamazhanov M. Boundary value problems for equations of parabolic-hyperbolic type. Tashkent, Fan, 1986, 220 p.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

12. Dzhuraev TD, Mamazhanov M. Boundary value problems for a class of fourth-order equations of mixed type. Differential equations, 1986, v.22, No. 1, pp.25-31.

13. Takhirov Zh.O. Boundary value problems for a mixed parabolic-hyperbolic equation with known and unknown dividing lines. Abstract of Ph.D. thesis. Tashkent, 1988.

14. Шерматова, Х.М. (2020). Исследование краевой задачи для параболического гиперболического уравнения третьего порядка в виде $(b*\partial/\partial y+c)(Lu)=0$. Теоретические и прикладные науки, (7), 160-165. http://www.t-science.org/arxivDOI/2020/07-87/07-87-37.html

15. Mamazhonov M., Mamazhonov S.M., Mirzakulov B.A. Investigation of one boundary value problem for a fourth-order equation of parabolic-hyperbolic type in a mixed pentagonal domain with two lines of type change. Abstracts of reports of the international scientific conference on the topic "Modern problems of differential equations and related branches of mathematics." Fergana, March 12-13, 2020, p. 98-102.

16. Mamajonov, M., Shermatova, X. M., & Mukaddasov, X. (2014). Постановка и метод решения некоторих краевих задач для одного класса уравнений третего порядка параболо-гиперболического типа. Вестник KRAUNS. Физико-математические науки, (1 (8)), 7-13.

17. Mamajonov, M., Shermatova, X. M., & Muxtorova, T. N. (2021). Об одной краевой задаче для уравнения параболо-гиперболического типа третего порядка в вогнутой шестиуголной области. ХИИИ Белорусская математическая конференция: материали Международной научной конференции, Минск, 22–25 ноябрь 2021 г.: в 2 ч./сост. ВВ Лепин; Националная академия наук Беларуси, Институт математики, Белорусский государственний университет.–Минск: Беларуская навука, 2021.–Ч. 1.–с..

18. Mamajonov, M., & Shermatova, X. M. (2017). Об одной краевой задаче для уравнения третего порядка параболо-гиперболического типа в вогнутой шестиуголной области. Вестник KRAUNS. Физико-математические науки, (1 (17), 14-21.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

ISSN: 2349-7793 Impact Factor: 6.876., Volume: 16 Issue: 05 in May 2022

BUKHARA'S PARTICIPATION IN PUBLIC DIPLOMACY IN COOPERATION WITH FOREIGN COUNTRIES THROUGH UNIFIED CITIES

Tuyev Fazliddin Erkinovich
Lecturer of Pedagogical Institute of Bukhara State University,
Department of Social Sciences

Annotation. *During the years of independence of Bukhara region cooperates with a number of countries in foreign relations. Buhari has established diplomatic relations with the United States, France, Turkey and States from foreign countries because of the "Unified cities" that have become closely friends.*

Key words. *Bukhara, State, Region, Communication, unified cities, Enterprise, Industry, Mutual.*

INTRODUCTION. The current global processes, the aggravation of global problems, the emergence of new directions in the system of international relations continue to be a prerequisite for the development of bilateral and multilateral relations between the countries.

In view of the above, the role of friendly relations with the foreign community in the field of "public diplomacy" through the "unified cities" is growing. After the national independence of the Republic of Uzbekistan, the prospects for establishing relations with the countries of the world through the "unified cities" have expanded. If we refer to a not long history, then in 1957 year was formed the "All-Union City fyderation" ("Vsemirnaya federasya porodnyonnikh gorodov" VFPG), in its composition in that year the cities of 12 countries were united, in 1975, the VFPG brought together 1,000 cities from 50 countries, and in 1989, more than 3,000 cities from all over the world. These unitary cities have gained much experience with the goals of international cooperation, democracy and peace.

DISCUSSION. At the beginning of the 1960s, Uzbekistan became a member of the Federation of all-union cities on a public basis, and the capital of the Republic Tashkent was united with such cities as Karachi (1964) of Pakistan, Morocco (1964), Tunisia, Tripoli (1964, 1966); Seattle (1972) of the USA, Samarkand Cairuan (Tunisia, 1977), Cusco (Peru, 1986), Olympia (USA, 1987), etc. Bukhara, which is a museum under the open sky, in December 1980 year was in harmony with the Spanish city of Kardova. Days of Cardova Culture in Bukhara in 1986, Bukhara Culture Days were held in Cardova (Spain) in 1988 and in these events gave praise to the Islamic literature of the ancient city of art, architectural monuments. In the late 1980s and early 1990s, the Cardova Cafe was opened in Bukhara as a symbol of friendship, and the Bukhara Cafe was opened in Cardova.

The members of the delegations of the two cities are scheduled to establish scientific-educational cooperation between the Bukhara State Pedagogical Institute (now Bukhara State University) and the University of Cardova on October 24, 1989 in Cardova. They signed the contract from 1988-1994. At that meeting, it was agreed to hold cooperation between Cardova and Bukhara in 1990 in Cardova and in 1992 in Bukhara.

In the 1990s, telegraph exchanges between the unified cities, cultural works, handicrafts and arts, the organization of exhibitions of agricultural products, and forms of cooperation in the field of nature protection were widely practiced.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

However, the disintegration of the former Soviet Union in 1991 in the early years of independence had a negative impact on the process of intercity economic and social life in Uzbekistan.

The active participation of the Republic of Uzbekistan in the world community in the early twentieth century, especially in the development of economic, scientific and technological cooperation with developed countries, opened up new areas. Scientific and technological cooperation with the United States is developing steadily. The main document regulating the relationship in this regard was signed in 2010. The intergovernmental agreement on scientific and technological cooperation focuses on the restoration of these ties between the capital Tashkent and Seattle, Washington, and between the ancient and modern cities of Bukhara and Santa Fe.

RESULTS. Within the framework of cultural and humanitarian dialogue between Tashkent and Seattle, Bukhara and Santa Fe, the relations between the unified cities are strengthening year by year. Uzbekistan and France, as well as Uzbek-German relations have accumulated rich experience in European countries. In particular, the cultural and humanitarian direction plays an important role in Uzbek-French relations. Cooperation between the cities of Samarkand and Lyon, Khiva and Versailles, Bukhara and Rueil-Malmaison has been established. In 2009, the Uzbek Garden was established in the center of Rueil-Malmaison, and a statue of Avicenna Abu Ali ibn Sino, a great medical figure, was erected in the park. Mirzo Ulugbek, Ahmad Fergani, Imam al-Bukhari, Kamoliddin Behzod, the ancient cities of Bukhara, Khiva, Termez, Shahrisabz, Karshi, Samarkand, Margilan and Tashkent, and literary monuments, as well as the Khorezm Mamun Academy. Bukhara is proud to be awarded the UNESCO Cities for Peace Award. The richest collection of manuscripts of the Institute of Oriental Studies of the Usman sect Koran and the Academy of Sciences can be traced back to historical aspects such as its inclusion in the UNESCO International Register.

CONCLUSION. So, during the years of independence in Bukhara, the restoration of historical monuments and sacred sites, the launch of the “Seven Saints” travel route, the construction of modern buildings, the achievements in socio-economic and cultural development have the opportunity to fraternize with dozens of cities around the world. Bukhara will continue to contribute to the further expansion of public diplomacy in Uzbekistan through “unified cities”.

REFERENCES

1. Vecherniy Tashkent, 26 aprelya 1975g. Xayitov Sh.A. Obщestvennыe organizatsii Uzbekistana v razvitii mejdunarodnыx svyazыy straы. avt. diss.na soisk. Kand. Ist. Nau. – Tashkent-1991. – p.12.
2. Tulyaganova N.X. Stanavleniye i razviti o vijeniya porojdyonnix gorodov v Uzbekistane (1865-1985 gg) // avt. diss.na soisk. Kand. Ist. Nau. – Tashkent-1988. - p. 14.
3. Pravda Vostoka, 1990 god. 25 oktabrya.
4. Vneshnepoliticheskiy Kurs Novogo Uzbekistana T. ©HHO “Sentr ustoychivogo razvitiya”, 2021. B-91. p-470.
5. ХАЙЕТОВ Ш. А., ТУЙЕВ Ф. Э. ДАННЫЕ ПЕРЕПИСИ НАСЕЛЕНИЯ РОССИЙСКОЙ ИМПЕРИИ 1897 ГОДА, ЯВЛЯЮЩИЕСЯ ИСТОЧНИКОМ ИЗУЧЕНИЯ НАСЕЛЕНИЯ, СОЦИАЛЬНОГО УСТРОЙСТВА И ЗАНЯТИЙ ТУРКЕСТАНА //Актуальные исследования. – 2021. – №. 24. – С. 26-30.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

ISSN: 2349-7793 Impact Factor: 6.876., Volume: 16 Issue: 05 in May 2022

HUMAN PHILOSOPHY IN THE TEACHING OF NASAFI

Narziyev Zubaydillo Ibodilloyevich
Associate professor of Bukhara state university
Bukhara, Uzbekistan

Annotation. *The issue of man is one of the most important topics in the teachings of Sufism. This article is devoted to the views of the Sufi and philosopher Aziziddin Nasafi on human philosophy and existence, and human philosophy is analyzed on the basis of his works. The article also provides a philosophical analysis of Nasafi's views on human existence.*

Keywords: *philosophy, microcosm, macrocosm, soul, knowledge, development, doctrine, wisdom*

Introduction. The problem of the origin of man in the works of Azizuddin Nasafi occupies a special place. In different systems of medieval philosophy, it is solved in different ways. At the same time, it should be noted that this problem during this period was solved mainly from the positions of theoocentrism, most researchers tried to harmonize their theory with the general religious opinion. Azizuddin Nasafi, as a representative of the philosophical school of tasawwuf, relied most of all on the teachings of Ibn Sina, Ibn Arabi, Suhravardi and others in solving the problem of man. In the works of Azizuddin Nasafi, the opinions of the majority of philosophical medieval schools are analyzed, and on this basis he tries to express his own opinion on the problem of man without regard to the prevailing religious ideas.

Discussion. Nasafi is the author of famous works “Inson al-komil val marifat-ul-vofir” (“A perfect man in the pleasure of knowledge”), “Kashf-ul-hakoik” (“Discovery of truth”), “Maksud-al-akso” (“Remote goals”). In these books, he gives an extensive analysis of the problems of sensory knowledge. In particular, two forms of being (natural and supernatural being) in relation to man and nature (microcosm and macrocosm) are given the most attention.

Azizuddin Nasafi, like other thinkers of the Eastern Middle Ages, understands human nature as a dualism of soul and body. In other words, he believes that man is the connecting link between the two worlds. According to Azizuddin Nasafi, the soul is a substance, and the body is an accident. On the question of the knowledge of the soul, he supports the point of view of the supporters of Sharia, however, regarding the classification of the soul and its properties, he takes the positions of philosophers. Man, according to Azizuddin Nasafi, represents the highest stage of development of being and reflects everything that exists. He believes that the essence of man is manifested in the existence of the mind and develops and improves depending on the totality of accumulated knowledge.

The essence of man, according to Azizuddin Nasafi, manifests itself in four things - good action, good (good) condition, good disposition and education, and the main goal of human life is the gradual development of these qualities. Taking into account the innate properties of man, especially taking into account his mind, the thinker compares him with God and ascribes divine properties to man [1].

As a creation, man was created in the most perfect way from a piece of mud, adorned with the most beautiful internal and external organs, and adorned with the blessing of reason. This mind must realize its own helplessness and the greatness of its Lord. Allah Almighty gave body, movement, spirit and life to other creatures as well. However, man has the ability to distinguish with the given spirit and mind. In this respect, while man remains at the level of animality, on the other hand, he rises to the level of humanity by recognizing Allah and turning to Him. According to Nasafi, in order

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

for a person to know himself, he must live eighty years and spend his life learning science and wisdom.

In addition, in the author's eyes, a person's best evaluation of his life is directly related to the time she spends to get to know himself. In approaching Nasafi's understanding of what is required in self-knowledge, it is important to keep in mind the connection she has made between several different basic levels and forms of knowing. Nasafi's approach to almost all issues is in terms of self-knowledge or ingenuity. A person who wants to reach the level of perfection according to the world of ideas he has established and who aims to understand the beings with all their reality, must first try to know and understand his own self.

The important point to note about Nasafi's description of how people reach knowledge is that it is not intellectual or rational. The Sufi strives to polish his heart in order to gain knowledge. However, doing this is not enough, it is Allah who places certain knowledge in the heart in the next process. The act of God's endowment of knowledge to the Sufi who is in sight is defined as love by Nasafi.

Azizuddin Nasafi begins to explore the appearance of a person from the position of supporters of Sharia, however, from the analysis of his works it follows that he does not agree with them in everything (for example, regarding the problem of time). But, perhaps in order to reconcile his teaching with the dominant ideology, he quotes from the Holy Koran. Azizuddin Nasafi considers a person to be a microcosm, which reflects the laws of the macrocosm, and states that a person passes the entire process of development of the microworld through himself, starting from the moment of conception. Azizuddin Nasafi's teachings on the emergence of man trace the primitive rudiments of the theory of the development of the living world. In the West, this theory began to be developed much later. Azizuddin Nasafi believes that the mind belongs only to the human soul, and he sees the advantage of man in this.

Nasafi, within the framework of his conceptual construction, considers a person not as an abstract carrier of feelings and reason, but proceeds from the idea of a person as an active, active and goal-setting being with thinking. The basis of this position is the Hanafi-Maturidite concept that preceded Nasafi, which was based on the kalam teaching about the wisdom of God and about man as the only creature that has a mind and lives in society. In general, Nasafi's teaching, covering the indicated qualities of a person, is also focused on the study of the characteristic qualities of a person as a thinking and active being. Speaking in modern philosophical language, in this case we are talking about an “epistemological subject” entering into the cognitive process.

Nasafi, based on the doctrine of the wisdom and will of God, His attributes and the fundamental question of the Middle Ages - the freedom of will and human choice, tries to carefully and reasonably justify all his reasoning on the points indicated. At the center of the thinker's reasoning is the “creativity” (“takvin”) of God, since it is in the process of creating the world that God's activity is presented in the most obvious way.

In “Tabsiratul-Adilla” and “Bahru-l-Kalam”, Nasafi wrote that God created the world with complete free will. Therefore, creation in maturidism is not an expression and not a quality of his essence of God, but only an action carried out by God not out of necessity, but only because he wants it. God has always been able to do it. Therefore, to consider that the act of creation does not take place in him, but must be identified with the created result, is nothing more than a fabrication (vahm). The correct view is that from time immemorial we have attributed creation to God, even if creation did not exist from time immemorial. This means that He was always the creator of things that one day appeared in the world as creations. In other words, God was always the creator of things that came

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

into being as creations at the point in time that He knew and wanted. The actions of God are different from the actions of people, they elude our understanding.

Nasafi considers the problem of the perfect man in close connection with aesthetic categories. In the understanding of the Sufi thinker, a perfect person is, first of all, a representative of excellent behavior, with high human characteristics (features), which contributes to the fact that the "sacred spirit" made earthly duties a reality: ensure the truth on earth, destroy bad habits and customs, and instead introduce good rules leading to the triumph of humanism, calling for true worship of the creator. In order to comprehend this degree of perfection, a person must first of all know himself. According to the thinker, one who does not know himself will leave this mortal world without knowing anything. And the knowledge of oneself begins with the knowledge of Shaitan (the devil) - the personification of everything bad, i.e. with the ability to discern evil.

Results: Nasafi claims that the path to perfection requires the comprehension of 4 things:

1. a good word,
2. a good deed,
3. righteous behavior,
4. education.(ma`rifat)

It is not easy to comprehend the above: only then can one reach the height of perfection if a person devotes himself to this with all his essence, forgetting about himself and his hardships. Here is how the sufi philosopher figuratively describes this state:

- ✓ once without dying, a person is not reborn;
- ✓ if you want to have a good rest, work to exhaustion;
- ✓ if you want a creator, die in yourself, and if you cannot die in labor, then do not look for a good pastime;
- ✓ Well, if you do not die in yourself, then do not look for the creator.

However, the thinker teaches, the goal "should not be to search for the creator, because he is everywhere and in everything, and there is no point in looking for him. Everything that exists is from Him… everything that exists is He Himself."

For this reason, a person should not look for the above features from the outside, they are in the very essence of a person: "... all education is hidden in you from beginning to end; whatever you are looking for, look within yourself, why look for all this on the side?" [2].

This means that the path to human perfection lies in gradual comprehension, but these stages of comprehension do not at all imply absolute religiosity, but mean the requirement for a righteous life in the mortal world.

Conclusion. Nasafi believes in the power of the human mind, the power of science, preaches the idea of progress, which, according to him, requires the development of natural scientific and philosophical knowledge. The philosophical doctrine of Azizuddin Nasafi has not lost its significance to this day and therefore requires a deeper and more systematic analysis. Nasafi, summarizing in his works the intellectual medieval ideas, along with the anthropological vision of the problem, also tried to consider the problem of man from the point of view of Sufi philosophy.

REFERENCES:

1. Sharifov, Isomuddin Umarovich Antropologicheskiye problemi v filosofii Azizuddina Nasafi, 2011. –p.126.
2. Aziziddin Nasafiy. Zubdat ul-haqoyiq. N.Komilov tarjimasi. –T.: "Kamalak", 1995. -p.52-53.
3. Saidjafarova, Parvina Shovaliyevna. Misticheskiye i filosofskiye vzglyadы Azizuddina Nasafi, 2012. –p.142.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

4. Narziyev Z.I. " The genesis of the tasawwuf philosophical outlook of Khujviri" Advansed studies in science: Theory and practice" The Collection of Scholarly Papers (Materials of the International Scientific Conference, London, UK, April 18-19, 2016)
5. Narziev Zubaydillo Ibodullaevich. "Kashf ul mahjoob": sourses, translations, copies and effects. American journal social and humanitarian research. (AJSHR). Issue 1. 2020/1. P. 67-72.
6. Narziev Zubaydillo. The consept of jealousy in the sufi-philosofical teaching of Khujviri and the problems of its training. American journal social and humanitarian research. (AJSHR). Issue 1. 2020/1. P. 63-66
7. Narziyev Zubaydillo Ibodilloyevich. The views on the consept "science" the classication of sciences, science and practice scholar and ignorant according to Khudjviri and his "Kashf ul mahjoob". Journal of Critical Reviews. Vol 7, Issue 4, 2020. P.18-22
8. Narziyev Zubaydillo. Hudjwiri and the role of his "Kashf ul - mahjoob" in the sufi history. Academicia. An International Multidisciplinary Research Journal. Vol. 8. Issue 6, June 2018.
9. Namozov B. B. Problem of Irfan in Sufizm //Europaische Fachhochschule. – 2014. – №. 8. – С. 67-68.
10. Bakhriyevich N. B. Knowledge, practice and scientist //Academicia: An International Multidisciplinary Research Journal. – 2020. – Т. 10. – №. 6. – С. 1745-1756.
11. Намозов Б. Б. Виды Ходжа Мухаммада Посро на душе человека и гносеологии суфизма // Theoretical & Applied Science. – 2018. – №. 5. – С. 393-399.
12. Namozov B. B. The views of Khoja Muhammad Porso on the soul of The Human and the gnoseology of Sufism //Teoretical & AppLied Science Philadelphia, USA. – 2018. – №. 5. – С. 61.
13. Ibodilloyevich N. Z. The Sufi-Philosophical views of Hujviri on correlation of Gnoseology of Sufism, Rational and Irrational Learning // Central Asian Journal of Social Sciences and History. – 2021. – Т. 2. – №. 3. – С. 61-73.
14. Bakhriyevich N. B., Ibodilloyevich N. Z. Anthropology of tasawwuf and the problems of human existence in Hujviri Views // Central Asian Journal of Literature, Philosophy and Culture. – 2021. – Т. 2. – №. 3. – С. 1-12.
15. Ibodilloyevich N. Z. et al. The issue of science and application in the sufi teaching // Euro-Asia Conferences. – 2021. – С. 98-103.
16. Ibodilloyevich N. Z. Aziziddin Nasafi-classical representative of irfani philosophy // E-Conference Globe. – 2021. – С. 169-174.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

ISSN: 2349-7793 Impact Factor: 6.876., Volume: 16 Issue: 05 in May 2022

THE IRRIGATION AND MELIOIRATION SYSTEMS IN BUKHARA: PROBLEMS AND OUTCOMES

SH.M.Mirzoyev,
PhD research fellow of the Bukhara state university.

Abstract. *In this article, the problems of irrigation and melioration systems in the Bukhara region of 50-60 years of the last century, the measures to prevent them, the measures to reconstruct, repair, salinity and waterlogging of irrigation systems, the historical experience of the construction of collectibles, ditches, drainage systems are revealed based on the archive materials.*

Keywords: *irrigation, land reclamation, collector, ditches, drainage, system, project, land fund, new land, mechanization*

Introduction. In the early years when Soviet power was established, the irrigation systems of Central Asia were in a deplorable state. The Soviets did not have enough means and machinery to improve the situation. Because the problems of the Second World War, which caused the elimination of the complications of the first World War, the end of the aggression of European countries, as well as the increased risk of rapid outbreak, attracted their attention.The victory in the Second World War inspired the leadership of the USSR and the people. Large-scale projects for the development of each sphere and network are developed and applied to practice by the Soviet government. In particular, the development of the agricultural sector took one of the leading places in this regard. The natural – climatic conditions of the republics of Central Asia indicate that there is a great opportunity to use the land. But, due to the water problem, the existing land fund was coming without productive use. It remains only to say that in the region there were many lands virgin suitable for planting, unused.

Methods. On August 26, 1950, the Council of Ministers of Uzbekistan and the CPSU adopted the resolution №1579 “On the transition to a new irrigation system and the development of Agriculture for the purpose of more productive use of irrigated lands[1, 96].

Undoubtedly, the decision also took into account the existing water problem in the Bukhara region, including the Uzbekistan SSR. The decision instructed the reconstruction of irrigation systems and the transition to new irrigation systems. After the Second World War, the Bukhara region became a major irrigation and melioration construction site. A large number of irrigation channels, a reservoir and a collector-drainage network were built. The construction of the Kamikasaba canal, Mirzamumin, North, West, South, North-Buxoro collector, Kattakurgan reservoir was completed, a water reservoir was built. The measures taken served to improve the water supply in the Bukhara region. In particular, it has been stipulated to improve the melioration condition of the landfon and to reclaim new land for 20 thousand hectares. However, the water reserve has to be created on account of the flow management of the Zarafshan River. But, in the impact of increasing water consumption in the high flow of the river, steam did not give the expected result for Bukhara region.

In the resolution adopted by the Soviet of Ministers of the USSR and the VKP(B) of Uzbekistan, all the regions of the Republic were assigned the task of multiplying crop areas. In particular, the Bukhara region should have new irrigation system transferred to lands a in 1950 to 25 thousand, in 1951 to 70 thousand, in 1952 to 49 thousand, in 1953 to 41 thousand hectares[2, 96].

In order to ensure the implementation of this decision, the oblast has developed a practical plan of major programs. In connection with the transition to a new irrigation system, chunanchi noted that in the region there were lots that were being watered and planned for new irrigation. Improve the melioration condition of crop areas, the new appropriation plan lands planes project documentation.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

For example, in 1955, a map of irrigation for 3,7 thousand hectares will be developed, in 1951-1955 reconstruction works will be carried out in irrigation and melioration networks providing water to 10,000 hectares of land in Zarafshan irrigation system[3, 29].

The regional leadership promoted the essence of the decisions coming from above with a fierce enthusiasm among the general public. Great achievements were obtained in the field and work began intensively. The main attention was paid to Coordination of activities of related and official organizations. Initially, it was necessary to clear the essay of irrigation and melioration, timely completion of the washing of land saline. In connection with the transition to a new irrigation system, 18 million rubles were allocated for irrigation and melioration systems. It was determined that the cost-effective irrigation systems will increase the coefficient of profitable work, the construction of hydrothenic essays, purification of irrigation systems with the help of irrigation systems via mechanization[4, 96].

However, since the 1990s in Central Asia, there has been a widespread decrease in the productivity of irrigated land from 1.5 to 2.0 times compared to 1980-1985. The reasons for this lie in:

deterioration of the material base and potential of farms;

inconsistency of prices for agricultural products with prices for production resources, especially fuel and agricultural machinery;

weak infrastructure and financial system;

deterioration of the reclamation condition of irrigated lands due to the complete or partial refusal of the state to participate in the operation of systems and the inability of farmers to maintain it, as a result of which there was a partial loss of operability of irrigation and drainage systems, especially on-farm.

The process of deterioration of the reclamation condition of irrigated lands was affected by the violation of the requirements of the irrigation wash regime and the irrational use of a limited water resource on

It was aimed that the tasks set for 1950-1955 years will serve to improve the water supply in the region. After all, the need for water should have been met with great financial resources, modern techniques and a scientific approach. When analyzing the figures on irrigation-melioration, it can be seen the opposite. It is worth noting that despite the fact that the water supply in the region has improved, the increase in the volume of crop areas has led to an increase in water consumption. For example, in 1950 year the oblast Land Fund increased from 19,200 ha to 24.000 hectares[5, 296].

The situation was alarming and errors and omissions were considered by the relevant departments. The analysis showed that there were no specialists with sufficient qualifications to carry out work in the field of oblast irrigation and melioration, irrigation systems were not cleaned on time, and basically the lack of access to water, etc., was a hindrance. This is due to the fact that water resources were wasted by the agricultural authorities, cotton fields were irrigated 1,2 times in the case of 20 June due to the lack of rational use of water. From 10 may to 20 July 1950, the Bukhara region received 4852,8 m^3/sec of water per day, which is 43,1 percent. Compared to the same period last year, the region received 7887,5 m^3/sec water per day or 67 percent of the planned [6, 16].

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

The plans for the transition to a new irrigation system have yielded positive results on steam compared to a number of other regions of the Uzbekistan SSR. Bukhara region completed 63 percent of the tasks assigned to the transition to new irrigation systems [7, 17].

On January 31, 1951, a regular meeting of the Council of people's Deputies of the Bukhara region was organized. The meeting was dedicated to the execution of resolution 1816 of the Council of Ministers of the CPSU and the USSR of Uzbekistan [8, 36]. The results achieved in the last year (63%) could be seen absolute reflection in this year. In particular, the district executive authorities, the oblast cotton department, water farms and local government agencies were cold-blooded on the tasks set by pratia and the government. As a result, the measures for the transition to new irrigation systems were not completed on time. The project estimate documentation for the optimization of irrigated land areas was not developed in its own way.

Construction tasks were done several times less than in the plan. As a result, the volume of land prepared until the end of 1950 year and the crop season 1951 year was not satisfactory. In the case of 31 January 1951 year, instead of 48,200 hectares of irrigated land in the plan, 9455 hectares have been optimized, which makes only the 19,4 percent of the plan [9, 37].

Transition to new irrigation systems jaryonida the issue of optimization of the Republic's crop areas was prioritized. Only 2.2 percent of the Lands of Bukhara Fund was vomiting in official documents watering the land. And optimizing it was a difficult task. The reason is that lots of watered alohid-separated into separate parts-are formed from regions convenient for water, and natural-Ki its generalization requires a long time and a lot of Labor. This situation can also be observed at the level of implementation of the rayonlarda plan. In the region situation among the districts of the region was sad. The plan to optimize the irrigated land areas in the district was implemented at a rate of 12% (650 hectares). The fulfillment of the targets met by Sverdlov district -13,3 percent, Qarakul – 12,4 percent, Shafrikan-13,5 percent fulfilled [1, 37].

The Brigades formed by the district executive branch were engaged in the useless activities. The brigade was not attracted by specialists who did not have enough capacity and qualifications. As a result, part of the projects were made without quality, without taking into account technical requirements. These projects do not necessarily meet the requirements established by the USSR Council of Ministers in the resolution of August 17, 1950. For example, 12 of the 32 projects, which developed a landfill zone, designed to reconstruct irrigation systems, were prepared without quality. The size of the work in the project is not determined, the problem of mulberry planting is not specified. Total in the region: 278 out of 155 collective farms project documents were approved by the district executive. This is 23016 hectares in the region, equal to 47,8 percent of the plan [1, 78].

The decision to switch to new irrigation systems clearly demonstrated the existing water problem in the Bukhara region. Irrigation systems had become almost unusable. For example, such structures as Kharkhur, Duoba, Mokhonkul, which existed on the Zarafshan River, were in a state of emergency. These facilities required immediate transportation and manpower. Warn the leadership of the Bukhara region of the Ministry of water resources of the Republic that otherwise the amount of precipitation in 1951 would be several times higher than the norm, eventually the rise in water levels of the river would incur a great loss of water inclusions [1, 83] . The above example shows that even in the years when there is plenty of water, there is no possibility of equal and stable taqsimlash of water to the crop areas of the region. Cleaning of waterways, collectibles and ditch networks is not at the required level. According to the data in the case of 20 January 1953 year, palan according to the region was fulfilled by 52 percent. According to the plan, only 6.5 thousand people participated in this work, with the participation of 30 thousand people every day. Excavator park and other land

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

excavation works were carried out in the cleaning of the kolkhozlararo collector network [2, 30]. Despite this, the scope of measures aimed at improving water supply has been systematically improved.

On April 12, 1952, the obkom party adopted a resolution "On measures to further increase the cultivation of cotton production in Bukhara". In it, the task was to improve the melioration condition of the lands to be irrigated in the region, to increase the yield of cotton to 22 centners in the next 2-3 years on the basis of the introduction of irrigation and Exchange planting. The main part of the tasks set out was related to the issue of water supply. The Oblast agricultural and agricultural organizations will attract a total of 15 horsepower: more than 3200 tractors, 69 excavators and many other types of land excavation and leveling mines machinery for water supply, land reclamation, land reclamation and land reclamation plans [2, 33].

In the future, it was planned to build a central Bukhara collector, to extract the South-Bukhara dump ground water from the Karakul Oasis, and to build modern engineering facilities in the Mokhonkul. In 1954-1955 it was decided to complete the construction of a water reservoir for the collection and drainage networks 8.5 mln^3, 300 units of water intake from the Zarafshan River, as well as the construction of a water reservoir [2, 33]. Although large-scale activities aimed at water supply of Zarafshan Oasis yielded its results, there was a lot of work to be done in the area. In particular, the unification of water intake channels from Zarafshan darayos and the construction of gateways in them; carrying out reconstruction work in the Vabkent, fur and Khayrabad water facilities; on the Left Bank of the Zarafshan River in the Southern Ditch zone of Bukhara, on the Right Bank of the Zarafshan River in the Northern Ditch zone of Bukhara, the Karakul Delta; Such requirements as the construction of the torabad water pipeline on the Zarafshan River are reflected.

At the beginning of the 50-ies of the 20th century, measures aimed at the development of the oblast irrigation and melioration systems contributed little to the improvement of water supply later. But, in accordance with the complete elimination of the problem was not divided. The hydrotechnical facilities were built, cleaned and put under control. But the volume of water coming to the region above decreases from year to year.

On June 3, 1954 the Soviet of Ministers of the USSR adopted the resolution "On the distribution of water between Samarkand and Bukhara regions". The decision required serious attention from both leaders of the region to the issue of water distribution:

-Meet the need for large-scale water supply from Kattakurgan in case of reduction in the volume of water coming to the Bukhara region;

- From August 1954, the Bukhara region will be transferred to the use of the waters of the Tudakul and the Quyimazar;

- Mighty workforce with a view to providing 24-hour service to the dambslocated on the Narpay channel and VS to attract specialists [2, 173];

The accident was observed as Narpay canal was given a large volume of water without taking into account the water transfer ability of the mite. In order to prevent such accidents from repeating again, a special trust was placed on the damgba in the above decision.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

Despite the difficulties, in the late 50-ies, somewhat positive results were achieved in the field of irrigation. In 1959, the 53328 hectares of lands irrigated to the region were transferred to the new irrigation system. In 1649 hectares irrigation-melioration works were carried out, of which 1223 virgin lands, 87512 tree seedlings were planted in accordance with the plan of new irrigation systems in the same year [6, 75].

In connection with the transition to new irrigation systems, water evaporation decreased, land salinity and swampiness were prevented, as well as irrigated lands were optimized. As a result of the optimization, the region of the region was merged into large plots with an irregular land fund from 5 to 25 hectares. In the conditions of generalization of the irrigation card, there was an opportunity to use the existing techniques efficiently and to develop irrigation farming. The development of irrigation systems led to the improvement of the melioration condition of crop areas. In order to prevent salinity and waterlogging of the lower Zarafon Oasis, large collages were commissioned: Central Alat 16 km long Alat rayononida, Northern Bukhara 28 km long Gijduvan rayon, Nakib 20 km long Romitan rayon, Kattazaur 16,5 km long Kyzyltepa rayon, Khargush 23 km long Galaasiya rayon and others [9, 52].

To create in almost all regions of the development of artificial drainage the drainage of the territory that meets the requirements of reclamation of saline lands. The drainage of the territory in individual regions varied from 2.5-3.0 to 6-7 thousand m3/ha per year, which made it possible to manage the water-salt regimes of soils and achieve a reclamation and economic effect. With a normal level of operation of drainage systems and compliance with the requirements of the irrigation flush regime, a negative water-salt balance of irrigated territories is formed. The highest effect is observed in the zones of development of perfect drainage types, such as Ferghana, Vakhsh, Chui valleys, Bukhara oasis. In these areas, over several years of operation of drainage systems with a flushing irrigation regime, soil desalination of the aeration and desalination zones of groundwater has been achieved;

Results. By the end of the 50-ies, positive changes in the field of oblast irrigation and melioration began to be noticeable. However, there was no opportunity to provide the need for water to grow steadily. If irrigation systems could not withstand high water pressure in the spring, they could not afford to get the required water from the river in the fall. At the top of the water bodies in this case stands out direktiv assignments, which indicated the saving of water and more productive foyadalanish. In particular, each collective farm and farm is assigned to take measures of the use of domestic water resources during the period of vegetation.

Discussion. It emphasizes the use of water collected in the existing collections and swamps with the help of pumps for irrigation of fields [1, 151]. The above examples show that the problem of water in the region still remains urgent. Since the elimination of the water malassal, it became known to all that it was practically impossible to implement the plans set by the Soviet government. The government of the Republic was able to draw the attention of the leadership of the USSR to the situation in the Bukhara region.

Conclusion. In 1958, in order to radically improve the water supply of Zarafshan valley to the Bukhara region, the implementation of the projects for the removal of the Amudarya water to the Bukhara region was launched [9, 15]. After all, the Amu-Karakul, Amu-Bukhara (first and second turns) channels began to make a great contribution to the irrigation of crop areas of the Bukhara region of the Amudarya water. Many years of dreams-desires were fulfilled. The Bukhara region water

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

supply was shifted to the irrigation system in Amudarya by one hundred percent in 1975 year. In its place, the problems were solved positively and began to make a worthy contribution to the development of agricultural sectors.

REFERENCES

1. Buxoro viloyat davlat arxivi 1111-fond, 1-ro‘yxat, 134-yig‘ma jild, 292-varaq
2. Buxoro viloyat davlat arxivi 1023-fond, 1-ro‘yxat, 571-yig‘ma jild, 16-varaq
3. Buxoro viloyat davlat arxivi 1023-fond, 1-ro‘yxat, 571-yig‘ma jild, 17-varaq
4. Qaror “1950-1951 yillarda yangi sug‘orish tizimiga o‘tishni ta'milash chora-tadbirlari to‘g‘risi”dagi (Buxoro viloyat davlat arxivi 1111-fond, 1-ro‘yxat, 136-delo, 36-varaq)
5. Buxoro viloyat davlat arxivi 1023-fond, 1-ro‘yxat, 876-yig‘ma jild, 173-varaq
6. Amu-Buxoro havza tizimlari korxonasi joriy arxivi, 1950-yig‘ma jild, 75-varaq
7. M.M.Tagiev. Iz istorii irrigasionnogo stroitel'stva nizov'ev Zarafshanskoy dolini. –Toshkent: Fan, 1978. –S. 52.
8. Buxoro viloyat davlat arxivi 1111-fond, 1-ro‘yxat, 136-yig‘ma jild, 151-varaq
9. M.Tagiev. Amudaryo suvlari Buxoro dalalarida. –Toshkent: Fan, 1988. –B. 15.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

ISSN: 2349-7793 Impact Factor: 6.876., Volume: 16 Issue: 05 in May 2022

THE SPIRITUAL-PHILOSOPHICAL LEGACY OF IBN SINA AS PER NEWLY ESTABLISHED FINDINGS

Izzatullayeva Gavhar Normurotovna

Lecturer of the Department of Uzbek language and literature at

Bukhara Institute of engineering and technology

Abstract. *In the following article the spiritual-philosophical legacy of Ibn Sina as per newly established findings were revealed based on the recent studies conducted in the Oriental and Western countries. New different approach is applied based on the regional preferences.*

Keywords: *spiritual studies. Philosophical weltanschuung, polymath, medical sciences, universe*

Introduction. Abu Ali al-Husayn ibn Abdullah ibn al-Hasan ibn Ali (980.8, Afshana village — 1037.18.6. Hamadan City, Iran) - a great polymath of Central Asia, who made a huge contribution to the development of World Science. In the West it is famous for the name Avicenna. Ibn Sina's father, Abdullah, is from the city of Balkh and is appointed as a finance officer to the village of Khurmaysan during the reign of the Emir of Somoni Noah ibn Mansur (967-997). He married a girl named Sitora in the village of Afshana and has two sons. The eldest of his sons was Hussein (Ibn Sina), the youngest Mahmud.

Methods. When Hussein turns 5 years old, the family of Ibn Sina moves to the capital — Bukhara and gives it to study. At the age of 10, Etmas Ibn Sina fully mastered the Qur'an and the lessons of decency. At this time, he is also engaged in calculus and algebra, perfectly mastered the Arabic language and literature. Ibn Sina's first teacher in the field of science was Abu Abdullah Notili. Since he was famous among el as a ruler and philosopher, his father Ibn Sina gave him a ringleader.

In the hands of Natili, the scientist studied logic, geometry and disaster, and in some philosophical matters he also surpassed his master. The master, who saw the intelligence of Ibn Sina, appoints his father not to engage him in anything other than science. After that, the father created all conditions for the son to study knowledge and deepen his knowledge. Abu Ali contiluously read and began to master various fields of science. He studied such subjects as music, optics, chemistry, fiqh, in particular, he loved and studied medicine, and in this science he began to quickly find perfection[1. 23].

The service of Abu Mansur al-Hasan ibn Nuh al-Qumri, another Bukharian physician, became great in Ibn Sina's achievement of high skill in medical science. Ibn Sina took a course of Medicine from him and learned many secrets of this science. Kumri died in 999 year, becoming much older during this period.

On the caravan roads of a lifetime, the town of Kezib, passing from one ruler to the hands of another, the road becomes his home, and the passengers become his relatives. Little Hussein was a very curious young man. "Why?; was the most commonly used word in the dictionary. When Hussein is five years old, his family moves to Bukhara. The boy places himself in an elementary Muslim school and receives education there for ten years.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

Hussein was the youngest among fifteen schoolchildren in the Hatib Ubaid class. Verses of the Qur'an, Surah readers are subject to read in Arabic. Many guys understood the Arabic language Basur. As soon as Husayn begins to read, he buries his master with questions, but his master immediately gives an easy answer: “the Qur’an is being mowed down. From there you will find answers to all your questions.”

At the same time, Hussein also deals with another teacher, studying mathematics, methodology and Arabic. His first teacher, Abu Abdullah an-Notili, who taught philosophy and mathematics to Ibn Sina, was also a follower of these readings. Disciple went so far from his teacher that he began to put his teacher in an uncomfortable position with questions and answers. Ibn Sina's biography characterizes the next situation: “I have analyzed this for this definition so that I have not heard of it before. When he was very kind, he advised my parents not to keep me busy with anything other than science. ... With Euclid's book, too, there was such an event: with the help of my teacher I mowed down five or six theorems, and the rest I mowed down independently. Soon Natili was unable to teach me. “The axis of your own, generate theorems yourself, then come closer to me,” he said. After that, I planted books independently. In the process, I had so many questions that my teacher did not even know the answer to them, that he eventually got it from me.”[2, 32]

Hussein studied medical sciences in detail by the Bukharian physician, the author of a number of scientific works Abul-Mansur Qamari. The teachings of the lunar under the arm did not last long, Ibn Sina is engaged in independent practice and soon becomes such a famous doctor that he is called upon to treat Nuh ibn Mansur, the Emir of Bukhara, who has become seriously ill in the palace.

Ibn Sina himself remembers this way: “One day Emir became a strict check, and the doctors could not determine his patient. My name was familiar to them and they told me about me and asked them to call me. I went to the place I was called and served with them”.

Since he served the governor of Isfahan after the death of the emir, he will be imprisoned in the fortress for four months. The last ten years of his life will pass with the service of Emir al-Davla’s Palace in Isfahan (1023-1037). In the palace he created very favorable conditions for his creativity. He will be the chief physician and adviser to Amir, and even watched him in walks. Over these years, Ibn Sina has been engaged in the teaching of literature and philosophy with her critical approach. At the same time, effectively continued her creative work.

Many of his arms, including the “Book of insof” (Kitab ul-Insaf), were burned to Isfahan because of the invasion of the troops of the Gaznavis. In one of the walks of the Isfahan King, Ibn Sina is diagnosed with a severe stomach and can not recover from it. Ibn Sina dies, saying his will to an unfamiliar man in June 1037 year. In his will, he asks all his slaves to be released and distributed all his property to the poor.

Ibn Sina was buried under the city wall in the Hamadan, eight months later, his remains were taken to Isfahan and buried again in the Amir mausoleum. Ibn Sina was a scientist who had gone from heart to research consciousness and had the passion to master all available knowledge at an encyclopedic level. The philosopher had an unusual memory and a sharp mind. The encyclopedic work of the scientist written in Arabic “The Book of healing” is devoted to logic, physics, biology, psychology, geometry, arithmetic, music, astronomy and metaphysics. The book of wisdom is also considered an encyclopedic work.

Healthy exercises. In his works, Ibn Sina writes about the role and role of physical exercises in the healing and healing experience. Free movements that lead to physical exertion without

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

interruption, deep breathing, he described. If a person is engaged in moderate and timely physical exertion and follows the procedure, he will not need both treatment and medication, he has confirmed. As soon as the exercises stop, it quenches. Physical exercises strengthen muscles, joints, nerves. He also advised to take into account the age when performing the exercises. Scrubbing has been stopped in treatments such as rinsing in cold and hot water.[3, 34]

Philosophy. Ibn Sina followed in the footsteps of Aristotle in the concept of metaphysical science. After Al Farabi, he shows the difference between existence and non-existence in relation to others, as well as the difference between existence and non-existence in relation to himself. Ibn Sina claims that the Creator is eternal. Abad to understand the concept of eternity with the help of the nooplatonic concept of Ibn Sina emanation, through which he logically illuminated the transition from the initial uniqueness to the world of plural creatures.

However, looking at the universe not as a final result of the origin of a person, but as a necessary element of all voluntary existence, in contrast to the Non- platonic Concept, Limited the process of Emanation to the heavenly world. The universe is divided into three worlds: the material world, the world of the undamaged eternal image, and the world that attracts all the diversity of the world. The human body and the unity of the soul form the living soul; the philosophical-minded person is the basis of the body, prone to accepting an intelligent soul. Absolute truth is achieved through the inner feeling that is present at the highest point of the thinking process[4, 42].

The scope of the Sufi works of Ibn Sina includes “The book about birds”, “The book about love”, “The book about the essence of prayer”, “The book about the essence of pilgrimage”, “The book about salvation from fear of death”, “The book of fate” etc.

Criticism. There was a sharp struggle between supporters of the ideas of Ibn Sina's philosophical views and those who opposed him. Toki was accused of saying that his philosophy would drive man away from Allah. Muhammad al-Ghazali rejected the philosophy of Ibn Sina in his famous book “The rejection of philosophers” and did not agree with Ibn Sina's theory of the impossibility and bespoke of the resurrection of the body. As a result, Ibn Sina turns out to protect the ideas of prose ad-din at-Tusi.

Music

Avicenna also wrote works on the theory of music, which are part of the encyclopedic work of the creator:

• “My musical collection in science” in the “Cure book”;

• “A small statement about music” in the “Book of salvation”;

• “Department of music in the Book of knowledge”.

From a theoretical point of view, Ibn Sina introduced music according to medieval traditions into the category of mathematical knowledge. He looked at music as a science that studies sounds and creates a melody as a result of their proportional accompaniment. Proceeding from the teaching of Pythagoras, he knew that music belongs to numbers and is inextricably linked with them.

Ibn Sina is the first in history to look at music not only as a mathematical science, but also from the point of view of sociology, psychology, poetics, ethics and physiology, which bases a thorough scientific base on the history of music.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

Together with Al Farabi, he forms the basis of the science of musical instruments, which later, although later, will find its development in Europe. It gives a detailed classification to the type of musical instruments and understanding their structure. In the sixth section of the "Book of knowledge", almost all musical instruments are presented by definition. As a result of the work of Al Farabi and Ibn Sina on the study of musical instruments, it is based on the science of musical instrument studies, which remains a special science in the field of music. The great scientist also invented the fiddle, which was a common bow instrument in Central Asia.

In memoriam.

- In his honor, Karl Linnaeus calls the plant Avicenna, which belongs to the akant family.
- In honor of Avicenna in Tajikistan was named the Tajik State Medical University, as well as the famous mountaineer named after Lenin mountain.
- In the city of Dushanbe, in his honor, an area was named, and a monument to a scientist was erected by the Azarbaijan sculptor Umar Eldarov.
- In June 2009, the Iranian government will draw a pavilion of Persian scientists from the Memorial square of the Vienna International Center to the United Nations Department in Vienna. Persian scientists have received four famous scientists, including the pavilion: Avicenna, Beruni, Zakiri Razi (Reza and Omar Khayyam).
- Medical institute named in honor of Abu Ali ibn Sina was opened in Bukhara in 1990.
- In the park of the Gaylezers hospital complex in Riga, a monument to Abu Ali ibn Sina was opened in 2006. The monument was erected by Jalaliddin Mirtajiev.
- Avicenna asteroid, which was opened by the Soviet and Russian astronomer Lyudmila Ivanova Chernikh 26 September 1973 year, was named after Ibn Sina.
- In honor of Ibn Sina, the volcano on the moon is named.

The program created by IBM for the automatic study of the X-ray picture of the cardiograms and mammary glands was named Avicenna.

- To the epogalisine "(Tet. Əbygalisina)-a fairy tale about Ibn Sina in the tatar language of Qayum Nasir.
- Noy Gordon wrote in his novel "The Physisian" (1988) a narrative in which a young English son introduces himself as a Jew in order to study the art of Medicine from Ibn Sina, who was the Great Teacher of his time.
- 2011 year Spanish writer Esekel Teodoro will release the novel "The Hand of Avicenna" ("el Manussrito de Avisena"), in which the Persian doctor describes some moments of his life.

Results. The scientist is the author of more than 450 books and 240 of them have reached the present time. According to Ibn Sinoshunos scholar Saida Nafisiy (1896-1966), the number of these works is 456. In the libraries of the world, his 162 works are stored. Of these, 23 are written in Persian. The book consists of 20 volumes, 20 volumes, "Kitab-ul-Insan", "Kitab-ul-Fitr" 8 volumes, 10 volumes, "Kitab-al-Fitr", 10 volumes, and 3 volumes.

Conclusion. Ibn Sina's works on various subjects have been repeatedly translated and published into many Western and Eastern languages, including Uzbek and Russian. Its name: the tropical plant of avicennia, the Mineral of Avicennit, as well as the names of many pines, educational and medical institutions, is immortalized in monuments in many countries of the world.

References.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

1. Ernst Bloc. Avicenna and the Aristotelian Left (New Directions in Critical Theory, 63. Englewood Cliffs. 1999

2. Jari Kaukua. Self-Awareness in Islamic Philosophy: Avicenna and Beyond, 2021. P.321

3. Mones Abu-Asab Ph.D., Hakima Amri Ph.D., et al. Avicenna's Medicine: A New Translation of the 11th-Century Canon with Practical Applications for Integrative Health Care. 2017. P. 213

4. Hakim. G.M. Chishti. The Traditional Healer's Handbook: A Classic Guide to the Medicine of Avicenna. 1988. P. 178

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

A new opportunity in the development of the national innovative system-economy in Uzbekistan.

Mirzaev Qulmamat Jonuzakovich

Professor of Samarkand Institute of Economic and Service, Samarkand, Uzbekistan

Usmanov Farzod Shokhrukhovich

Student, Samarkand Institute of economic and services

Abstract: *In this article, the country's economy such a new development of innovative policy , in collaboration with various government research institutions joint creation of innovative processes, including new technology, new innovative ideas.*

Keywords:*Economy, innovation, technology, cooperation, invention, mission, national, system.*

The formation and development of the national innovation system is one of the important tasks in the transition to an innovative economy in the country. Every developed state has a mustThe national innovation system will be shaped by the national characteristics and economic conditions of the country.

Today, the economy of science in our countryPresident of the Republic of Uzbekistan Sh. Mirziyoyev: “We need to clearly define the priorities of our country in the field of science. No state can develop all branches of science at once. That's itfor we also have several priorities in science each yearliWe support tire development "[1]he said. At the same time, it is a task that needs to be fulfilled in the future in our republicfawere also identified, including “screening scientific achievementstron platform, a base of domestic and foreign scientific developmentsshould be formed. Every higher education and scientific tadQiqat Dargah is a prestigious foreign university and research centerWe must work with them. ”[2]

He was the first scientist to introduce the concept of a national innovation system into science and call it a “national innovation system”is K. Freeman (1987)[3].

The national innovation system is the economy of the countrydietwork on such a new innovative policy to developand its development, in which various research institutions (institutlar) new technology, the joint creation of innovative processes, including new innovative ideas. In other words, the national innovation system is new knowledge that implements the country’s main national innovation strategyorganization, storage and transmission of new technologies and new ideas. Also milliy innovative system, intellectual salo to get more benefits for the national economy and achieve higher efficiencysystematic implementation of a new national innovation policy as a result of the use of the fruits of the intellectual labor of intelligent people (scientific discoveries, inventions, etc.)ratdir.

[1]Address of the President of the Republic of Uzbekistan Sh. Mirziyoyev to the Oliy Majlis. // People's Word newspaper January 25, 2020.
[2]There.
[3]Freeman, C. (1987), Technology Policy and Economic Performance, London: Pinter

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

The need for a national innovation system in the countryriyati economy in the context of globalization of the world economydiodeThis is due to the need to use the experience of rapidly developing countries such as China, South Korea, Singapore in the national economy of the Republic and the formation of a separate national innovation system.

The Ministry of Innovative Development of the Republic of Uzbekistan is responsible for the development, formation and regulation of the national innovation system in Uzbekistan.

The need for the formation and development of the national innovation system in the country is reflected in the following:

First of all, there is no single system of this process for enterprises and organizations that are creating innovations in our countryleague.

Secondly, the lack of an innovation chain based on a single innovation that connects science, education and industry in our country.

Third, there is no single national market for innovative projects in the country, which provides free access to intellectual institutions (scientists, inventors, designers), innovative institutions that meet the demand for new innovative projects, technologies.

Fourth, the high level of market risks in the development and implementation of new innovative projects.

Fifth, the lack of a competitive environment between the entities that create the national innovation system.

Sixth, the low participation of the private sector (enterprises, firms, etc.) in the effective organization of the national innovation system in the country as a consumer of innovative ideas and technologies.

In general, it is a problem that represents the necessity described aboveThe solution of these problems is an innovative process of the national innovation systemyoncreates innovative products as a set of objects directly and indirectly involved in the economy, and innocontinuity of vation activity fao on the basis of high efficiencyallows you to perform Such structures are abandonedthe infrastructure of the state scientific sectors, the education system, the inclusion of subjects involved in the state innovation activitykin.

Today, the structure of the national innovation system is as followsand:

- public science sectors and their infrastructure;
- education system (universities, research institutions, scientific design bureaus, etc.);
- all other entities involved in innovation activitiesconsists of

The future of the national innovation system in UzbekistanThe country's innovative development strategistgiyasidetermines Innovative development in the country is a systemic process, which involves the implementation of clearly defined measures in accordance with the strategic plan. In this regard, UzbekPresident of the Republic of Kyrgyzstan 21 September 2018brDecree No. PF-5544 “On 2019-2021kistons Innovative development strategy of the RepublicRoadmap for the implementation ofsi ”and the Republic of Uzbekistan until 2030gan innovation development targetla-

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

riThe General Strategy is defined. This strategyThe main goal of the country is to compete in the international arenabardoshaccount of human capital development as a key factor in determining innovation and innovative developmentlanain. Also, the main objectives of the Strategy of the Republic of Uzbekistan to achieve the main goal until 2030 are as followsare:

– The Republic of Uzbekistan is a global inno by 2030and50 leading mam in the world according to the index index ratingto join the ranks of lakat-lari;

– Development of the system of continuing education, adaptation of the training system to the needs of the economychanensuring the quality and coverage of education at all levelsrishto achieve;

– Strengthening the investment in innovation, research, development and technology (public and private sector funding);

– Effective mechanisms for integrating education, science and entrepreneurship to strengthen the scientific potential of research and development and increase their efficiency, as well as the introduction of the results of research and development, technological workini creation and so on.

References:

1. Address of the President of the Republic of Uzbekistan Sh. Mirziyoyev to the Oliy Majlis. // People's Word newspaper January 25, 2020.
2. Freeman, C. (1987), Technology Policy and Economic Performance, London: Pinter.
3. Q.J.Mirzaev, E.Sh.Shavqiev, B.K.Janzakov. Innovative Economy: Textbook. - T .: “Innovative Development Publishing House”, 2020. Pages 153-156

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

ISSN: 2349-7793 Impact Factor: 6.876., Volume: 16 Issue: 05 in May 2022

THE FEATURES AND TYPES OF MULTIMEDIA TECHNOLOGIES

Yorkulova Marjona Shukhratovna,
Navoi State Pedagogical Institute
Master's degree in English language and literature
Akhmedova Malohat Ergashevna
Scientific leader

Annotation: This article is about the features and types of multimedia technologies.
Keywords: *multimedia technologies, virtual learning, ICT, internet.*

It is becoming increasingly frequent for language teachers to incorporate new teaching and learning approaches into their classroom practice, including the use of computer technology. Commonly known as Information and Communication Technologies (ICT) or sometimes called ILT (Information and Learning Technology), these technologies have been greatly influential in creating new opportunities for innovative teaching approaches, especially in language teaching. Indeed, many teachers are fast becoming aware of the potential for "interactive", language-in-use projects which have ITC as a key element of the teaching process. Innovative uses of Internet and other ICT tools can easily provide opportunities for collaborative language projects which focus on "using the language to learn the language". Perhaps even more importantly, the new practices developing from the integration of Internet use in EFL or ESL classrooms is ushering in unexpected changes in language teaching objectives.

Virtual learning environments provide new and unique ways in which to convey cultural knowledge and develop intercultural communication skills. High-fidelity graphics, sound, and animation make it possible for them to simulate many tangible aspects of a specific culture, such as buildings, streets, art, dress, speech, gestures, and more. This enables the provision of more authentic computer-based practice environments than may otherwise be feasible using traditional live role-play and media based approaches.

Cultural training programs have evolved substantially in the last six decades. The earliest examples began to surface after World War II when international travel and collaboration became more prevalent in business and government work. As the need for these programs became more evident, scientific interest in creating theories of intercultural growth, identifying underlying cognitive processes, and demonstrating their effectiveness also grew. The field of intercultural training is highly interdisciplinary, attracting researchers from a variety of fields, including anthropology, cognitive psychology, social science, business, and more. Surprisingly, very little of this work leverages state of the art computing technology. The usual structure of intercultural training programs includes a blend of didactic and experiential components, including methods such as lectures, discussion, film, case study, and role playing (Landis, Bennett, & Bennett, 2004). Many of these methods are based on a classroom instruction model and seek to leverage peer interaction and debate to engage learners. Typically, the goal is to induce changes in knowledge, skills, and/or attitudes. Knowledge includes basic facts about a new culture, such as common values and beliefs, preferences for physical contact, or typical eating and drinking patterns. Skills usually refer to the learner's ability to interact with someone from the new culture, including communicating their desires and interpreting the behaviors of others. Finally, attitudes have to do with basic beliefs a learner has about people of a different

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

culture and whether a positive, neutral, or negative disposition exists towards them. Evaluations of intercultural training programs also tend to focus on these

The differences are as follows:

• Intercultural knowledge: research about or exchange of information concerning cultures different from one's own. This results in knowledge about the other culture.

• Intercultural communication skills: recognition of personal value system and preconceptions + added knowledge about other cultures. This results in empathy with the other culture.

It is possible to introduce yet another term into this ever-growing field of interculturality: intercultural awareness. In the field of language teaching (including ESL and EFL), it is becoming more frequent to hear of language teaching and (inter)cultural awareness as being integral to each other. Along these lines, however, this intercultural awareness in language learning is too often seen as yet one more "skill" to be acquired, along with reading, writing, listening and speaking skills; in other words it is fast becoming the "fifth" skill to be learnt in the language classroom. However, as Claire Kramsch (1993) points out, "if language is seen as social practice, culture becomes the very core of language teaching". This means that it cannot be extrapolated as an isolated skill from the "whole competence" of a language user.

It also means that understanding a language goes beyond being grammatically and lexically competent in that language. The student must be aware of not only the target language's culture but also be able to see how the target language's culture relates to their own. In order to develop students' intercultural communicative competence, their awareness of cultures (own and others) will help them interpret and understand other languages and cultures. Thus, intercultural communicative skills must be seen as a competency which requires not only knowledge and skills but also attitudes. Quite rightly, Internet, due to its multicultural and multilinguistic nature, has been proclaimed as a significant tool for teaching intercultural competency.

Added to all of this is the increasingly popular movement which champions English as an International Language (EIL); promoting English as an international lingua franca. Still, this position is not without its detractors, notably because of the quite political and imperialistic attitude which can be attached to it. Perhaps a more diplomatic orientation might be positioning English for Intercultural Communication. Placing English as just one of several possible international lingua francas implies a focus on interaction between non-native-speakers who may come from very different language and cultural backgrounds. The objective becomes one of communicating effectively and appropriately, thus bringing us back to the definition of intercultural communication – in this case, using English as the means of communication. This focus shifts the teaching goals from language norms (usually pertaining to native speakers) to a focus on negotiation wherein the speakers must learn to accommodate each other's different levels and backgrounds.

Some goals of such a programme designed to teach is not just language, but also entail the student be able to:

• observe, identify and recognise elements of their own culture and others' cultures
• compare and contrast
• negotiate meaning
• tolerate ambiguity
• effectively interprete messages
• limit the possibility of misinterpretation
• defend one's own point of view while acknowledging the legitimacy of others' perspectives

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

• have the ability to accept differences between individuals

Many foreign language teachers first become interested in using multimedia technologies and Internet because of the opportunities provided for language use and "authentic communication". Nonetheless, it is important to point out that there are different ways of "communicating" through Internet, and not all of them require the same level of intercultural competence and collaboration. According to Judi Harris (April 2004), internet communication projects can be classified according to purpose. Evidently, the purpose of the student task will influence the amount of communication and possible intercultural communication required.

Harris classifies the three types of internet tasks as:

• Independent: This work requires a minimal amount of intercultural or even interpersonal communicative skills. This would include any work which requires browsing or searching for particular information on one's own, as in research.

• Interdependent: This includes any type of information exchange such as emails or discussion groups. These tasks usually require interpersonal and intercultural skills, according to the way the project or communicative effort is set up.

• Problem-solving: Tasks designed for problem-solving also involve a high level of communication and subsequently will require developing or enhancing interpersonal skills.

These different task purposes must be kept in mind when designing an international collaborative ICT project because the need for intercultural skills is more of a requisite for some tasks than it is for others. Learning intercultural skills can even become a part of the design of the task. Projects involving interpersonal exchange can become sites for bringing together cross-cultural partners for discussion about a wide range of topics, including cultural aspects of different areas of life. Some ideas for designing interpersonal exchange include:

• Key pals

• Global classrooms

• Internationally organized meetings

•"Electronic interviewing" of a personality known by all the partners

•Collaboratively created webquest (partners exchange information to be included in the final version)

• Collaborative writing of an electronic journal

All of these type of projects can facilitate the exchange of ideas amongst students from different cultures. These can be complemented by setting up common databases or electronic publications based on the exchange of information amongst partners. All of these tasks require knowledge and use of intercultural communication and therefore will help the students develop and further their intercultural communication skills.

The third type of Internet use, problem-solving, integrates most fully the use of communicative skills, especially if the problem-solving is done collaboratively. If the project is designed to incorporate global partners, it will necessitate the development and use of intercultural communicative knowledge quite extensively. By involving the students in different areas of problem-solving, they will be required to use communicative skills for many different purposes. To name just a few:

• request and organize information

• deliver and exemplify their knowledge about information requested from them

• clarify and request clarification about information

• analyze and negotiate possible answers

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

One example of this type of collaborative projects could be information searches wherein each partner has only part of the information necessary to resolve a problem which is in common to all the partners involved. Another example is parallel problem solving wherein each partner works on similar problems and then the students are asked to compare results. These problem-solving projects can be linked to simultaneous discussions as well, whether textually (through keyboard chatting) or audio-video links, thus increasing the use of different intercultural communicative skills even further.

Hopefully, through guided reflection, as students experience linguistic and cultural otherness, they will integrate this into their existing linguistic and cultural understandings. This will lead to greater intercultural awareness and self-awareness as well. Some writers (e.g. Byram 1989, Holliday 1994) feel that reflecting on self-identity as well as other's identity can help students break away from stereotypical beliefs about others. This would be a welcome complement to the intercultural element of a success internationally collaborative ITC project! And it may well be the first step towards a new more egalitarian era of English for Intercultural Communication (EIC), wherein native and non-native speakers alike are all more interculturally aware.

According to J. Willis (1996), an appropriate classroom task is "a goal-oriented activity in which learners use language to achieve a real outcome" (p. 53). Willis also suggests that language use in tasks should reflect language use in the outside world. Though, language use in the outside world is quite unclear, and activities and tasks based on structured scenarios tend to miss the nuances and subtleties of meaning negotiation, which is essential to accurate and successful communication. Nunan (1989) similarly states that a task "is a piece of classroom work which involves learners in comprehending, manipulating, producing, or interacting in the target language while their attention is principally focused on meaning rather than form" (p. 10). As such, according to Nunan, a language learning task is an activity that has a nonlinguistic purpose with a clear outcome and that uses any or all of the four language skills in its completion by conveying meaning in a way that reflects real-world language use.

This approach to language learning and teaching is practical on a local or classroom level. However, the problems that persist center more on what exactly constitutes real-world language use and how meaning can be created or negotiated through a common target language between people of different backgrounds and communication styles in unfamiliar contexts, where even basic common sense, values, and perspectives are in a constant state of change. Acquisition of these skills requires a refocusing of goals and ideas for communicative competence. Shehadeh (2005) claims that "what is needed, therefore, is an approach to L2 [second language] learning and teaching that provides a context that activates language acquisition processes" (p. 14). However, if such contexts are indeed constantly changing and unpredictable, how can they be reproduced in a classroom or structured language learning environment for the purpose of practicing tasks for acquiring real-world skills?

According to Widdowson (1998), learners cannot be prepared in patterns of cultural behavior because these are too unpredictable and cannot be imitated in the classroom. Nevertheless, he also suggests that the classroom context is a community with its own cultural reality, and that this offers a unique environment in which language and culture are not just learned but learned from. Tasks which are more demonstrative of the real world can then be included into the classroom as a methodology that will provide for communicative competence.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

As Widdowson states, these tasks should then be systematically linked to the things learners need to do in the real world, incorporate what is known about the nature of successful communication, and embody what is known about second language acquisition.

Similarly, Bygate (1987) suggests that oral interaction tasks in which participants are constantly negotiating meaning, such as an interview or a dinner party, helps learners to practice skills such as evaluation, explanation, justification, and predication, and generally learn how to manage interaction.

On the other hand, Byram (1997) proposes that "learners need to see their role not as imitators of native speakers but as social actors engaging with other social actors in a particular kind of communication and interaction which is different from that between native speakers" (p. 21). Byram's model proposes that the ultimate goal of language teaching should not be to become a native speaker but an intercultural speaker. In addressing the requirements for an intercultural speaker, Byram establishes a comprehensive model of intercultural communicative competence geared toward developing culture-specific as well as general knowledge and skills for learning about, becoming involved in, and successfully negotiating intercultural communicative interactions.

In some EFL settings, classes consist of students of different cultural backgrounds; in others, classes consist of student with the same culture. In the former case, learning about diverse cultures and developing intercultural awareness are often not new issues—in multicultural classrooms, students learn about each other's cultures through various activities, and not only during English lessons. Classes of learners with the same cultural backgrounds, on the other hand, do not present a pressing need to raise cross-cultural awareness, so multicultural education is absent from school curricula.

Human-computer interaction of multimedia technology provides an innovative platform for foreign language education. Particularly, assisted by multimedia technologies, case-based teaching is widely being implemented in teaching intercultural communication, which is a new area in English curriculum system. This pedagogy awakens great concern for its effectiveness of theory input and students' criticality development.

Multimedia technologies play one of the best roles in creating an authentic learning context. It embodies a task-based principle, a widely supported in language learning practice.

Nowadays, multimedia assisted case-based teaching is broadly used in teaching intercultural communication. Different from traditional exemplification, it values the specifically designed task involvement and teacher-student interaction based on learning targets. Besides, it fortifies students' analyzing abilities, their introspection and critical thoughts that are important evaluating criteria for students in intercultural communication. Therefore, this pedagogy is accepted as the most effective, attractive and desired teaching method in intercultural communication.

References:

1. Bgajnokov B. X. Ethical anthropology / B. H. Bgajnokov. - Nalchik: publishing house. and others. KBIGI, 2009. - 128 p.

2. Beluxin D. A. Pedagogical ethics: necessary and current / D. A. Beluxin. - M .: 2007.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

Evaluation of the prevalence and intensity of caries in children with rheumatism.

Kazakova N.N., Sadieva D.Sh., Khamrayeva Sh.F.
Bukhara State Medical Institute
Department of Therapeutic Dentistry

ABSTRACT: *Preservation and strengthening of the dental health of the population is one of the strategic directions of medicine. Despite modern scientific achievements, the intensity and prevalence of caries, as well as periodontal tissue diseases, have always been high. One of the important factors in the development of periodontal hard tissue diseases are systemic somatic diseases of the body. Rheumatism or acute rheumatic fever is a disease characterized by widespread inflammation of the connective tissue, mainly due to streptococcal infection. The disease most often occurs in children aged 7-15 years.*

KEY WORDS: dentistry, children's age, rheumatism, caries.

In childhood, caries develops faster and more rapidly. This is facilitated by: reduced resistance of the organism in children, anatomical and physiological features of the teeth, concomitant rheumatic disease, a decrease in local immunity of the oral cavity. Along with this, carious processes have a great influence on the composition of the oral fluid, which changes due to the formation of a carious process in the oral fluid. Rheumatic diseases represent an extensive group of nosological forms that are diverse in nature, the main feature of which is the presence in the patient of certain manifestations of the pathology of the musculoskeletal system [Skakodub A., 2019].

Today, the issue of providing specialized dental care to children with severe rheumatic diseases, in which, due to a decrease in local immunity in the oral cavity, dysfunction of the salivary glands and long-term use of anti-inflammatory therapy, is becoming increasingly relevant, there is a violation of the acid-base balance, leading to multiple dental caries.

The purpose of the study: to study the prevalence and intensity of primary caries and its modern and effective prevention in children with rheumatism.

Materials and methods of the study: We examined 48 children aged 6-14 years, patients with rheumatism, who are being treated in the regional Bukhara children's multidisciplinary center, in the department of rheumatology and who are on the "D" register at the place of residence in the district clinics of the city of Bukhara. Bukhara. The examined children underwent clinical and laboratory studies generally accepted in dentistry.

The age group from the age group of 7-10 years consisted of 14 children (29%), 34 children were in the age range of 11-14 years (71%). The control group was comparable to the main groups in terms of age.

Rheumatism was diagnosed by a pediatric rheumatologist. The study evaluated clinical, anamnestic, laboratory and instrumental parameters at the time of the initial examination. A comprehensive dental study included: identifying complaints of sick children, taking an anamnesis, visual examination and index assessment of KPU, GI, RMA KOSRE, cytological research methods,

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

professional and individual oral hygiene - the state of the oral organs. Children were examined using a standard set of dental instruments under artificial lighting.

During the examination of children, the generally accepted sequence was followed: external examination, examination of the functions of the maxillofacial region, examination of the lips and oral mucosa, examination of the state of periodontal tissues, assessment of the location of teeth, dentition and occlusion, assessment of oral hygiene, examination of hard tissues of teeth, condition of the oral fluid. The study of the condition of the teeth in the oral cavity of children began from the upper jaw from right to left, then on the lower jaw from left to right. The state of the teeth was taken into account: the absence of caries, intact teeth, carious lesions, including various forms of caries with and without complications.

Diagnosis of caries was carried out on the basis of anamnesis, clinical examination, probing, percussion. Of the additional methods, for the diagnosis of focal demineralization of enamel, the initial form of caries, staining of spots with a 2% aqueous solution of methylene blue was used according to the method of L.A. Aksamit. The term "focal enamel demineralization" refers to the initial manifestation of caries - caries in the white spot stage. This included single and multiple spots on the visible surfaces of tooth enamel.

By color, white homogeneous spots were distinguished, which, as a rule, were clearly defined, and heterogeneous spots, where chalky areas were combined with healthy enamel.

The sizes of the spots ranged from point sizes to occupying 1/3 of the tooth surface. According to the nature of the surface, spots with a shiny smooth surface were distinguished, matte rough. In some cases, a decrease in the enamel density in the area of focal demineralization was revealed, the enamel was easily scraped off by an excavator.

All stains related to focal enamel demineralization were stained with 2% aqueous methylene blue.

Results and analysis of the study: As a result of the examination of sick children, a highly significant incidence of major dental diseases in the oral cavity was established in a comparative study of patients with healthy children in the control group (Table 1).

Detection rates of major dental diseases in children with rheumatism significantly higher incidence of major dental diseases compared with healthy children in the control group.

Table 1

The prevalence of major dental diseases in sick children with rheumatism and the control group

Study Groups	Major dental diseases studied					
	dental caries		gingivitis		periodontitis	
	abs	%	abs	%	abs	%
1. Rheumatism, n=48	47	97,9	32	67	19	23
2. Control group of healthy children, n=11	7	63	3	27	-	-

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

Since when distributing children by age, groups 6-14 were small, for further research we selected mainly children as the largest groups of 48 children, all in-depth studies were carried out mainly with children of this age.

The study of the prevalence of dental caries in sick children compared with healthy children revealed a significant high prevalence of caries in sick children. If in the healthy group the prevalence was 48.9±1.5%, then in patients it was 79.5±2.20%. The prevalence of caries in rheumatism is significantly higher compared to the control and was respectively equal to 87.9±1.7% versus 48.9±1.5%.

The study of the second indicator of caries, as its intensity, revealed a rather large difference in these indicators in sick children compared to healthy ones. In the first age group with rheumatism, this indicator was 4.85±0.9 in contrast to the control group equal to 2.14±0.5. In the second age group, there is an increase in this indicator compared to the control group and the first age group.

The intensity of caries is highly significantly higher both in the first and second age groups, compared with the data of healthy children in the control group. In the first age group, KPU+kp was equal to 5.19±0.6, in the second - 5.21±0.8. In the control group, respectively, 2.14±0.5 and 1.95±0.3.

The conducted studies prove a higher prevalence and intensity of caries indicators in both studied groups with rheumatism.

Table 2

The intensity of caries in children with rheumatism

The course of the disease	Children's age					
	6-10 age			11-14 age		
	Milk teeth	Permanent teeth	Sum	Milk teeth	Permanent teeth	Sum
1. Articular form of rheumatism	2,4±0,3	2,45±0,07	4,85±0,9	2,37±0,2	2,52±0,6	4,89±0,4
2. Systemic form of rheumatism	2,6±0,4	2,59±0,2	5,19±0,6	2,48±,3	2,73±0,1	5,21±0,8
3. Control group	1,45±0,2	0,69±0,1	2,14±0,5	0,75±0,03	1,2±0,4	1,95±0,3

Note: * - the significance of differences in relation to the control group was noted, P<0.05.

It should be noted that caries in both milk and permanent teeth is characterized by an early and aggressive course, short-term development of caries complications, pulpitis and periodontitis, and almost asymptomatic against the background of powerful, anti-inflammatory therapy of the underlying disease. It was found that the onset of carious disease during the eruption of permanent teeth or in the first years after eruption, as well as the presence of several carious surfaces on the crown of permanent teeth. A feature of dental caries in sick children is its multiple nature, the presence of several carious cavities in 1 tooth (up to 3-4). Localization of caries not only in typical places for it, but also in the cervical region.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

As a result of the study, it was found that in the studied KPU index in children with rheumatism, the shares of "K" (caries) and "U" (removal) were expressed, as well as its multiple complications in the form of pulpitis and periodontitis.

Conclusions: The conducted studies prove a higher prevalence and intensity of caries indicators in both studied age groups in rheumatism.

BIBLIOGRAPHY.

1. Авакова Д.Р., Митронин А.В., Торопцова Н.В., Ерканян И.М. Кариес зубов у больных ревматоидным артритом: современное состояние проблемы // Вестник Национального медико-хирургического Центра им. Н.И. Пирогова. 2018. №1. –С.143-149
2. Атежанов Д.О. Уровень стоматологического здоровья детей с соматической патологией//Вестник АГИУВ.-2016.-№4.-С.66-70.
3. Безруков С.Г., Галкина О.П. Распространенность и интенсивность кариеса зубов в зависимости от функциональных свойств ротовой жидкости у больных ювенильным ревматоидным артритом // Современная стоматология. 2014. №2 (59). –С.67-68
4. Хамраева Д.Ш., &Казакова Н.Н. Болаларда кариес профилактикасининг замонавий усуллари// Вестник врача. Самарканд. - 2021. - № 2. - С. 104-108.
5. Kazakova N.N., Sobirov A.A. Changes in saliva in children with comorbidities// Journal For Innovative Development in Pharmaceutical and Technical Science. – 2021. - № 4(3). – P. 28-31.
6. Kazakova N.N. The Chronic Catarrhal Gingivitis Diagnosis Specifics in Patients with Rheumatism// JournalNX. -2020. - №11(6). – P. 396-400
7. GS.Amrulloevich, IG.Elmuradovich, &KN.Nodirovna. INTERDISCIPLINARY APPROACH TO THE DIAGNOSTICS OF PATIENTS WITH HIGH-LOWER JOINT DISEASES// World bulletin of public health, Volume 3,2021. – P. – 63-70. ISSN (E): 2749-3644 Imp.pactor-7.8
8. NN.Kazakova. THE SPECIFICS OF THE DIAGNOSIS OF CHRONIC CATARRHAL GINGIVITIS IN PATIENTS WITH RHEUMATISM// Turkish Journal of Physiotherapy and Rehabilitation, 32(3). Web of science. 2021. – P. 22969-22978. ISSN 2651-4451/ e-ISSN 2651-446X
9. RS SH, SG Sharopov, &NN Kazakova. IMPROVEMENT OF LOCAL PLASTICS OF SOFT TISSUES DURING EXPRESSION IMPLANTATION// STEP-2021. 3rd International Conference on Science Technology and Educational Practices. Portugal. – 2021.30 th May. – P. 57-58.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

10. RS SH, SG Sharopov, &NN Kazakova. FORECASTING THE WIDTH OF THE SOFT TISSUE IN THE DENTAL IMPLANTATION AREA// European Journal of Research Development and Sustainability. – 2021. №5(2). – P. 145-147.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

THE NATURE AND CHARACTERISTICS OF BLOG FIELD AND JOURNALISM.

Tursunova Khonzodabegim Khudoberdi kizi
Master of the University of Journalism and Public Relations of Uzbekistan

Annotation. *This article provides a systematic analysis of the content and current state of the blog industry. At the same time, the difference between the blog industry and today's traditional journalism is also calculated on a scientific basis, and to get feedback on the advantages and disadvantages of the blog industry.*

Keywords: *blog industry, structural analysis, traditional journalism, scientific foundations, production of the blog industry, advantages and disadvantages, feedback.*

Introduction: A blog (from the English web log [1] - "web log") is a view of a website in which articles are written in chronological order. Most blogs publish news or comments on a specific topic; others serve as a personal online diary.[1]

According to the Washington Profile, the first blog post was published in 1992 by T. Berens-Lee. In 1996, blogs spread to the general public.

In August 1999, San Francisco-based PYRA LABS launched Blogger. It was the first free blog service. was acquired by Blogger Google. In 2004, Apple sued the bloggers for spreading information about their new product, which had not yet been officially announced, but lost in the milk.

In 2006, a court ruled that bloggers also had the same rights as journalists.

Types of blogs

By type of authorship.

- Personal blog - one person is taken. (usually a blog owner).
- Symbolic blog - refers to an unknown person.
- Collective or social blog - run by a group of individuals based on information provided by the blog owner.
- Community blog - run by members of an organization.

According to multimedia types.

- Text blog - a project blog based on texts.
- Photo blog - a blog based on photos.
- Music blog - a blog based on music.
- Video blog - a blog based on video files.

Blog - 1. An online journal of events, an online diary, an online diary - a website, its regular entries consisting of online images or multimedia, which can be uploaded to reverse chronological sources, short descriptions and comments to foreign resources. The difference between a blog and a traditional diary is with the environment: blogs, resources, and the presence of readers who are unfamiliar with the public debate with the authors. 2. Personal sites consist mainly of the blog owner's personal rules and users 'comments on these posts.[2]

Tips on blogging.

	Blogging can be about ready-made forms of design. You may need a personal design or shape. ready-made forms are available on the Internet. These forms

[1] https://uz.wikipedia.org/wiki/Blog Wikipedia, the free encyclopedia

[2] Muratova, Nozima. Media and information literacy in journalism: [Text] / N. Muratova, E. Grizl, D. Mirzakhmedova - Tashkent: Bactrian Press, 2019. - 112 p

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

Design	are helpful in projecting these innovations. Such forms can be obtained from about addresses. Some providers offer these forms, which can also be used. The design is evaluated by the ease of work of the blog author and users. For example, comparing the designs of the blogs http://blog.cer.uz/ and http://blog.olam.uz/
Content	First determine the blog topic and choose a name. About the fact that the title of the blog reflects his theme. For example, if the topic is about food, the blog can be called "food", or if it is about business, it can be called "business". The content of the blog should include a brief introduction, a story and an article posted on yangiliklar.net. It is recommended that information be written in simple and clear language. They can be illustrated by pictures. It is important to pay attention to spelling mistakes. About whether the image size is suitable for web pages. Blogs are valued for their exact content. Exact content blog performs user status. therefore, it is important to keep in mind that the information will be interesting and useful for you. For example, http://blog.cer.uz/ to get acquainted with the content of the blog
Copyright	Copyright belongs to the author of the blog. If there are several authors, they belong to them. To obtain a copyright, you can apply to the Patent Office under the Cabinet of Ministers of Uzbekistan. If the blog is based on information from other authors, the comment address should be provided.
Hosting	The blog needs an area on the Internet. You will need to send from the provider service for hosting. That is, it is a paid service. The Internet provider can provide hosting.
Advertising and activation	You can send for advertising from the blog. number author will have these capabilities. It is also possible to activate the blog. To do this, it is necessary to sort it on the systems. Nowadays bloggers work on the newspaper for hours. The number of readers of a newspaper depends on the circulation of the newspaper, and the number of readers of a blog depends on the number of its users. For example, the blog http://blog.olam.uz/ pays attention to advertising information.

A journal is a type of social activity in which the owners (owners-journalists) collect, analyze and disseminate social information through the production of information (press, radio, television, news agencies, etc.). Journalism is one of the social propaganda and agitation.[3]

The term journalism was originally used to refer to a set, and a journal to all periodicals.

Today, the term journalism refers to the product of journalism, a set of related professions, education in the field, and the field of science. Journalistic information activities include the press, radio, television, agencies, documentaries, and so on.

The media in the system of journalism relies on daily social and special, important issues, from the interpretation of social issues and from scientific works. Information in the system of journalism operates at a certain frequency and speed in its activities.

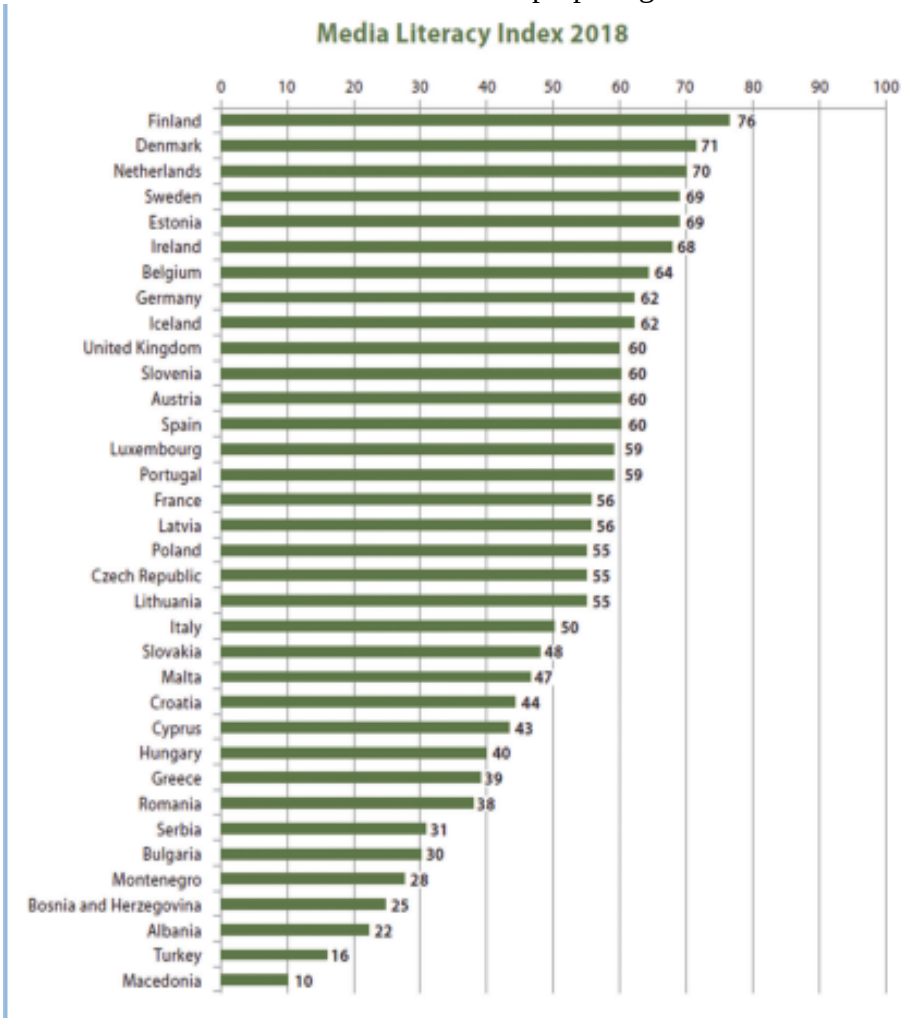
[3] https://qomus.info/encyclopedia/cat-j/jurnalistika-uz/ QOMUS.INFO Letter J Journalism

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

An article on the main uses, freedom of access to information, quality of education, trust between employees and electronic participation was posted on yangiliklar.net..[4]

The journal is skeptical of any information that is managed by any of the professions that are managed by the professors, and seeks to capture this information from multiple sources. It should also be able to communicate with everyone.

I was not strong, but there was pressure. Often I get a call from the event I attended, from the organizations I went to for interviews, when I got back to work. The leader laughs, "What else have I come for?" When my questions tortured the officials, or when I felt that something was wrong, I repeatedly asked them not to see the material I was preparing.[5]



However, they say that the analysis of the TV channels I work for is done in full impartiality, with the preparation of material that does not deviate from the content. One of the last broadcasts was to confirm the material that we had to give to the press secretary of the organization and inform him that we had achieved good health. This incident was also widely discussed on social media. I aired

[4] In the new media literacy index for 2018, stability in relation to “post-reality” and its predictors demanded a sense of ocean, Marin Lessensky said.

[5] https :// xs . uz / uzkr / post / hammasi - oldingi - holiga - qajtishiga - ishonmajman - ishongim - kelmajdi - zhurnalistlar - bugungi - zhurnalistika - haqida Yulduz Olimova - Journalist of "My Country" TV channel:

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

the material on the same day for the approval of the officials of the organization where I work. I have not met others.

As I watch today, I find that journalists are afraid. There is a lack of real critical, analytical material. Some journalists act like they're out of date. This is unfortunate. Is it not the first application of events and happenings in society, the production that takes place, the objective production of the legislation that is being abolished. Another important issue is the qualification of journalists, I think it is necessary to constantly search for and improve the skills of people working in this field.

References:

1. https://uz.wikipedia.org/wiki/Blog Wikipedia, the free encyclopedia
2. Muratova, Nozima. Media and information literacy in journalism: [Text] / N. Muratova, E. Grizl, D. Mirzakhmedova - Tashkent: Bactrian Press, 2019. - 112 p
3. https :// qomus . info / ensiklopediya / cat - j / jurnalistika - uz / QOMUS.INFO Letter J Journalism
4. Common sense wanted to be tolerant of "post-reality" and its predictors in the 2018 new media literacy index, Marin Lessensky said.
5. Creating for print media descriptions, T., 2008.
6. https://xs.uz/uzkr/post/hammasi-avvalgi-holiga-qajtishiga-ishonmajman-ishongim-kelmajdi-zhurnalistlar-bugungi-zhurnalistika-haqida Yulduz Olimova - Journalist of "My Country" TV channel
7. Muratova N. "Online journalism: theory and practice. Study guide. OzJOKU, 2019.
8. Kasimova N. Technological bases of Internet journalism. T. 2010.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

ISSN: 2349-7793 Impact Factor: 6.876., Volume: 16 Issue: 05 in May 2022

TO STUDY THE EXPERIENCE OF USING MODERN INNOVATIVE SEISMIC PROTECTION SYSTEMS IN THE DESIGN OF SKYSCRAPERS

Dilshoda Abduqayumova Anvarjon qizi
Student of Namangan Engineering and Construction Institute
Email.abduqayumovadilshoda2001@gmail.com

Abstract: *According to the local police of the state of Japan, about 130 thousand buildings and structures were destroyed and damaged as a result of the worst earthquakes in the history of the country and the subsequent tsunami. However, the largest of them, the skyscrapers, survived, and they were able to show that they were earthquake-resistant to natural disasters.*

Key words: *destructive effects, special technological solutions, external loads.*

In March 2011, more than two hundred thousand people watched a video of the Tokyo skyscrapers being photographed during an earthquake on YouTube.

- Earthquakes in Japan often occur during breakfast, lunch and dinner. Local scientists pay special attention to protection from this disaster, - said Mergen Abakanov, Deputy Director General of the Research Institute of Earthquake Engineering and Architecture of Kazakhstan. - They calculate the foundations for seismic resistance, use critical-mesh systems, effectively use a virgin diaphragm and various seismic protection devices.

Ensuring resilience to the destructive effects of earthquakes in the construction of skyscrapers is a unique set of engineering measures. The purpose of these measures is to reduce the impact that can occur on the upper part of the building by damaging the value of the seismic force acting between the building and the ground.

Earthquake-resistant buildings must meet several of the most important requirements: the symmetry of structural schemes, a uniform distribution of masses, and the correct use of building materials. The main element that allows to increase the stability of modern skyscrapers is a metal frame, which is branched using a central support (column) made of steel.

Steel frames made on the basis of special technological solutions can not only adequately withstand seismic forces, but also ensure reliable operation of structures under the influence of future earthquakes. These seismic forces can be divided into two groups: the first will be placed at the bottom of the skyscrapers, and the second will be distributed over the entire height of the building.

By constructive ideas belonging to the first group, it can be understood that an additional object appears between the building itself and the floor, which allows to extinguish the horizontal vibrations in the soil layer. The types of these additional objects can be many: it can be a lead-rubber base, a spring vibration damping device (damper) or a sliding base.

Several nine-story panel buildings in Almaty, which are seismically uncomfortable, stand on a gabled structure: during the earthquake, the ground beneath the apartment building appears to have shaken slightly, while the house itself remains in place. In Japan, on the other hand, lead-rubber supports are often used - cylindrical rubber devices with a high flexibility of the lead core with a diameter of about one and a half meters. During an earthquake, the lower part of the base moves along with the ground, while the upper part remains in place, allowing the building to maintain its direction in space for some time [4,5].

The second group is the idea of reducing the impact of seismic loading along the height of a building. In particular, the use of a virgin diaphragm in high-rise buildings is mandatory here. They cause a redistribution of energy between vertical load-bearing structures and inertial dampers acting

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

as a pendulum (when the building is tilted to one side and the pendulum tries to return the building to its previous position). Such dampers were installed in the Taipei 101 skyscraper, which in 2002, while still under construction, experienced a magnitude 6.8 earthquake. Inside the tower, on the 88-92 floors, there is a sphere weighing 660 tons. It consists of 41 steel plates, which are held by eight steel ropes and eight springs. possible.

In order to select the exact type of seismic wave absorber, it is necessary to know the seismological data of each construction site, as well as their specific geological characteristics to record their velocity, acceleration and displacement.

An earthquake in 1995 in Kobe, Japan, destroyed about 200,000 buildings and killed 6,434 people. The results of the earthquake study showed that many skyscrapers in the city did not meet the earthquake resistance requirements adopted in 1981 at all.

At that time, the builders had built old-style weak wooden roofs and multi-ton roofs on the towers, which further intensified the effects of strong winds and typhoons. However, under the influence of the earthquake, unstable curtains collapsed and heavy slabs on the roof overwhelmed the structures from top to bottom. Recent events show that Japanese builders have learned from their mistakes in the past and changed their approach to building skyscrapers.

The design of seismic structures is a very complex issue. This is because seismic forces are formed not only under the influence of external loads, but also in the process of vibration of structures. This situation has identified two ways to increase the seismic strength of structures, namely traditional and special methods.

Traditional methods are mainly concerned with reducing the mass of structures, increasing their strength and virginity properties, as well as choosing rational constructive types and planning solutions. Special methods of seismic protection are very important for high-rise buildings, which are associated with the targeted modification of the dynamic schemes of operation of structures [1].

Thanks to a specially adopted government program of the Japanese state to support scientific research on the development of innovative technologies of seismic protection of buildings and the development of seismic protection design standards and ranked first in the world in the number of buildings (more than 3,000 buildings and structures). One of the technical solutions adopted is to increase the virginity and priority of these structures. For example, in the Harumi Island Triton Square office complex in Japan, vibration control devices are located around the perimeter of the main building, which protects load-bearing columns and beams from strong earthquakes (Figure 1). As a result, three adjacent buildings are interconnected by a damping system. This helps to reduce the vibration caused by wind pressure and provide a comfortable environment inside the rooms.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

Figure 1. Harumi Island Triton Square office complex, Japan, 2001.

Figure 2. Nikken Tokyo Building, Japan, 2003.

A vibration control system was also used in the Nikken Tokyo Building in Japan (construction completed in March 2003) (Figure 2) [3].

The above brief comments provide examples of building design using innovative systems of seismic protection of buildings in Japan, as well as some modern methods of seismic protection of buildings. In particular, it was noted that one of the most effective ways to ensure the reliability of high-rise buildings and structures is the effective use of seismic protection and damping devices.

The use of innovative seismic protection systems allows to reduce the seismic forces acting on buildings by 2-3 times. Naturally, the use of vibration control systems in buildings increases costs, but seismic resistance indicators (including the reliability of load-bearing structures and equipment) increase.

Thus, a significant increase in the following indicators can be achieved through the implementation of proper design work on the effective use of seismic protection and seismic extinguishing means:

- reliability of buildings increases;
- safety and reliability of equipment is ensured;
- economic performance of buildings will increase;
- there is no need to carry out rehabilitation work after strong earthquakes;
- Convenient and comfortable conditions will be created for the population.

REFERENCES:

1.Зеленицкий И. Япония научилась на собственных ошибках и строит сейсмоустойчивые небоскребы.// "Коммерсант. Наука" №1 от 01.04.2011, стр. 17.
2.Architector [Электронный ресурс]: Harumi Island Triton Square, Япония,2001.
3.Architektonika [Электронный ресурс]: Nikken Tokyo Building, Япония,2003.
4. Б.С.Рахмонов. Иншоотлар динамикаси ва зилзилабардошлиги асослари.Ўқув қўлланма.Урганч.2012 й. 275 бет .
5.Б.А.Ҳобилов, У.Фахриддинов**.** Бино ва иншоотлар зилзилабардошлиги. Darslik 1 ва 2-қисм.Тошкент,2014. 272 бет.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

WAYS OF APPLYING INTERNET RESOURCES IN TEACHING ENGLISH TO A2 LEVEL LEARNERS

Saydaliyeva Umida Furqat qizi

Teacher of English department, "TIIAME" National Research University,

Tashkent, Uzbekistan

Ziyadulloyeva Mohidil Shovkat qizi

Teacher of English department, "TIIAME" National Research University,

Tashkent, Uzbekistan

Annotation. *This paper is planned to give a short diagram of the possible advantages of Information and Communication Technology (ICT) use in training and the ways by which diverse ICTs have been utilized in instruction so far. A case of utilizing Internet assets for training English for youthful students is likewise acted in this paper. At that point, this paper closes with a desire for future ICT-based training in Uzbekistan.*

Ker words: *Internet, teaching English, young learner, ICT, innovative teaching, websites, creative methodology*

Introduction. Globalization and innovative change have made another worldwide economy. The rise of this new worldwide economy has genuine ramifications for nature and reason for instructive foundations. As the half-existence of data keeps on contracting and admittance to data keeps on developing exponentially, schools can't stay simple settings for the transmission of an endorsed set of data from educators to understudy over a fixed timeframe. Subsequently, Information and correspondence advances (ICTs)— which incorporate radio and TV, just as more up to date computerized innovations, for example, PCs and the Internet—have been promoted as conceivably incredible empowering devices for instructive change and change. At the point when utilized properly, extraordinary ICTs are said to help grow admittance to instruction, reinforce the significance of training to the undeniably computerized work environment, and raise instructive quality by, among others, helping make educating and learning into a drawing in, dynamic cycle associated with reality. The public vision that identified with the advancement of HR in the ICT area is: "Actualize Longlife Learning Paradigm". To build the degree of life quality, wherein ICT is situated in this setting as an asset to accomplish "Make It As The Tool To Achieve Longlife Learning Paradigm". Or maybe, schools must advance "figuring out how to learn",i.e., the obtaining of information and aptitudes that make conceivable persistent learning over the lifetime. [1]

Nonetheless, the experience of presenting distinctive ICTs in the homeroom and other instructive settings everywhere in the world in the course of recent many years recommends that the

[1] Ayres, R. 2003. *Developing a Tool for Integrating CALL into the ESL Curriculum: A Case Study.* In Morrison, B. et. al (Eds.), Directions in CALL: experience, experiments, and evaluation (pp. 17-32). Hong Kong: Hong Kong Polytechnic University.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

full acknowledgment of the expected instructive advantages of ICTs isn't programmed. The successful coordination of ICTs into the instructive framework is an intricate, multifaceted cycle that includes not simply innovation—surely, given enough introductory capital, getting the innovation is the most effortless part!— yet additionally educational plan and instructional method, institutional preparation, educator abilities, and long haul financing, among others.

For non-industrial nations, ICTs have the potential for expanding admittance to and improving the significance and nature of instruction. ICTs are a conceivably incredible asset for expanding instructive chances, both formal and non-formal, to already underserved electorates—dissipated and provincial populaces, bunches customarily barred from training because of social or social reasons, for example, ethnic minorities, young ladies and ladies, people with inabilities, and the old, just as all other people who for reasons of cost or due to time limitations can't select nearby. The examination has indicated that the suitable utilization of ICTs can catalyze the paradigmatic move in both substance and teaching method that is at the core of instruction change in the 21st century. On the off chance that it is planned and executed appropriately, ICT-upheld instruction can advance the securing of the information and abilities that will enable understudies for long-lasting learning. At the point when utilized suitably, ICTs—particularly PCs and Internet innovations—empower better approaches for educating and adapting instead of just permit educators and understudies to do what they have done before in a superior manner. These better approaches for educating and learning are supported by constructivist hypotheses of taking in and establish a move from an educator focused teaching method—in its most exceedingly terrible structure described by retention and repetition learning—to one that is student-focused.

ICT-improved learning activates instruments for the assessment, estimation, and investigation of data, in this way giving a stage to understudy request, examination, and development of new data. Students, accordingly, learn as they do and, at whatever point proper work on genuine issues inside and out creation learning not so much dynamic but rather more pertinent to the student's life circumstance. Thusly, and rather than remembrance based or repetition learning, ICT-upgraded learning advances expanded student commitment. ICT-improved learning is additionally "without a moment to spare" learning in which students can pick what to realize when they have to learn it. ICT-upheld learning supports communication and participation among understudies, educators, and specialists paying little mind to where they are. Aside from displaying genuine collaborations, ICT-upheld learning furnishes students the occasion to work with individuals from various societies, in this way assisting with upgrading students' joining and open aptitudes just as their worldwide mindfulness. It demonstrates learning done all through the student's lifetime by extending the learning space to incorporate friends as well as tutors and specialists from various fields. ICT-upheld learning advances the control of existing data and the making of genuine items as opposed to the spewing forth of got data. ICT-improved learning advances a topical, integrative way to deal with educating and learning. This methodology wipes out the fake partition between the various orders and among hypothesis and practice that portrays the customary homeroom approach. ICT-upgraded learning is understudy coordinated and symptomatic. In contrast to static, text-or print-based instructive innovations, ICT-upgraded learning perceives that there are various learning pathways and a wide range of verbalizations of information. ICTs permit students to investigate and find as opposed to only tune in and recollect.[2]

[2]Cahyono, B.Y. 2010. *Teaching English by Using Internet Resources*. Malang: State University of Malang Press.

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

The utilization of ICT in instruction has become a significant apparatus in educating and learning measures. Different sorts of ICT have been made and acquainted with cultivating the educating and learning measure in the homeroom. The function of ICT as a method for introducing learning materials can't be messed with since the utilization of ICT is probably going to make learning additionally intriguing and make it more fruitful. How Uzbek English educator adapts to creating innovation? Ayres (2003) attested some significant focuses to be contemplated when an educator liable to set up a viable combination of CALL innovation into the EFL homeroom, for example, 1. Distinguishing the course educational ways of thinking and learning results obviously because it will impact the decision of technique, material, and drill; 2. Recognizing accessible CALL or ICT assets including the sites, both for understudies and staff. I think the thought of the upkeep, setting, and proportion between the PCs and the clients ought to likewise be incorporated; 3. Match the learning result with proper assets; make an unmistakable substance profile so there is no covering or redundancy; 4. Make an unequivocal goal and it ought to be recorded both for educators and understudies.

In any case, there are a few issues that should have been considered for this incorporation: To start with, it is critical to consider the academic viewpoints which support the product creation so it will coordinate the course targets. Second, student language level and PC abilities, and how available the assets for the understudies. Third, instructor preparation and capabilities on PCs and innovation. Fourth, on the head of each one of those contemplations, money-related issues will impact pretty much every part of that coordination. Presently, how to apply those hypothetical bases into the Uzbek homeroom setting? Perhaps the most component of ICT utilized is as Internet assets. With regards to the EFL instructing and learning measure, there are a few highlights offered by the Internet that can be considered for showing English in the study hall. There are in any event three fundamental areas of utilizing web assets in educating English. The first is utilizing Online Resources to help English Language Learning. With these highlights, educators can utilize the assets that are accessible on the Internet for instructional purposes. This part doesn't expect educators to adjust the accessible materials from the assets. This part manages Online Dictionary, Online Thesaurus, Encarta, Online Newspaper, Online Magazines, Internet Journals, Wikipedia, and Internet Games.

The subsequent element is utilizing Internet assets to improve English language learning. These kinds of Internet highlights need the instructors' imagination in utilizing them. These highlights can be utilized to make the learning of English language abilities and English language segments better. This part incorporates Searching Engines, Internet Grammar Resources, Internet jargon Resources, Internet ESL Resources, TOEIC Online Preparation, Podcast, Videocasts, and YouTube. The third component is utilizing Internet assets to learn English intelligently. These kinds of highlights feature the significance of cooperation in utilizing web assets. These highlights require the understudies to react to the Internet with a specific goal in mind so they could learn English better. The Internet assets inside this classification incorporate Mailing Lists, WebQuests, Web sites, Facebook, Moodle, Discussion Board, and Virtual Classroom.[3]

Numerous exercises can be applied in showing English for youthful students, including games, melodies, and stories. Utilizing stories in training English for youthful students is an integral asset

---

[3] *Thijs, A., et al.* Learning Through the Web Available Online. *http://www.decidenet.nl/Publications/Web_Based_Learning.pdf Accessed 31 May 2002.*

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES., under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

since youngsters are charmed by stories and can disguise jargon and the structure of language while tuning in to them. One reason why stories function admirably for encouraging youthful students has to do with inherent inspiration. Natural inspiration is the hypothesis that individuals are propelled by inward factors. Youngsters don't comprehend the outer variables that may inspire a grown-up to choose to gain proficiency with an unknown dialect, so the educators need to make a study hall that inside spurs them to take an interest in the exercises and, at last, gain proficiency with the language. At the end of the day, the instructors need to ensure that their understudies appreciate the way toward educating and learning or they won't be propelled to take an interest and learn. At the point when the kids as of now love tuning in to stories, it implies that there is as of now a most of the way to naturally propelling them. The lay relies upon how great the story is, how intriguing and bright the delineations are, and how it is being told. Nonetheless, by utilizing the Internet those prerequisites can be satisfied without any problem. Here is one example of a web site that can be visited for young learners: *http://www.magickeys.com/books/#yc*

Conclusion. The utilization of ICT is rousing exceptional changes in instruction around the globe. These changes hold a guarantee for the improvement of human lives. Notwithstanding, in Uzbekistan, it appears to be that we are still in the phase of 'figuring out how to utilize ICT' as opposed to 'utilizing ICT to learn'. We do trust that later on the advancement of ICT in instruction will arrive at the degree of utilizing ICT to learn. Besides, when these days the utilization of ICT will in general be inconsistent, in the following - not a long time before now- - it will be improved and facilitated well and contacted all youngsters the entirety of Uzbekistan's territory. At that point, each kid in this nation can take the advantage of having such a magnificent and charming involvement with the English class.

REFERENCES:

1. Ayres, R. 2003. *Developing a Tool for Integrating CALL into the ESL Curriculum: A Case Study.* In Morrison, B. et. al (Eds.), Directions in CALL: experience, experiments, and evaluation (pp. 17-32). Hong Kong: Hong Kong Polytechnic University.

2. Bilawal, T. 2005. *UNESCO Meta-survey on the Use of Technologies in Education: Indonesia ICT Use in Education*. [http://www.unescobkk.org/fileadmin/user_upload/ict/Metasurvey/indonesia.pdf.] (July 1, 2008)

3. Cahyono, B.Y. 2010. *Teaching English by Using Internet Resources*. Malang: State University of Malang Press.

4. Children's Story Books Online. *http://www.magickeys.com/books/#yc accessed on 31 March 2011.*

5. *Thijs, A., et al.* Learning Through the Web Available Online. *http://www.decidenet.nl/Publications/Web_Based_Learning.pdf Accessed 31 May 2002.*

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT,

ENGINEERING AND SOCIAL SCIENCES

ISSN: 2349-7793 Impact Factor: 6.876., Volume: 16 Issue: 05 in May 2022

ACRYLAMIDE AND QUINAZOLINDION: INDUSTRIAL APPLICATION

Karimova Sadoqat Amrilloyevna
BuxMTI basic doctoral student

Annotation: *Earliest reports on the origin of acrylamide in food have confirmed asparagine as the main amino acidresponsible for its formation. Available evidence suggests that sugars and other carbonyl compounds play a specific role in the decarboxylation process of asparagine, a necessary step in the generation of acrylamide. It has been proposed that Schiff base intermediate formed between asparagine and the sugar provides a low energy alternative to the decarboxylation from the intact Amadori product through generation and decomposition of oxazolidin-5-one intermediate, leading to the formation of a relatively stable azomethine ylide.*

Keywords: *acrylamine, product, decarboxylation, industry, method.*

INTRODUCTION

This paper describes the progress made to date in understanding the fundamental mechanistic aspects of the formation of acrylamide. Essentially all experiments were conducted in a laboratory environment, and their validity infood remains to be assessed.

MATERIALS AND METHODS

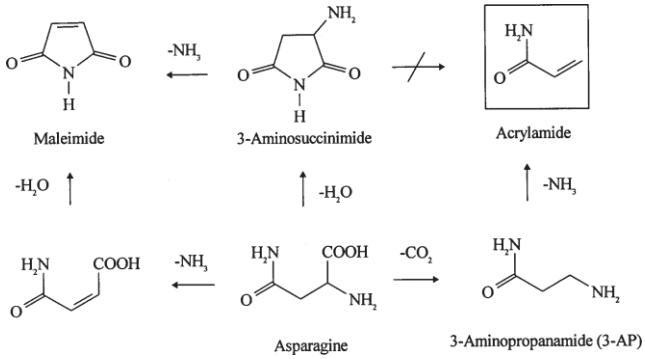


Figure 1. Thermal degradation of asparagine.

Initial investigations that followed the discovery of acrylamide in cooked food have led not only to the unambiguous identification of asparagine as the mainamino acid precursor of acrylamide, but has also confirmedthat the 3 carbon backbone of acrylamide and the amide nitrogen originate from corresponding locations in asparaginein model system studies using N and C-labeled precursors. Although thermally allowed decarboxylation and deamination reactions of asparagine alone, in principle, can produce acrylamide (Figure 1), the presence of sugars was necessary to effect the conversion of asparagine into acrylamide. Subsequent studies have indicated that any carbonyl-containing moiety can perform asimilar transformation and that asparagine alone prefers to undergo intramolecular cyclization and form an imide (Figure 1) rather than decarboxylate and form acrylamide.

RESULTS AND DISCUSSION

The first 2 reports (1, 2) published on the origin of acrylamide in food had entirely different perspectives on themode of sugar-assisted decarboxylation of asparagine. Mottram et al. (1) proposed a known oxidative decarboxylation process known as Strecker degradation (7), which is a well established process in thermally generated aroma formation in food (1); however, this process will not

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

only decarboxylate asparagine but also at the same time oxidize it into Strecker aldehyde that needs further reductionand dehydration steps to be converted into acrylamide. On theother hand, Stadler et al. (2) reported the unexpected discovery of asparagine *N*-glycoside or Schiff base (Figure 2),the initial interaction product between glucose and asparagine, as the direct precursor of acrylamide, producing higher yields than any of the corresponding more stable Amadori product (Figure 2) or the sugar and asparagine mixtures. This critical finding provided the initial clues for thefirst detailed mechanism that linked decarboxylation to the presence of open form of asparagine *N*-glycoside (Schiff base) as proposed by Yaylayan et al. (Figure 2).

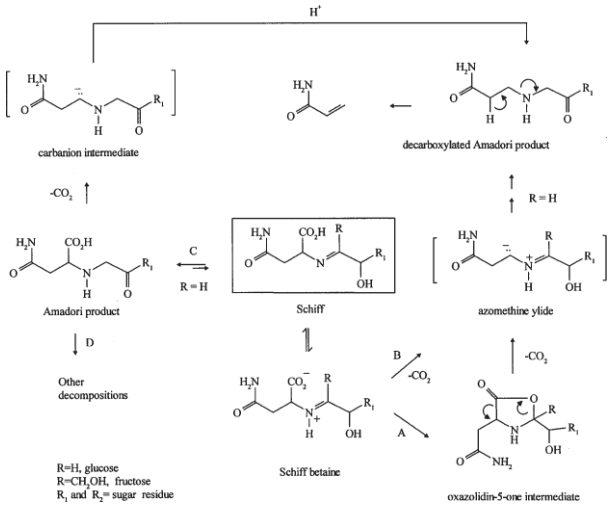


Figure 2. Proposed mechanisms of formation of acrylamide by Yaylayan et al. (pathway A) and by Zyzaket al. (pathway B).

The proposed mechanism was based on the known abilityof imines (or Schiff betaines) formed between amino acids and aldehydes to undergo intramolecular cyclization (Figure 2, pathway A) initiated by the carboxylate anion andformation of oxazolidin-5-one intermediate (Figure 2). Manini et al. observed the formation of such an intermediate and its facile decarboxylation at room temperature in D-glucose/L-DOPA model system. However, literature evidence indicates thatamino acids in the presence of carbonyl compounds such as aromatic aldehydes or ninhydrin undergo decarboxylation through the formation of oxazolidin-5-one intermediate. On the other hand, if the asparagine *N*-glycoside (Schiff base) is allowed to undergo Amadori rearrangement without decarboxylation, it can still undergo this step, but at much higher temperatures because the developing negative chargeon the Amadori carbanion intermediate (Figures 2 and 3) is not stabilized similar to azomethine ylide. However, at this high temperature, competition with intramolecular cyclization to form N-substituted succinimide Amadori product might hinder acrylamide formation even further. According to Figure 3, both decarboxylated species, the Schiff base and Amadori products, are capable of generating acrylamide either directly or indirectly through release of 3-aminopropanamide (3-AP).

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

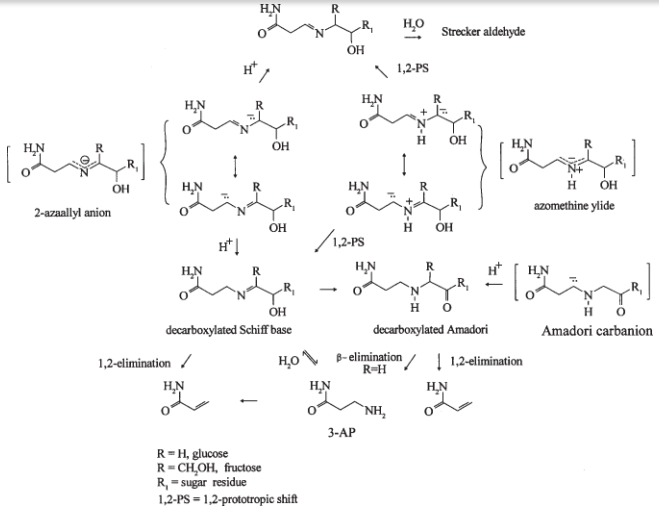


Figure 3. Proposed role of reactive intermediates2-azaallyl anion, azomethine ylide, and Amadori carbanion in the generation of acrylamide.

CONCLUSION

Thus, the foodmatrix adds to the complexity of elucidating reaction pathways in food, and confirms earlier observations that eachfood category needs careful and individual study. Furthermore, and owing to the importance of the Maillard reaction to the overall quality of manufactured foods, the process of decoupling aromagenesis from reactions leading to the formation of undesirable chemicals, therefore, becomes one of the main challenges that we face today.

REFERENCES

1. *Maillard Reaction in Food Chemistry and Medical Sciences: Update for the Postgenomic Era* (2002) S. Horiuchi, N. Taniguchi, F. Hayase, T. Kurata, & T. Osawa (Eds), International Congress Series 1245, Elsevier Science, Amsterdam, The Netherlands

2. Velisek, J., Davidek, J., Hajslova, J., Kubelka, V., & Janicek,
G. (1978) *Lebensm. Unters. Forsch.* **167**, 241–244

3. Breitling-Utzmann, C.M., Köbler, H., Herbbolzheimer, D., &Maier, A. (2003) *Dtsch. Lebensm. Rundsch.* **99**, 280–285

4. Velisek, J., Davidek, J., Kubelka, V., Bartosova, J., Tuckova,A., Hajslova, J., & Janicek, G. (1979) *Lebensm. Wiss.Technol.* **12**, 234–236

5. Sugimura, T. (2002) *Toxicology* **181-182**, 17–21

6. Philips, D.H. (1999) *Mutat. Res.* **443**, 139–147

7. Tricker, A.R., & Preussmann, R. (1991) *Mutat. Res.* **259**,277–289

ISSN 2349-7793 (online), Published by INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES.,
under Volume: 16 Issue: 05 in May-2022
https://www.gejournal.net/index.php/IJRCIESS

TOGETHER WE REACH THE GOAL