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# **INTERNATIONAL CONFERENCE ON ADVANCE SCIENCE AND TECHNOLOGY**

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## GRAIN SEEDER DESIGNED FOR DRY SLOPING AREAS

(TIAME) National Research University Independent researcher

**R.F.Khudaykulov**

**Abstract.** The article presents the shortcomings of the current seeder for sowing grain when used in arable fields, the need for its improvement, the design scheme, structure and technological process of the new seeder.

**Keywords.** Auger, hill, lalmi, grain, seeder, hole, reel, centner.

As is known, alluvial lands are areas of unirrigated agriculture in the steppe zone. Alluvial farming is widespread in areas with an average annual rainfall of more than 200 mm. In these areas, agronomic measures such as the accumulation and storage of natural moisture in the soil, fertilization, weed control, and prevention of soil erosion are used. Alluvial farming is also of great economic importance because it allows the use of lands that are inconvenient for irrigation. Alluvial lands are a great reserve for expanding irrigated agricultural areas with the creation of irrigation facilities. After the release of water in Tashkent, Samarkand, Jizzakh, and Kashkadarya regions, large areas of alluvial lands were converted into irrigated agricultural areas [1].

According to the State Statistics Committee, in 2017, a total of 322,464 hectares of arable land were cultivated in Uzbekistan, of which 157,606 hectares were wheat and 80,613 hectares were barley. [2].

While the arable land slightly increased in 2018 to 330,659 hectares, in 2019 this figure decreased to 300,025 hectares, or 30,634 hectares. The reason given was low rainfall in these years.

In 2020 and 2021, the arable land in our republic increased again, reaching 323,544 hectares and 339,938 hectares, respectively.

In 2022, the arable land decreased slightly again, and a total of 324,633.3 hectares of agricultural products were sown, of which 133,603.6 hectares were wheat and 86,273 hectares were barley.

Grain is grown in the arable lands of Surkhandarya, Tashkent, Jizzakh, Samarkand and Kashkadarya regions.

In 2017 and 2022, grain was grown on a smaller area - between 2.6 and 5.6 thousand hectares in Surkhandarya and Tashkent regions, while grain was grown on 38.9

thousand hectares in Samarkand region, 35 thousand in Jizzakh region, and about 67 thousand hectares in Kashkadarya region.

In the dryland areas of Samarkand and Kashkadarya regions, mainly wheat was grown, which amounted to 35,656.9 and 63,325.5 hectares in 2021, respectively, while in Jizzakh region, barley was grown on a larger area, which was 63,893 hectares, and wheat was grown on 28,497.1 hectares (Figure 1.3).

Based on the analysis of the above figures, wheat is grown on more than 133,000 hectares of land, and barley on more than 86,000 hectares. So, the total grain area is 219,000 ha.

From these data, it can be seen that dry lands are suitable for growing cereals, especially wheat.

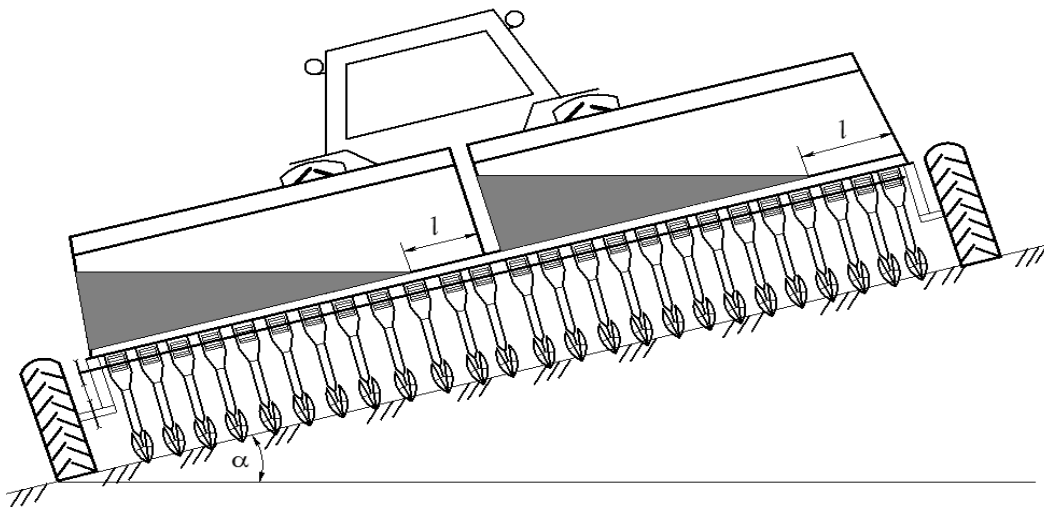
Currently, the yield obtained from grain crops is 7-15 centners per hectare. However, experiments have proven that if agrotechnical measures are applied in a timely and correct manner, it is possible to obtain 15-25 quintals of grain per hectare of land [3].

Thus, although there are opportunities to obtain high yields from arable lands, the productivity in production is much lower than the potential. Studies have shown that increasing productivity should begin with improving the quality of sowing.

To do this, there must be seeders that fully ensure the sowing of grain, taking into account the slope of the arable lands and its direction. Because currently there are no grain seeders with devices that take into account the specific characteristics of arable lands. The current SZ-3.6 grain seeder is intended for flat fields.

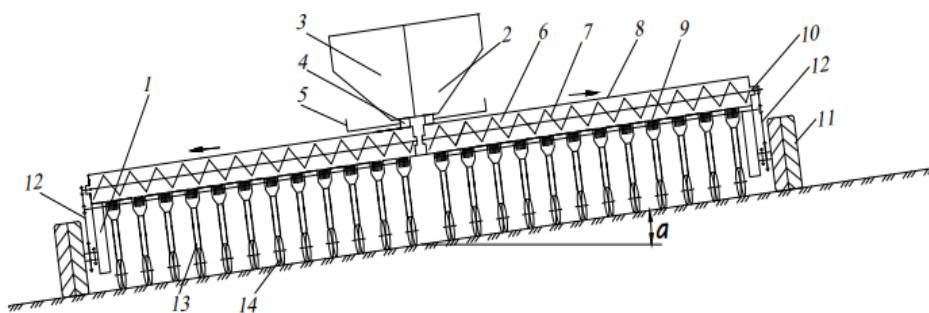
When these seeders are used in arable lands, a disadvantage of the seeder is observed. More precisely, the amount of grain in the bunker on the upper side of the slope decreases and gradually there is no grain on the metering devices, that is, the sowing process is not carried out. Because the grain in the bunker always moves downhill and its surface remains horizontal. The reason is that the grain has a very scattering property and the natural angle of friction (spill) is quite small. As the amount of grain in the bunker decreases, the area of the area that remains unplanted increases. All this leads to a decrease in productivity.

The fact that the grain in the bunker is collected by moving towards the slope and the surface is horizontal is shown in **Figure 1**.



**Figure 1. Scheme of the state of grain placement in the bunker during sowing grain in arable land with a SZ-3.6 seeder**

In order to eliminate the mentioned shortcoming, the following changes were made to the design of the current grain thresher. The hopper was placed in the middle of the coverage width of the seeder. It was divided into two parts in the transverse plane, and a hole for pouring grain was opened from each part. The seeder is conditionally divided into two parts according to the working width. An auger is installed on each part separately, and it is placed on the gauge (Fig. 2).



**Figure 2. Scheme of the improved seeder**

The improved seeder consists of a frame 1, respectively, right and left hoppers 2, 3, a hole 4, a barrier 5, auger shaft 6, auger 7, a casing 8, a metering device 9, a drive gear 10, a support roller 11, a chain drive 12, a seed conveyor 13 and sowing discs 14.

The rotational movement of the auger 7 is provided by a chain drive 12 from the seeder rollers 11.

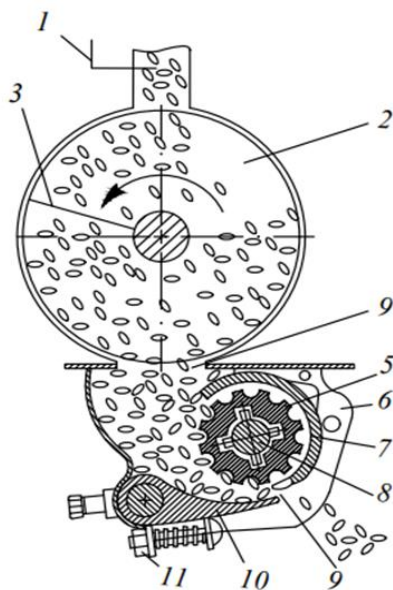
The hole 4 and the casing 8 are interconnected. The lower part of the casing 8 is fixedly connected to the metering device 9. This design ensures that the grain in the

hopper falls into the metering device. Since the gap between the auger 7 and the metering device body 9 is smaller than the thickness of the wheat, grain damage is prevented.

The specified planting rate is provided by changing the number of rotations of the hole surface 4 and the corresponding screw 8. Changing the number of revolutions of the auger is done through the chain transmission 12.

The working width of the used SZ-3,6 and improved seeders is the same.

The technological workflow of the improved seeder is presented in Figure 3.



**Figure 3. Schematic of the technological workflow of the improved seeder**

When the machine is started, the grain in the hopper (not shown in the figure) falls into the auger 3 in the amount determined by the barrier 1 through the hole. The auger 3 delivers the grain through the hole 4 to the metering devices. From there, the seed is fed to the sowing discs by means of the seed conveyors and is sown.

The metering device consists of a roller 5, a housing 6, a bushing 7, a roller shaft 8, a stud 9, a base 10 and an adjusting screw 11. The design and technological process of the metering device in the improved seeder have not been changed [4].

The improved seeder ensures high-quality sowing regardless of the slope and the amount of grain in the hopper. Because the auger forcibly delivers the specified amount of grain to each metering device.

In conclusion, it can be said that in order to increase grain yield in arable lands, it is necessary to ensure the completeness of sowing and improve its quality. For this, it

is necessary to provide metering devices with a fixed amount of grain. This, in turn, requires the improvement of existing seeders.

## **LITERATURE**

1. Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 1025 dated December 20, 2019 “On the effective use of available land and water resources, rational placement of agricultural crops for the 2020 harvest and forecast volumes of product production”.
2. Kurvontoev R., Muminov S.M., Murodov F., Ernazarova H.B. New techniques and technologies of soil cultivation on arable lands // Collection of scientific articles of the Republican scientific and practical conference “Issues of fertility, protection and effective use of soils of Uzbekistan”. – Tashkent: Tashkent State University of Applied Sciences, 2013. – P. 153-157.
3. Khudayarov B.M., Khudaikulov R.F., Grain seeder for arable land. International conference “Current issues of agricultural development: problems and solutions”, Fergana, June 6-7, 2023. B – 1156-1158.
4. [https://n.ziyouz.com/books/uzbekiston\\_milliy\\_ensiklopediyasi/O'zbekiston%20Milliy%20Ensiklopediyasi%20-%20L%20harfi.pdf](https://n.ziyouz.com/books/uzbekiston_milliy_ensiklopediyasi/O'zbekiston%20Milliy%20Ensiklopediyasi%20-%20L%20harfi.pdf).

## **“СОЦИАЛЬНЫЕ ПСИХОЛОГИЧЕСКИЕ ОСОБЕННОСТИ И ГЕНДЕРНЫЕ РАЗЛИЧИЯ СЧАСТЬЯ”**

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**Аннотация (Abstract):** Это исследование направлено на выявление социально-психологических особенностей восприятия счастья, а также на изучение гендерных различий, связанных с этим понятием. Используя анкетный опрос, были собраны данные по ключевым аспектам счастья среди мужчин и женщин разных возрастов. Результаты показали, что восприятие счастья варьируется в зависимости от пола и социальных факторов, таких как семейное положение, карьерные устремления и степень социальной поддержки. Полученные данные имеют практическое значение для разработки программ, направленных на улучшение благополучия.

**Ключевые слова (Keywords):** Счастье, гендерные различия, социально-психологические особенности, благополучие, социальная поддержка.

### **ВВЕДЕНИЕ (INTRODUCTION)**

Проблема счастья и благополучия является одной из центральных тем в психологии. Многие исследования подчеркивают влияние социальных и психологических факторов на восприятие счастья, однако гендерные различия в этом аспекте остаются недостаточно изученными. Цель данной работы — исследовать социальные и психологические характеристики восприятия счастья и выявить гендерные различия в восприятии счастья среди мужчин и женщин. Работа ориентирована на исследование взаимосвязи счастья с такими переменными, как социальная поддержка, семейное положение и профессиональная удовлетворенность.

### **Методология (Methods)**

Для получения данных использовался количественный метод анкетирования. Участниками исследования стали 200 респондентов (100 мужчин и 100 женщин) в возрасте от 20 до 50 лет. Анкета содержала вопросы, направленные на оценку уровня счастья, социального окружения, уровня социальной поддержки и степени профессиональной удовлетворенности. Для анализа данных использовались статистические методы, такие как корреляционный и

регрессионный анализ, для выявления значимых взаимосвязей между переменными.

### **Результаты (Results)**

Анализ данных показал значительные гендерные различия в восприятии счастья. Женщины чаще связывают счастье с семейными отношениями и социальной поддержкой, тогда как мужчины акцентируют внимание на профессиональных достижениях. Кроме того, мужчины чаще подчеркивали значение финансовой стабильности как фактора счастья, тогда как для женщин важным аспектом являлась гармония в личной жизни. Результаты также показали, что женщины с высоким уровнем социальной поддержки демонстрируют более высокий уровень счастья, независимо от семейного положения и карьеры.

### **Обсуждение (Discussion)**

Полученные данные согласуются с теорией, согласно которой гендерные различия в восприятии счастья обусловлены как биологическими, так и социальными факторами. Результаты показывают, что женщинам свойственно строить счастье вокруг межличностных связей и поддержки, в то время как мужчины фокусируются на карьерных аспектах и финансовой стабильности. Эти находки важны для создания гендерно-ориентированных программ психологической поддержки, направленных на улучшение общего благополучия.

### **Заключение (Conclusion)**

Настоящее исследование показало, что восприятие счастья тесно связано с социальными и психологическими факторами, включая гендерные различия. Дальнейшие исследования могут углубить понимание механизмов, влияющих на эти различия, и их практическое применение в разработке программ для повышения уровня счастья.

### **Список литературы (References).**

1. Психологическая газета\Выходит с октября 1995 года
2. Lyubomirskiy S, Sheldon K.M, Shkade D "Baxtga intilish:Barqaroq o'zgarish me'morchiligi. Umimiy psixologiyani ko'rib chiqish" 2005-y
- 3 [www.enjoybooks.ru](http://www.enjoybooks.ru)

## THE STUDY OF SOIL MOISTURE AND STABILITY IN CONSTRUCTION AREAS IS ALSO THE SIGNIFICANCE OF THE FIELD OF HYDROGEOPHYSICS.

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**Key words:** soil moisture, stability, hydrogeophysics, construction sites, geophysical methods, hydrogeology, environmental safety

**Introduction:** The success and safety of the construction of buildings and structures largely depends on the geological and hydrological conditions of the construction site. Before construction work begins, it is very important to obtain accurate information about the physical and mechanical properties of the soil, underground structures, and water resources. This information is a key factor in ensuring the stability of the construction, guaranteeing the long-term operation of the structure, and protecting against natural disasters such as earthquakes, floods, or landslides. One of the most important aspects of the construction of buildings and structures is determining soil moisture and stability. Soil moisture, in particular, is a very important measure for the stability of a construction site. High soil moisture, such as high water tables or excessive rainfall, can cause soil to weaken, compact, and shift. This, in turn, leads to errors and dangerous situations on the construction site. Therefore, the analysis of soil moisture and its stability is of great importance in creating favorable conditions for construction, preventing risks and ensuring the safe operation of structures for a long time. Hydrogeophysics, i.e. using geophysical methods, is one of the most effective ways to measure soil moisture and analyze the condition of underground water. With the help of hydrogeophysics, it is possible to obtain accurate information about the condition of underground water layers, changes in soil layers and the differences between them. At the same time, the mechanical properties of the soil, waterless layers and potentially dangerous areas are determined through hydrogeophysical methods. These methods play an important role in ensuring soil stability, analyzing groundwater levels, and creating a complete picture of the earth's structure. The advantage of geophysical methods is that they can be used on a large scale relatively quickly and at low cost. With the help of shallow geophysical methods, it is possible to study underground structures,

determine soil moisture and stability, which, in turn, helps to ensure the safety and quality of construction. Therefore, the importance of the field of hydrogeophysics and its application in construction sites is increasing every year.

#### Analysis and Results.

The effectiveness of the study of geological and hydrological conditions of construction sites, especially in the assessment of soil moisture and stability, is provided by the use of shallow geophysical methods. With the help of such methods, it is possible to determine the physical properties of the soil, water-free layers, the state of underground water and other geological parameters. The hydrogeophysical methods used during the analysis were analyzed as follows:

#### Soil Moisture and Stability

Soil moisture is the main factor determining the stability of the construction site. A high level of soil moisture can have a negative impact on the safety of construction, because excess moisture reduces the mechanical stability of the ground. By analyzing soil moisture, favorable conditions for construction can be created. Studies have measured high levels of soil moisture, and this data has helped identify areas at risk for construction.

#### Efficiency of hydrogeophysical methods

Hydrogeophysical methods are used to effectively measure soil moisture, analyze the state of groundwater, determine salinity and other hydrological properties. The following methods are widely used:

- Resistivity measurements measure the electrical resistance of the soil and provide information about groundwater, brines, and topsoil. With the help of resistivity measurements, soil layers and underground water resources are determined.
- Electromagnetic measurements are effective in determining the level of moisture in the soil. This method is widely used in measuring the movement of underground water and analyzing soil layers.

Research shows that by using hydrogeophysical methods, the location of the upper layers of the soil and underground water in the construction site can be accurately determined. For example, the 2023 hydrogeophysical survey used resistivity measurements to measure the precise location of the subsurface water table and soil moisture.

#### Application of hydrogeophysical methods in construction sites

The use of shallow geophysical methods, especially hydrogeophysical methods, provides an opportunity to accurately analyze soil and underground structures in construction sites. With the help of these methods, information on soil moisture,

groundwater level, changes in soil layers, salinity and mechanical properties is collected.

For example, surface moisture and groundwater levels were measured using resistivity measurements. This information is important in ensuring the safety of the construction process and identifying potentially dangerous areas. At the same time, it is possible to obtain detailed information about the conductivity and moisture level of the upper layers of the soil through electromagnetic measurements.

Studies show that the use of shallow geophysical methods is effective in increasing the safety of construction sites. Using hydrogeophysical methods, physical and mechanical properties of the soil, groundwater levels, aquifers, and other important parameters are determined. This plays an important role in ensuring the safety of the construction process, identifying potentially dangerous areas and preventing problems.

Effective use of hydrogeophysical methods in determining soil moisture and assessing stability increases the quality of construction processes. The information obtained using these methods will help determine the necessary precautions to ensure the safety of the construction. There are also opportunities to save time and money through these methods.

**Summary.**

The use of hydrogeophysical methods in the study of soil moisture and stability in construction sites is considered effective. With the help of these methods, it is possible to obtain accurate information about soil moisture, groundwater level and other hydrological properties, which helps to ensure the safety of construction. The stability of the ground, the movement of upper layers and underground water determined by the methods of shallow geophysics helps to increase the safety of construction works. Through the integrated application of hydrogeophysical methods, it is possible to fully and accurately analyze the geological and hydrological conditions of construction sites, which reduces construction risks and guarantees the long-term operation of structures. At the same time, these methods save time and money, so they should be widely used in the construction industry.

#### **LIST OF USED LITERATURE:**

1. Guberman, M. (2020). Geophysical Methods in Engineering Geology. Journal of Engineering Geology, 38(4), 101-110.
2. Telford, W. M. (2017). Applied Geophysics. Cambridge University Press.

3. Smith, A. (2021). Recent advances in geophysical methods for geotechnical engineering applications. *Journal of Geophysical Research*, 124(7), 1154-1169.
4. Hussein, S., & Al-Mubarak, N. (2020). Shallow geophysical methods for soil moisture measurement in construction sites. *Geophysical Methods for Site Investigations*, 22(3), 210-226.
5. Zhang, L., & Zhao, F. (2022). Hydrogeophysical methods and their applications in soil analysis and construction. *Geophysical Journal International*, 199(1), 90-105.

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**Annotatsiya:** *Axborot turli ijtimoiy qatlamlar, professional va milliy guruhlar vakillariga har xil ta'sir qilish barobarida uni suiste'mol qilish amaliyoti turli guruhlarda bir-biridan keskin farq qilishi mumkin. Bu eng avvalo, axborot manbai minimal (televideniye, radio), ayrimlarda esa keng (internet, yangi telekommunikatsiyalar tizimi) bo'lishi mumkin.*

**Kalit so'zlar:** *Axborotlashuv, axborot, jamiyat, ijtimoiy qatlamlar, axborotlashgan jamiyat, mutaxassislar, ijtimoiy hayot.*

**Abstract:** *As information has different effects on representatives of different social strata, professional and national groups, the practice of its abuse can be drastically different in different groups. First of all, the source of information can be minimal (television, radio), and in some cases it can be extensive (internet, new telecommunications system).*

**Keywords:** *communication, information, society, social strata, informed society, specialists, social life.*

**Аннотация:** *Поскольку информация оказывает различное воздействие на представителей разных социальных слоев, профессиональных и национальных групп, практика злоупотребления ею может существенно различаться в разных группах. Прежде всего, источник информации может быть минимальным (телевидение, радио), а в некоторых случаях и обширным (Интернет, новая телекоммуникационная система).*

**Ключевые слова:** *Информация, информация, общество, социальные слои, информационное общество, эксперты, общественная жизнь.*

Axborotlashuv jarayoni jamiyatdagi iqtisodiy hamda ijtimoiy-madaniy o'zgarishlarga jiddiy ta'sir ko'rsatadi. G'arb sotsiologlari fikriga ko'ra, axborotlashgan jamiyat:

- *texnika sohasida*- ishlab chiqarish, iqtisodiyot, ta'lim va maishiy hayotga axborot texnologiyalarining keng joriy etilishi;

-*iqtisodiy hayotda*- axborotning tovarga aylanishi

-*ijtimoiy hayotda*- axborot turmush, hayot darajasining o'zgarishi asosiy omiliga aylanishi;

-*siyosiy sohada*- keng miqyosda fikr almashishga zamin yaratuvchi xilma-xill axborotlarni erkin olishga yo'l ochilishi;-

- *madaniyat sohasida*- axborot almashinuvi davr ehtiyojlariga javob beradigan normalar va qadriyatlarning shakllanishi bilan xarakterlanadi.

Ayni paytda axborotlashgan jamiyat:

-uyda ishlashning kengayishiga, transport harakatining kamayishiga va buning oqibatida tabiatga tushadigan yukning keskin qisqarishiga olib keladi;

-ish kunning qisqarishi, odamlarning uyda ko'proq bo'lishiga oilaviy muhitning barqarorlashishiga zamin yaratadi;

-keyingi yuz yilliklarda kishilar shahar yashash va ishlash uchun eng qulay makon, degan xulosaga keldilar. Axborotlashuv jarayoni esa, qishloqdan turib ham butun olam bilan muloqot qilish, eng obro'li tashkilotlarda ishlash, shahar aholisi bahramand bo'layotgan madaniyat yutuqlarini istifoda etish imkonini yaratadi. Bu esa, o'z navbatida nisbatan osuda va tinch bo'lgan, tabiatga yaqin qishloqlarga qaytish yoki u yerda doimiy qolish uchun zamin yaratadi.

-masofaviy ta'lim bilim olishning eng qulay shakliga aylanish barobarida, aholining keng qatlamlari uchun elitar oliy ta'lim muassasalari eshiklarining ochilishiga zamin yaratadi. Sodda qilib aytganda, ma'lumotlilik ko'p darajada insonning xohish irodasiga bog'liq bo'lib qoladi.

Ayni paytda, Axborotlashuv jarayoni bir qator muammolarni ham keltirib chiqarmoqda:

“Yumshoq erotika”dan tortib “ochiq pornografiya”gacha bo'lgan hodisalar bilan bog'liq muammolar ana shular jumlasidandir. Bunday holatlarning oldini to'la-to'kis olib bo'lmaydi. Zero, axborot tarmoqlarining uzilishsiz ishlashi uning muhim sifatliy belgisi hisoblanadi. Bu jarayon doimiy takomillashuvni boshdan kechirmoqda.

Demak, yuqoridagi muammolar yo'lga qanchalik to'siq qo'yilmasin doimo ularni aylanib o'tish imkoniyati mavjud bo'ladi.

Yana bir muammo mualliflik va intellektual mulk huquqining buzilishi bilan bog'liq. Shunday ekan, axborot tarmog'ida ko'pchilik ko'ra olmaydigan hududlar yuzaga kelishi tabiiy. Bugungi kunda kompaniyalar o'z axborotlarini himoya qilish va ruxsat etilmagan tashrifning oldini olish uchun katta mablag'lar sarflayotgani ham shundan.

Shu bilan birga muayyan axborotlarni yashirish tortib, uni noqonuniy ravishda e'lon qilishgacha bo'lgan ko'rinishlarda namoyon bo'ladigan suiste'molliklar ham kelib chiqishi mumkin.

Axborot turli ijtimoiy qatlamlar, professional va milliy guruhlar vakillariga har xil ta'sir qilish barobarida uni suiste'mol qilish amaliyoti turli guruhlarda bir-biridan keskin farq qilishi mumkin. Bu eng avvalo, axborot manbai minimal (televideniye, radio), ayrimlarda esa keng (internet, yangi telekommunikatsiyalar tizimi) bo'lishi mumkin.

Mutaxassislar fikriga ko'ra, bugungi kunda jamiyatda aynan axborotni olish, unga yo'l topish sohasida keskin bo'linish, tabaqalashuv sodir bo'lmoqda.

Yoshlar o'zining harakatchanligi yangilikka intiluvchanligi hamda o'z vaqt resusriga egaligi tufayli yuqori darajada kommunikativ faollik ko'rsatishadi. Boshqa guruhlarda esa, nisbatan passivlik kuzatiladi. Ularga xos bunday xususiyatlar salbiy oqibatlarni ham keltirib chiqarishi mumkin. Bu birinchi guruh uchun tobora faollashayotgan agressiv siyosiy ta'sirg'anib berilib ketish xavfini mavjudligida, ikkinchi guruhning esa, pozitiv mazmunga ega axborotlar ta'sirtidan tashqarida qolishda ifodalanadi.

**Xulosa:** Hozirgi kunda axborotlashgan jamiyat, uyda ishlashning kengayishiga, transport harakatining kamayishiga va buning oqibatida tabiatga tushadigan yukning keskin qisqarishiga olib keladi. Va yana shuni ham ta'kidlash kerakki, axborotlashgan jamiyatda ish kunining

qisqarishi odamlarning uyda ko‘proq bo‘lishiga va oilaviy muhitning barqarorlashishiga zamin yaratadi.

Axborotlashuv jarayoni bir qator muammolarni ham keltirib chiqaradi: Pornografik vidiolarning tarqalishi, mualliflik huquqi va intellektual mulk huquqlarining buzilishi kabilarni misol sifatida keltirishimiz mumkin.

#### **FOYDALANILGAN ADABIYOTLAR:**

1. B.M.Umarov. M.X.Ahmedova. OCHIQ AXBOROT TIZIMLARIDA-PSIXOLOGIK XAVFSIZLIK. Toshkent-2013. 17-18.
2. Berdiyeva, Gulnoza, and Avazbek Narzulloyev. “VIRTUAL BORLIQ VA UNING TURLI SOHALARDA QO ‘LLANILISHI.” Solution of social problems in management and economy 3.4 (2024): 18-23
3. Berdieva, Gulnoza. “The Role, Importance And Relevance Of Information Technology In The Motivational Phase Of Teaching.” The American Journal of Applied sciences 3.04 (2021): 334-338.
4. Berdiyeva, G. “INFORMATIKA VA AXBOROT TEXNOLOGIYALARI FANINI OQITISHDA MASOFAVIY TALIM TEXNOLOGIYALARINING AHAMIYATI.” Экономика и социум 12-1 (91) (2021): 146-150.
5. Berdieva, Gulnoza, and Named after Nizami. “The importance of students’ use of information technology in computer science.” (2021).
6. Бердиева, Гулноза. “ Электрон таълимни ташкил этиш ва ахборот тизимлари таҳлили” Муғаллим ҳам узликсиз билимлендириу Илмиу-методикалик журнал 3.3(2022):121-123
7. Berdiyeva, Gulnoza. “TA’LIMDA MULTIMEDIA VOSITALARIDAN FOYDALANISH.” THEORY AND ANALYTICAL ASPECTS OF RECENT RESEARCH Turkey International scientific-online conference 4.1(2022): 150-152.
8. Jurayev, Suhrobjon. “GENERAL ISSUES OF IMAGE PROCESSING AND ANALYSIS AND CAPABILITIES OF WEB PROGRAMMING LANGUAGES.” Академические исследования в современной науке 3.4 (2024): 97-108.
9. Jurayev, Suhrobjon. “TASVIRLARGA ISHLOV BERISH VA TAHLIL ETISHNING UMUMIY MASALALARI VA WEB DASTURLASH TILLARINING IMKONIYATLARI.” Инновационные исследования в современном мире: теория и практика 3.1 (2024): 113-122.
10. Saloxiddin o‘g‘li, Jurayev Suxrob, and Botirov Odilbek Hayrullo o‘g‘li. “MODERN SERVER TECHNOLOGIES.” НАУЧНЫЕ ДОСТИЖЕНИЯ И ОТКРЫТИЯ 2019: сборник статей X (2019): 53.
11. Shamsiddinov, G‘iyosjon, Barchin Ro‘ziqulova, and Laziza Inatillayeva. “BOSHLANG ‘ICH TA’LIMDA AXBOROT TEXNOLOGIYALARIDAN FOYDALANISH USULLARI VA AFZALLIKLARI.” Педагогика и психология в современном мире: теоретические и практические исследования 3.10 (2024): 39-41.
12. Shamsiddinov, G‘iyosjon, Umida Nurmaxmatova, and Durdona Turayeva. “INFORMATIKA VA RAQAMLI TEXNOLOGIYALARNING TA’LIM JARAYONIDAGI O‘RNI.” Science and innovation in the education system 3.4 (2024): 102-105.

13. Shamsiddinov, G'iyosjon, Jasmina Murodulloyeva, and Durдона Turayeva. "GLOBAL IQLIM O 'ZGARISHI SHAROITIDA EKOLOGIK BARQARORLIKNI SAQLASHNING ZAMONAVIY, INNOVATSION USULLARI." *Инновационные исследования в современном мире: теория и практика* 3.3 (2024): 103-106.
14. Ashirova, Mavluda, and Muxiba Yaxiyaxonova. "RAQAMLI IQTISODIYOT DAVRIDA KRIPTOVALYUTA VA BITKOIN." *Международная конференция академических наук*. Vol. 3. No. 4. 2024.
15. Яхияханова, Мухиба. "RAQAMLI TA'LIM MUHITIDA BOSHLANG'ICH SINFI O'QUVCHILARINING IT SAVODXONLIGINI OSHIRISH METODIKASINI TAKOMILLASHTIRISH." *Ижтимоий-гуманитар фанларнинг долзарб муаммолари/Актуальные проблемы социально-гуманитарных наук/Actual Problems of Humanities and Social Sciences* 4 (2024).
16. Ashirova, Mavluda, and Muxiba Yaxiyaxonova. "RAQAMLI IQTISODIYOT DAVRIDA KRIPTOVALYUTA VA BITKOIN." *Международная конференция академических наук*. Vol. 3. No. 4. 2024.
17. Sh, Mavlonov Sh, and F. B. Jurayeva. "ZAMONAVIY TEXNOLOGIYALAR YORDAMIDA MINTAQALAR IQTISODIYOTINI RIVOJLANTIRISH." *Экономика и социум* 10 (125) (2024): 234-238.
18. Aliqulov, Sh. "M. Yaxiyaxonova. Ta'lim samaradorligini oshirishda kreativ va zamonaviy metodlarning ahamiyati. Raqamli ta'lim muhitida fanlararo integratsiyani Qo'llashning ta'lim samaradorligiga ta'siri: xalqaro Tajribalar va rivojlanish istiqbollari." (2024).
19. Shukurullo Fayzullo o'g'li, Aliqulov. "TA'LIMDA MULTIMEDIYA TEXNOLOGIYALARINI QO'LLASH." *PEDAGOGS* 50.2 (2024): 51-55.
20. Shamsiddinov, G'iyosjon, Jasmina Murodulloyeva, and Umida Nurmaxmatova. "YASHIL IQTISODIYOT VA YO'NALISHLARI BO'YICHA TA'LIM DASTURLARINI RIVOJLANTIRISH MEXANIZMLARI." *Models and methods in modern science* 3.5 (2024): 44-49.
21. Shamsiddinov, G'iyosjon, and Temurbek Zarifov. "GLOBAL TARMOQ QURISHDA TARMOQ QURILMALARIDAN FOYDALANISH VA TARMOQ TOPOLOGIYALARINING O'RNI." *Science and innovation in the education system* 3.5 (2024): 50-60.
- 22.
23. Raxmatov Sherqo'zi Akbar Kodirov. "Ta'lim jarayonida bulutli texnologiyalardan foydalanishning samaradorligi" *Pedagogis Internatsional research* ISSN:281-4027\_SJIF:4.995. 2023/5/15
24. Jalilova, Sevinch, Marjona Yusupova, and Muxiba Yaxiyaxonova. "KUNDALIK HAYOTIMIZDA RAQAMLI TEXNOLOGIYALAR." *Прикладные науки в современном мире: проблемы и решения* 3.3 (2024): 13-17.
25. Xurramova, Sarvinoz, Marjona Yusupova, and Muxiba Yaxiyaxonova. "OLIY TA'LIM TIZIMIDA BULUTLI TEXNOLOGIYALARNING IMKONIYATLARI." *Педагогика и психология в современном мире: теоретические и практические исследования* 3.3 (2024): 36-38.

## TABIY FANLARDA FANLARARO BOG`LIQLIKNI O`QITISHNING HOZIRGI HOLATI

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Tabiiy fanlar sohasida fanlararo bogliqlikni oqitish hozirgi kunda ta'lim tizimida juda muhim ahamiyatga ega. Bu fanlararo bog`liqlik, bir nechta tabiiy fanlar (masalan, biologiya, kimyo, fizika, geologiya, ekologiya va boshqalar) o'rtasidagi o'zaro ta'sirni va o'zaro bog'liqlikni o'rgatish jarayonini anglatadi.

**Fanlararo bog'liqlikning ahamiyati:** Tabiiy fanlar bir-biri bilan juda chambarchas bog'langan sohalaridir. Masalan, biologiya va kimyo, yoki ekologiya va fizika kabi fanlar o'rtasida doimiy o'zaro ta'sir mavjud. Fanlararo bogliqlikni orgatish nafaqat ilmiy bilimlarni yaxshilashga, balki o'quvchilarning tanqidiy fikrlash, muammolarni hal qilish va kompleks vaziyatlarni tahlil qilish ko'nikmalarini rivojlantirishga yordam beradi.

### **Fanlararo bog'liqlikning o'qitishdagi afzalliklari:**

1. **Ilmiy yondashuvni oshirish:** Fanlararo bog`liqlik orqali o'quvchilar ko'plab fanlarni birlashtirgan holda umumiy tushunchalar hosil qilishadi, bu esa tabiiy fanlarning yagona tizim sifatida ishlashini tushunishga imkon beradi.
2. **Amaliy ko'nikmalarni rivojlantirish:** Bugungi kunda ko'plab muammolar, masalan, ekologik inqirozlar, iqlim o'zgarishi, genetik tadqiqotlar va boshqalar bir nechta fanlar orqali yechiladi. O'quvchilarga bu muammolarni o'rganishda bir nechta fanlarni integratsiya qilish muhim.
3. **Tadqiqot va innovatsiyalarni rivojlantirish:** Fanlararo o'qitish yangi g'oyalar va innovatsiyalarni yaratish uchun zarur bo'lgan muhitni yaratadi. Masalan, biologiya va fizika sohalaridagi yondashuvlar birlashtirilgan holda yangi texnologiyalar yoki ilmiy kashfiyotlar amalga oshirilishi mumkin.

**Hozirgi kunda o'qitish metodologiyasi:** Fanlararo bog`liqlikni o'rgatishning zamonaviy metodlari integratsiyalangan o'quv dasturlari va transdistsipliner yondashuvlar orqali amalga oshiriladi. Bu metodlar o'quvchilarga nafaqat biror bitta

fan bo'yicha bilim olish, balki bir nechta fanlarni birlashtirib, yanada kengroq nuqtai nazar yaratish imkonini beradi.

Masalan, "yashil kimyo" yoki "biofizika" kabi yo'nalishlar fanni fanlararo integratsiya qilishga misol bo'la oladi. O'qituvchilar va talabalarga ilmiy muammolarni hal qilishda fanlararo usullarni qo'llash orqali o'quv jarayonini yanada samarali qilish imkoniyatlari taqdim etiladi.

### **Fanlararo bog'liqlikni o'rgatishda samarali metodlar:**

1. **Proyekt asosida o'qitish:** O'quvchilar biror ilmiy loyiha ustida ishlash orqali turli fanlarni birlashtirishni o'rganadilar. Bu usulda o'quvchilarga haqiqiy hayotdagi masalalarni hal qilish imkoniyati beriladi, va ularning ko'nikmalari rivojlanadi.
2. **Ilmiy tadqiqotlar va eksperimentlar:** Fanlararo o'qitishda amaliyot va eksperimentlar katta ahamiyatga ega. O'quvchilar ilmiy laboratoriya ishlarida bir nechta fanlarni qo'llab, o'zlashtirilgan bilimni amaliyotda ko'rishadi.
3. **Mavzularni integratsiyalash:** O'quv dasturlarida bir nechta fanlarni birlashtirgan mavzularni o'qitish, o'quvchilarga yaxlit bilimlarni taqdim etishning samarali usulidir. Masalan, ekologiya va fizikaning integratsiyasi, iqlim o'zgarishlarini tushunishga yordam beradi.

**Xulosa:** Fanlararo bog'liqlikni oqitish tabiiy fanlar sohasida yangi bilimlarni yaratishda, o'quvchilarning fikrlash ko'nikmalarini rivojlantirishda va jahon miqyosidagi ilmiy muammolarni hal qilishda katta rol o'ynaydi. Hozirgi o'qitish metodlari o'quvchilarga bir nechta fanlarni integratsiya qilish orqali kompleks va interaktiv bilimlarni o'zlashtirishga imkon beradi. Bu esa nafaqat ilmiy tafakkurni rivojlantirish, balki kelajakdagi innovatsiyalarni yaratish va muammolarni hal qilishda muhim omil bo'ladi.

## **FARZAND MUVAFFAQIYATI YO'LIDA OTA-ONANING ROLI**

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**Anotatsiya:** Mazkur maqolada farzand muvaffaqiyati yo'lida ota-onaning o'rni va ularning qo'llab-quvvatlashdagi ishtiroki haqida so'z yuritiladi. Unda oilaning sog'lom muhit yaratishdagi roli, ota-onaning motivatsiya berish va rag'batlantirishdagi ahamiyati hamda haddan tashqari bosimning salbiy ta'siri yoritilgan. Shuningdek, adabiyotlardan olingan fikrlar asosida ota-onaning farzand yutuqlariga ta'sir qiluvchi omillar tahlil qilinadi. Ushbu maqola ota-onalarni farzand tarbiyasida faolroq ishtirok etishga va ularning muvaffaqiyatlarini qo'llab-quvvatlashga undaydi.

**Kalit so'zlar:** Farzand muvaffaqiyati, ota-onaning roli, qo'llab-quvvatlash, oilaviy muhit, motivatsiya, tarbiya, rag'batlantirish, ta'lim, muvaffaqiyat omillari, ota-ona ishtiroki.

### **THE ROLE OF PARENTS IN THEIR CHILD'S SUCCESS**

**Abstract:** This article discusses the role of parents in their child's success and their participation in providing support. It highlights the importance of creating a healthy family environment, the significance of parental motivation and encouragement, and the negative effects of excessive pressure. Additionally, the article analyzes factors influencing children's achievements based on ideas from literature. It aims to inspire parents to take a more active role in their child's upbringing and support their success.

**Key words:** Child's success, role of parents, support, family environment, motivation, upbringing, encouragement, education, factors of success, parental involvement.

### **О РОЛИ РОДИТЕЛЕЙ В УСПЕХЕ ИХ РЕБЕНКА**

**Аннотация:**

В данной статье рассматривается роль родителей в достижении успеха их детей, а также их участие в оказании поддержки. Подчеркивается важность создания здоровой семейной атмосферы, значимость родительской мотивации и поощрения, а также негативное влияние чрезмерного давления. Кроме того, анализируются факторы, влияющие на успехи детей, на основе идей из литературы. Цель статьи — вдохновить родителей на более активное участие в воспитании детей и поддержку их успехов.

**Ключевые слова:** успех ребенка, роль родителей, поддержка, семейная среда, мотивация, воспитание, поощрение, образование, факторы успеха, участие родителей.

Har bir farzandning hayotda muvaffaqiyatga erishishi ortida ota-onaning e'tibori, mehr-muhabbati va qo'llab-quvvatlashi mujassamdir. Oila bolaning birinchi tarbiya makoni bo'lib, uning shaxsiy rivoji va yutuqlariga asosiy poydevor yaratadi. Farzandning o'ziga bo'lgan ishonchi, maqsadga intilishi va ijtimoiy muvaffaqiyatga erishishi ko'p jihatdan oilaviy muhitga va ota-onaning faol ishtirokiga bog'liqdir. Bugungi kunda ota-onalar nafaqat moddiy jihatdan yordam berishlari, balki bolalarining qiziqishlari, qobiliyatlari va maqsadlarini qo'llab-quvvatlash orqali ularga muvaffaqiyat yo'lini ko'rsatishlari zarur.

Ota-onaning sog'lom muloqoti va motivatsiyasi farzandning nafaqat o'qishdagi, balki hayotdagi muvaffaqiyatini ta'minlovchi muhim omillardandir.

Shu sababli, ota-onalar farzand tarbiyasi va ta'lim jarayonida o'z o'rnini yanada chuqurroq anglab, faolroq ishtirok etishlari kerak.

Farzand muvaffaqiyati yo'lida ota-onaning roli haqida Abdug'ani Abduvaliyev ta'kidlagan va shunday fikrlarni keltirib o'tgan: Oilada farzandning aqliy va ma'naviy rivoji uchun muhit yaratish – bu ota-onaning eng muhim vazifalaridan biridir. Bola o'zini qadrlangan va tushunilgan his qilsa, uning muvaffaqiyat sari intilishi yanada kuchayadi. Bu fikrni tasdiqlagan holda amerikalik faylasuf, psixolog, pedagog va ta'lim nazariyotchisi John Dewey ota-onaning ta'limdagi rolini quyidagicha izohlaydi: "Ta'lim va tarbiya birgalikda shakllanadi. Agar ota-onalar bolalarining ta'lim olish jarayonida faol qatnashmasa, ularning yutuqlari to'liq bo'lmaydi."

Shuni ham ta'kidlash joizki, muvaffaqiyatga erishish imkoniyatini yaratishda oila muhiti barkamol avlod tarbiyasi va uning kamolotiga oid barcha masalalarni o'zida mujassam etishi darkor. Shunga ko'ra barkamol shaxs ilm va kasb-hunarga mehr-muhabbat, komillik sari intilish, vatanparvarlik, mehnatsevarlik, ahillik, insonparvarlik, tashabbuskorlik, odoblilik, e'tiqod va sadoqatlilik kabi fazilatlar ruhida

tarbiyalash ota-onaning eng asosiy vazifalaridan biridir. Abdurauf Fitrat " Rahbari najot" asarida shunday yozilgan jumalarni ko'rish mumkin: "Suv qaysi rangdagi idishda bo'lsa, o'sha rangda tovlangani kabi bolalar ham shunday muhitda bo'lsalar, o'sha muhitning har qanday odat va axloqini qabul qiladilar."

Farzandning ilk tarbiya maskani bu onaning ko'ksidir. Ona tarbiya maskani biror zararga yo'liqsa, nasllarga o'nnglanmaydigan yaralar ochiladi, onani yo'qotadi. Ota-ona farzandi bilan muloqot jarayonida, ular bilan o'yin faoliyatlarida bolalar tarbiyasi va kelajagi uchun urg'uni tog'ri qo'yish ham talab qilinadi, chunki bolani yoshligidan nimaga qiziqtirib, o'sha narsaga ko'proq jalb qilsa, bolaning tug'ma qobiliyat va qiziqishlarini ham inobatga olsa, bolaning kelajagi uchun foydalidir.

Xulosalab aytadigan bo'lsam, farzandning muvaffaqiyatli va barkamol bo'lishida ota-onaning mehr-muhabbati, qo'llab-quvvatlashi va sog'lom muloqoti muhim ahamiyatga ega. Bola o'zini qadrlangan va tushunilgan his qilgan muhitda yutuqqa erishishga intiladi. Oila ilm, tarbiya va ezgu fazilatlar maskani bo'lib, ota-onaning faol ishtiroki barkamol avlod tarbiyasining asosidir. Shu bois, ota-onalar farzandlariga nafaqat moddiy, balki ma'naviy jihatdan ham ko'maklashishlari shart.

Ota-onaning farzand muvaffaqiyati yo'lidagi roli beqiyosdir. Ularning e'tiborli va mehribon munosabati bolani kelajakda yetuk shaxs sifatida shakllanishiga yordam beradi. Shunday ekan, ota-onalar har bir qadamida mas'uliyatli bo'lib, farzand tarbiyasiga jiddiy yondashishlari lozim.

### **FOYDALANILGAN ADABIYOTLAR**

1. Nishonova S." Sharq uyg'onish davri pedagogik fikr taraqqiyotida barkamol inson tarbiyasi". Ped.fan.dok.diss... -T.:1988. -289b
2. Paul Tough. "How children succeed" . Kanadalik yozuvchi va jurnalist. - T.:2012.
3. Abdurauf Fitrat." Rahbari najot". o'zbek adibi, faylasufi, davlat arbobi va jadidchilik harakatining yetakchilaridan biri. -T.:1915.
4. John Dewey." The School and Society". Amerikalik faylasuf, pedagog, psixolog va ta'lim islohotchisi. -T.: 1899.
5. " Al-jome' as-sahih" asari.Ilmni o'rganishning fazilati va Bilimni yetkazish va ulashish masalalari to'g'risidagi hadislar.
6. Maktab oiladan boshlanadi.-T.: Yangi asr avlodi. 2013

## MODELING OF HEAT BALANCE EQUATIONS FOR AN AUTONOMOUS GREENHOUSE

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**Abstract:** the heat load of a even-span greenhouse with a useful area of 50 m<sup>2</sup> located in the city of Karshi for the period from November 15, 2023 to March 15, 2024 is determined taking into account the ambient temperature, solar radiation, and heat losses in the greenhouse. According to the results, it was calculated that the greenhouse will consume 14,800 kWh of thermal energy during this season.

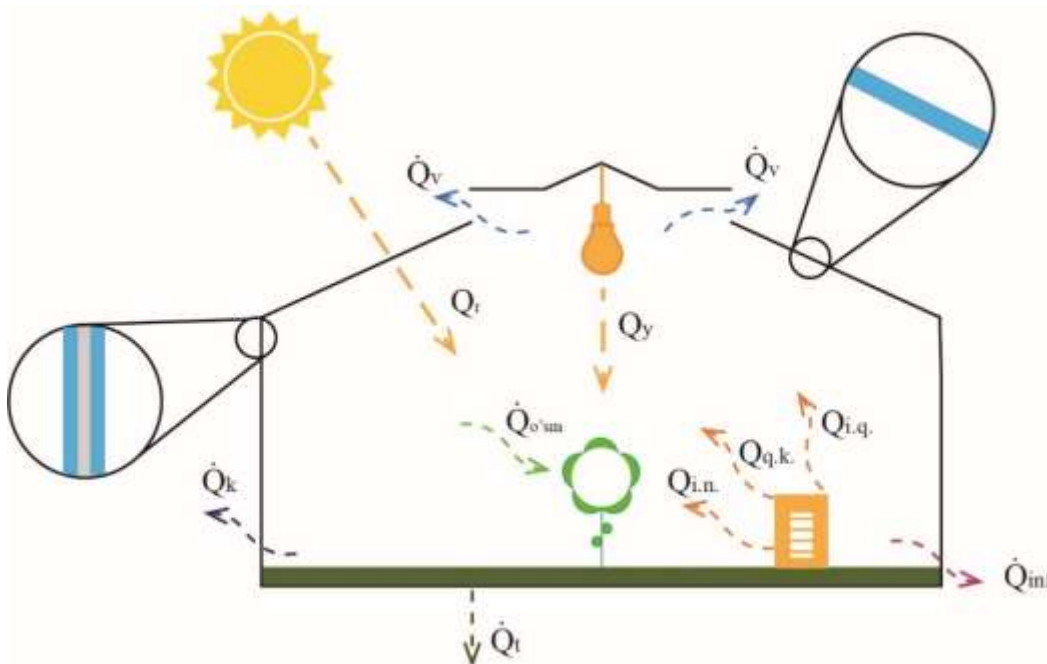
**Key words:** modeling, heat balance, autonomous greenhouse, solar radiation, ambient temperature.

In autonomous greenhouses, it is important to save natural fuel sources, reduce exhaust gases into the atmosphere, and produce high-quality and affordable products by choosing a greenhouse design based on the location and climatic characteristics of the area, making maximum use of solar radiation in heating greenhouses, and installing renewable energy devices and highly efficient heat pumps in the greenhouse energy supply system.

The object under analysis is an autonomous greenhouse with a useful area of 50 m<sup>2</sup>, located at the alternative energy sources polygon under the Karshi Institute of Engineering and Economics. Tomatoes and cucumbers are grown in the autonomous greenhouse, which require a temperature range of 15...22 °C during the growing season. The growth period of such crops is several months. However, due to the problem of maintaining the set temperature, the most critical period for heating the greenhouse is the four-month period from mid-November to mid-March. Therefore, the study of the operation of the heating and electrical system is carried out with an estimated air temperature inside the greenhouse of 15 °C in the evening and 22 °C in the daytime, and it covers the above-mentioned months.

The internal air temperature of an autonomous greenhouse varies depending on several external and internal factors. These factors depend on the amount of solar radiation penetrating the walls and ceiling of the greenhouse, the heat source operating on natural fuel and electricity, lighting, the amount of natural ventilation and air infiltration, the amount of constructive heat loss, the amount of heat lost through the soil, and the

amount of heat consumed by plants. All of the above values were taken into account when compiling the heat balance of an autonomous greenhouse in Fig.1.



**Fig. 1. Heat balance calculation scheme for an autonomous greenhouse**

The mathematical model of the heat balance of the autonomous greenhouse under study is expressed by the following equations [1]:

$$\rho_h \cdot V \cdot C_h \frac{dt}{dt} = \left( Q_r(\tau) + Q_{i.n}(\tau) + Q_y(\tau) + Q_{q.k}(\tau) + Q_{i.q}(\tau) \right) - \left( \dot{Q}_v(\tau) + \dot{Q}_{inf}(\tau) + \dot{Q}_k(\tau) + \dot{Q}_t(\tau) + \dot{Q}_{o'sm}(\tau) \right) \quad (1)$$

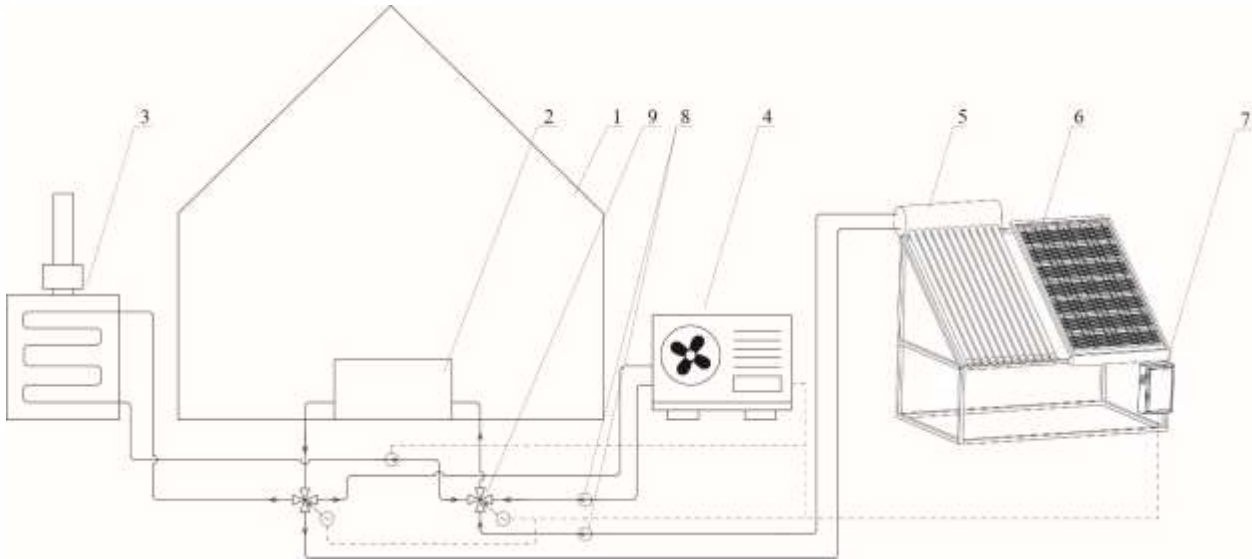
$Q_r$ - heat amount of solar radiation;  $Q_{in}$ - heat amount of heat pump;  $Q_y$ - heat amount of lighting lamps;  $Q_c$ - solar thermal collector;  $Q_{iq}$ - heat boiler;  $Q_v$ - heat amount lost through natural ventilation;  $Q_{inf}$ - heat amount lost through air infiltration;  $Q_k$ - heat amount lost through the greenhouse ceiling;  $Q_d$ - heat amount lost through the greenhouse walls;  $Q_a$ - heat amount lost through the greenhouse base;  $Q_t$ - heat amount lost through the soil;  $Q_{o'sm}$ - heat amount lost through plants.

The amount of heat output of a solar thermal device (collector) is determined by the following formula, which depends on the external temperature and solar radiation [2,3]:

$$Q_{qk} = A_c \cdot F_R \cdot [Q_r \cdot \tau(\alpha) - U_L \cdot (t_k - t_t)] \quad (2)$$

Fig.2 shows a scheme for providing the greenhouse with thermal energy. In this case, solar radiation, solar thermal devices, heat pumps, and heat boilers are used as heat

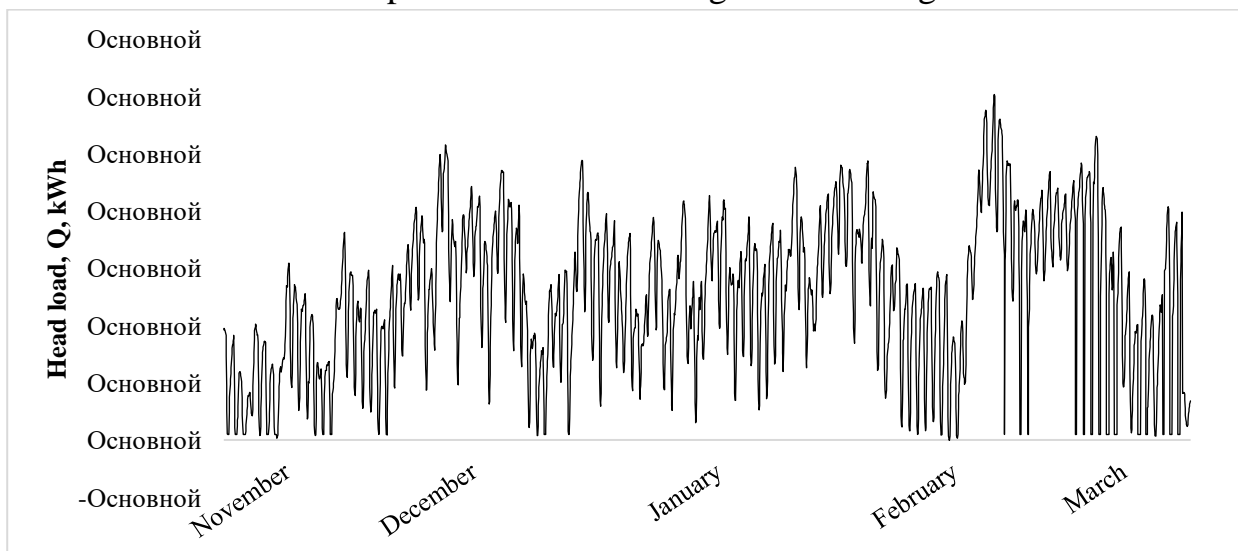
sources to increase the reliability of heat supply in abnormal cold weather. Heat pumps are supplied from electrical networks integrated with solar photovoltaic devices.



**Fig.2. Scheme of providing greenhouse with thermal energy**

1-greenhouse; 2-heat exchanger; 3-heat boiler; 4-heat pump; 5-solar thermal collector; 6-solar photovoltaic panels; 7-electrical equipment box; 8-circulating water pumps; 9-controlled water heaters.

Fig.3. shows the dynamics of the greenhouse heat load change in the absence of changes in ambient temperature and solar radiation. The average temperature inside the greenhouse is assumed to be 20 °C. It was found that in January, due to the maximum temperature drop, the heat load increases to 12 kWh. At such times, natural fuel boilers are started in parallel at short wattage to heat the greenhouse.



**Fig.3. Dynamics of greenhouse heat load changes**

The dynamics of ambient temperature changes in the city of Karshi for the period from November 15, 2023 to March 15, 2024 is presented. The temperature change was determined in a 1-hour time interval. The maximum temperature during this season was 26 °C and the minimum temperature was -10 °C.

**Conclusion:** the calculations were carried out from November 15 to March 15, 2023, at 1-hour intervals. The average internal temperature of a greenhouse with a glass cover of 50 m<sup>2</sup> was assumed to be 20 °C. Taking into account the ambient temperature changes and heat losses in the greenhouse, it was modeled that the greenhouse would consume 14,800 kWh of thermal energy during this season. It was determined that the heat pump produced 11,150 kWh of thermal energy when heating the greenhouse during periods of no sunlight. The heat pump consumes 2,710 kWh of electricity in this case.

#### Literature

1. B.M. Santos et. al. A solar collector design procedure for crop drying. Brazilian Journal of Chemical Engineering. Vol. 22, No. 02, 2005, pp. 277 – 284
2. K. G. Tataraki et. al. Combined Cooling Heating and Power systems in greenhouses. Grassroots and retrofit design. Energy, 2019, 189(5):116283
3. A. Nems, M. Nems and K. Swider. Analysis of the Possibilities of Using a Heat Pump for Greenhouse Heating in Polish Climatic Conditions—A Case Study. Sustainability, 2018, 10, 3483; doi:10.3390/su10103483

## **BASIC WAYS OF TEACHING ENGLISH LANGUAGE BY USING INTERACTIVE METHODS**

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**Abstract:** This paper explores fundamental approaches to teaching the English language through the implementation of interactive methods. Interactive teaching strategies enhance learners' engagement, promote communication, and foster critical thinking skills in language acquisition. The study examines techniques such as group discussions, role-playing, gamification, and technology-integrated activities, emphasizing their impact on improving learners' language proficiency. Furthermore, it highlights the importance of creating a student-centered environment to facilitate active participation and collaborative learning. The findings suggest that interactive methods not only improve linguistic competence but also boost learners' confidence and motivation, making the learning process more effective and enjoyable.

**Keywords:** interactive teaching methods, English language acquisition, student-centered learning, gamification, communicative strategies.

### **INTRODUCTION**

The teaching of the English language has evolved significantly over the years, with traditional methods increasingly being supplemented or replaced by interactive approaches aimed at fostering greater learner engagement and active participation. Interactive teaching methodologies prioritize learner-centered practices that encourage collaboration, critical thinking, and practical application of language skills. These strategies are particularly relevant in addressing the challenges of contemporary language education, where the focus extends beyond mere memorization to the development of communicative competence and linguistic fluency.

Research underscores the effectiveness of interactive methods, such as group discussions, role-playing, gamification, and technology-assisted instruction, in creating dynamic and immersive learning environments. Such approaches not only enhance learners' language proficiency but also promote cognitive and affective engagement, which are critical for sustained motivation and confidence. This paper aims to analyze the fundamental principles underlying interactive teaching methods in English language instruction and evaluate their impact on language acquisition outcomes. By emphasizing the integration of modern pedagogical techniques, the study contributes to the ongoing discourse on effective language teaching practices in diverse educational settings.

### **LITERARY ANALYSES**

The concept of teaching English through interactive methods can be analyzed as an evolving pedagogical narrative shaped by educational theory, practice, and the dynamic demands of language acquisition in modern contexts. This analysis explores the thematic elements, techniques, and theoretical frameworks that underpin interactive methods of language instruction, focusing on their implications for learner engagement and linguistic proficiency. The process of teaching English

interactively follows a narrative structure that mirrors a progressive learning journey. It begins with foundational activities (e.g., vocabulary-building games), transitions to intermediate tasks (e.g., collaborative projects), and culminates in advanced practices (e.g., debates or presentations). This structured progression underscores the transformative power of interactive methods in developing linguistic skills[1]

Among the most widely used methods are role plays, brainstorming, case-study approaches, presentations, and discussions. These techniques help in developing communicative abilities, logical reasoning, and various forms of intellectual engagement such as analysis, synthesis, comparison, and generalization [2, p. 30]. These student-centered strategies are particularly effective for encouraging students to actively participate in the process of acquiring knowledge, skills, and strategies [3, p. 9]. It is well-established that role plays enhance the educational experience at universities by making learning more engaging and effective. They help strengthen interdisciplinary connections, bridge theoretical concepts with the practical needs of professional fields, and cultivate essential skills for future professionals. The primary component of this method is the role play itself, which offers students the opportunity to develop skills that are challenging to acquire through conventional learning methods [4, p. 451].

Role plays can be conducted in two ways: scripted and non-scripted. In scripted role plays, the teacher might provide an example from a textbook, which works well as a warm-up activity. Students are divided into pairs, and each pair adopts different roles to practice dialogue. In non-scripted role plays, students are assigned roles and must rely on their existing knowledge to communicate effectively with their partners. This approach can be adapted to fit various contexts, particularly in general English classes.

**Telephone Conversation.** Speaking on the phone is different to a face-to-face conversation because one relies solely on the language to communicate. Get the students who are practicing to sit back to back in order to work properly. There is a whole range of ideas which one can use to act this out. Examples include: phoning to make a complaint, speaking to a friend or inquiring about a job position.



**Going to the Shop.** It is effective for younger learners as it will teach them the basics of interacting with people. Children generally rely on their parents to buy things for them, therefore this will boost

their overall general confidence in buying. It can be as simple or as complex as one wishes, depending on the situation. Key phrases are often important here, such as "I would like..." "How much are..." "Good morning..." and so forth

Another engaging interactive technique that fosters essential qualities and enhances cognitive development is brainstorming. Brainstorming involves a collaborative process where participants collectively generate ideas to solve a particular problem. When applied correctly, this method offers several benefits, including the removal of language barriers, the reduction of fear of making mistakes, and the elimination of hesitation. It encourages students to freely express their thoughts. Through brainstorming, students can develop creative and associative thinking, boost initiative, and improve their ability to generate numerous ideas within a limited time. It also helps in expressing personal opinions more confidently.

There are some ideas of brainstorming activities:

**- Multi-purpose Items**

First, the teacher gives the class any object. Next, give the students a couple of minutes to think of all of the different uses for that item. In about five or six minutes, the teacher asks students to share what they have come up with. For example, you can use forks to eat food, comb your hair, open cans, mix ingredients, and clean pans. Not so bad for a simple fork. Using the "Multi-purpose Items" encourages creativity and it's fun to hear what the students come up with.

**- Talking Timebomb**

First, the teacher comes up with a topic or idea. Next, the teacher starts the music, and students have to think of as many words as they can for that topic. Someone starts with a ball. When he /she comes up with a word, he /she passes the ball to another student. This process continues but students can't repeat something that has already been said. When the music stops, whoever is holding the ball loses. And the punishment can be anything. For example, they must speak for one minute about a topic the teacher gives them.

Unlike traditional teaching methods, which can often feel rigid and monotonous, interactive strategies serve to boost motivation and make the learning process more engaging and communicative. The primary aim of these strategies is to increase students' interest in learning and encourage their active participation in lessons. Interactive activities offer more than just the achievement of educational goals; they provide a range of benefits. Teachers can easily incorporate these activities into the classroom to help students improve their communication and teamwork skills. Furthermore, interactive strategies foster students' creativity, critical thinking, problem-solving, and decision-making abilities.

In essence, interactive teaching strategies in English focus on actively involving students in the learning process through four key approaches:

- 1) teacher-student interaction,
- 2) student-student interaction,
- 3) the use of audio-visual aids, and
- 4) hands-on exercises. These approaches contribute to enhancing students' long-term memory retention. Additionally, interactive strategies help to improve students' interest, knowledge, and teamwork spirit.

The adoption of modern teaching methods significantly enhances the effectiveness of the learning process. It is essential to select these methods according to the specific didactic objectives of each lesson. While retaining traditional teaching forms, supplementing them with diverse methods that stimulate student activity results in an improvement in students' mastery levels (2020, p. 356).

In interactive strategies, educators incorporate digital tools to optimize the teaching and learning process, creating an educational environment that aligns with contemporary technological advancements. For instance, PowerPoint slides have become one of the most widely used tools in classrooms today. These slides make lectures more engaging, dynamic, and effective, while also simplifying the introduction of new concepts. Therefore, the use of interactive strategies, particularly through audio-visual aids, helps students retain information for extended periods. In this context, interactive strategies convey the same messages as words but in a way that offers clearer concepts, ultimately enhancing the effectiveness of the learning experience.

### **CONCLUSION**

In conclusion, interactive teaching strategies can yield the highest positive impact on the process of teaching English as a second language. These methods have the potential to actively involve both students and teachers in the learning experience. By using a variety of simple audio-visual tools, interactive strategies are adaptable for use in both developed and developing countries. Moreover, interactive teaching can improve memory retention and stimulate engagement in the learning process by stimulating students' minds through various activities and tools. Therefore, interactive strategies represent modern teaching and learning approaches that make the educational process more effective and practical. Finally, given the significance of interactive teaching strategies, this study recommends further research to compare their impact with other teaching methods.

#### References:

1. Chang, S. H. (2015). Memory Strategies Used by Teachers. Online Submission
2. Mathew, N. G., & Alidmat, A. O. H. (2013). A study on the usefulness of audiovisual aids in EFL classroom: Implications for effective instruction. *International Journal of Higher Education*, 2(2), 86-92. s.
3. Rachmavita, F. P. (2020, October). Interactive media-based video animation and student learning motivation in mathematics. In *Journal of Physics: Conference Series* (Vol. 1663, No. 1, p. 012040). IOP Publishing
4. Dold, L. (2012). "Dogme: A Teacher's View." *International House Journal of Education and Development*

## **THE IMPORTANCE OF COMMUNICATIVE COMPETENCE IN TEACHING ENGLISH LANGUAGE**

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**Abstract:** Communicative competence plays a pivotal role in the effective teaching and learning of the English language. It encompasses linguistic, sociolinguistic, discourse, and strategic competencies, enabling learners to use the language appropriately in diverse contexts. This competence fosters meaningful interactions, enhances language proficiency, and facilitates cultural understanding. The integration of communicative approaches in language instruction empowers students to develop fluency, accuracy, and confidence in real-life communication. This paper explores the significance of communicative competence in English language teaching, emphasizing its impact on learner engagement, motivation, and overall language acquisition.

**Key Words:** Communicative competence, language proficiency, linguistic competence, sociolinguistic competence, discourse competence.

### **INTRODUCTION:**

In the field of English language teaching, communicative competence is a fundamental concept that significantly influences language acquisition and pedagogical effectiveness. It extends beyond mere grammatical accuracy, encompassing the ability to use language appropriately in various social and cultural contexts. Developed by Dell Hymes, the concept of communicative competence includes linguistic, sociolinguistic, discourse, and strategic competencies, all of which contribute to a learner's ability to engage in meaningful communication[1]

The shift from traditional, grammar-focused instruction to communicative language teaching (CLT) has emphasized the necessity of interactive and student-centered learning. By fostering communicative competence, educators enable learners to develop fluency, accuracy, and pragmatic awareness, which are essential for real-world communication. Moreover, this competence enhances students' confidence, motivation, and engagement, leading to more effective language acquisition.

This paper explores the importance of communicative competence in English language teaching, highlighting its role in improving linguistic proficiency, promoting cross-

cultural understanding, and preparing learners for authentic communication. It also examines pedagogical strategies that enhance communicative competence and their implications for language education.

### **Literary analyses**

The concept of communicative competence is a cornerstone of effective English language teaching, as it integrates multiple linguistic and cognitive skills essential for meaningful interaction. The shift from traditional grammar-based instruction to communicative language teaching (CLT) underscores the necessity of fostering a holistic language learning environment. This paradigm recognizes that mere grammatical knowledge is insufficient for successful communication, emphasizing the importance of sociolinguistic, discourse, and strategic competencies.

From a pedagogical perspective, communicative competence enhances learners' ability to navigate real-life communication scenarios by equipping them with the skills needed to interpret and produce contextually appropriate language. The integration of authentic materials, interactive activities, and task-based learning fosters engagement, motivation, and retention. Furthermore, communicative competence plays a crucial role in intercultural communication, enabling learners to interact effectively with speakers from diverse linguistic and cultural backgrounds.

### **Literary Analysis of Communicative Competence in English Language Teaching**

1. **Linguistic Competence in Literary Language** Literary works demonstrate linguistic competence through varied vocabulary, sentence structures, and grammatical patterns. Classic novels such as *Pride and Prejudice* by Jane Austen or *1984* by George Orwell present diverse syntactic constructions that expose learners to complex linguistic forms, enhancing their grammatical proficiency.

2. **Sociolinguistic Competence and Cultural Contexts** Literature provides insight into different social and cultural norms, thereby fostering sociolinguistic competence. For example, in Chinua Achebe's *Things Fall Apart*, the use of Igbo proverbs and cultural references illustrates how language reflects identity, values, and traditions, allowing learners to understand the pragmatic aspects of communication.

3. **Discourse Competence and Narrative Structure** Literary texts contribute to discourse competence by demonstrating coherence and cohesion in storytelling. Shakespeare's plays, such as *Hamlet* or *Macbeth*, exemplify how dialogue and monologues structure discourse, helping learners understand how ideas are logically connected in conversation and writing.

4. **Strategic Competence and Figurative Language** Literature often challenges readers with metaphors, symbolism, and indirect speech acts, requiring strategic

competence to interpret meaning effectively. For instance, in F. Scott Fitzgerald's *The Great Gatsby*, the symbolic use of the green light requires readers to infer deeper meanings, mirroring the way language learners must develop strategies to comprehend implied messages in communication[2]

Communicative competence is considered a **relative rather than an absolute** concept, as it relies on the **collaboration** of all individuals involved in the interaction. This interdependence suggests that communicative competence exists in varying **degrees** rather than as a fixed state.

Hymes (1972:114) explains that **communicative competence has been introduced, examined, and redefined by various scholars over time**. The core idea behind the concept is that language proficiency extends beyond **grammatical accuracy**; effective communication also requires an understanding of how language is used within a speech community to achieve specific communicative goals[3]

Additionally, Hymes categorizes communicative competence into **two primary dimensions**, each consisting of four key components:

1. **Linguistic Aspects:**

- Phonological and orthographic knowledge
- Grammatical proficiency
- Lexical knowledge (vocabulary)
- Textual (discourse) competence

2. **Pragmatic Aspects:**

- Functional use of language
- Awareness of linguistic variations
- Interactional abilities
- Understanding of cultural norms and context[4]

This classification emphasizes that both **linguistic knowledge and pragmatic skills** are essential for achieving effective communication in any language.

### CONCLUSION

Communicative competence is measured by determining if, and to what degree, the goals of interaction are achieved. Communicative competence is dependent on the context in which the interaction takes place. Communication is successful with one group in one situation that may not be perceived as competent with a different group in another situation. Brown, D (2000: 250) states the domain of communicative competence includes learning what are the available means (available strategies), how they have been employed in various situations in the past, and being able to determine which ones have the highest probability of success in a given situation[5]

In conclusion, communicative competence is a critical factor in language education, influencing learners' ability to use English effectively in academic, professional, and social contexts. The emphasis on interaction, contextual appropriateness, and cultural awareness underscores its significance in contemporary language pedagogy. Therefore, English language instruction should prioritize communicative competence to ensure that learners acquire not only linguistic accuracy but also the ability to communicate effectively in diverse settings.

References:

1. Bachman, L. (1990). *Fundamental considerations in language testing*. Oxford: Oxford University Press
2. Canale, M. and Swain, M. 1980. Theoretical bases of communicative approaches to second language teaching and testing. *Applied Linguistics* 1 (1), 1-47.
3. Ampatuan, Ramlah A., and Ariel E. San Jose. "Role Play As An Approach In Developing Students Communicative Competence." *International Journal for Innovation Education and Research* 4.1 (2016).
4. Canale, Michael. "From communicative competence to communicative language pedagogy." *Language and communication* 1.1 (1983): 1-47.
5. Chomsky, Noam. *Aspects of the Theory of Syntax*. Vol. 11. MIT press, 2014

## **MODERNIZATION PROCESSES IN LEGAL AND NORMATIVE BASIS OF THE EDUCATION SYSTEM IN UZBEKISTAN.**

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**Annotation.** Since the first years of independence, the development of the education system in our country has been elevated to the level of state policy, and great efforts have been made to ensure that our children acquire modern knowledge and professions in conditions that meet world standards, grow up as physically and spiritually mature people, realize their abilities, talents, and intellectual potential, and cultivate feelings of loyalty and selflessness to the motherland in the hearts of our youth.

**Keywords:** education, upbringing, value, "Law on Education", continuing education, individual, state, society.

The Resolution of the President of the Republic of Uzbekistan Sh.M. Mirziyoyev dated April 20, 2017 - On measures for the further development of the higher education system is significant in that it is both a logical continuation of the work being carried out to reform the education system in our country and is aimed at raising it to a new level. One of the most important aspects of the Resolution is that it pays special attention to compliance with international standards in the training of highly qualified specialists, creating conditions at its level, and training personnel with modern knowledge and skills in accordance with the spirit and requirements.

Therefore, pedagogical personnel working in educational institutions should be well-versed in the optimal organization of teaching forms, enriching the theory of the formation of a well-rounded personality with various new ideas. The implementation of the ideas of the "National Program for Personnel Training" into practice, the success of the reforms being carried out in the education system of our country, largely depend on the spiritual image and professional skills of teachers working in the education system.

In the social policy of the Republic of Uzbekistan, the realization of national identity, the creation of harmony between the individual and society through the assimilation of national and universal values, the satisfaction of the transition of needs from individual to general require the study and development of the abilities, talents, internal capabilities, and specific individual-psychological characteristics of young people

reaching adulthood in all respects. It is impossible to increase the effectiveness of the process of secondary specialized and higher education and upbringing without determining the formation, mental development, and level of upbringing of the younger generation as a person and subject.

The establishment of democratic principles in the infrastructure of society, in group interpersonal relations, the beginning of the criteria of equality, subjectivity, cooperation, empathy among citizens to become a way of life is a vivid expression of the global socio-historical victory of the human world.

In the present era, the end of the robotization of the individual, the establishment of a material and spiritual foundation for his manifestation as an independent person (subject), the acquisition of a personal worldview (both scientific and religious), stable beliefs, a strong position, a firm will, a sharp and unbending idea have created an opportunity. Such a social reality, phenomenon, social imagination and need of universal significance, the recognition of the individual as a central figure in our country and the assessment of him as a driving force of development, mean that pedagogical knowledge has become a necessity.

In the field of humanities, since it requires interaction in the form of man-society, society-man, it is permissible to establish both direct and inverse relationships between the first and the second. As Abdulla Avloni predicted in his time: "If pedagogy wants to educate a person in all respects, then it is necessary to study a person in all respects." Therefore, in the process of education, it is necessary to form a well-rounded person, through its result, product, it is permissible to develop an independent thinker, creative seeker, strong-willed, hardworking, ideologically convinced, highly spiritual, and conscientious person.

Because without practically resolving the "subject-subject" relationship, we will not be able to determine the level of education. In this regard, pedagogy is of great importance, and this is the condition for it to correspond to the goal of society to cultivate a well-rounded person.

The statement of the President of the Republic of Uzbekistan Islam Karimov: "Only if we can educate intelligent, highly spiritual people can we achieve the goals we have set for ourselves, and prosperity and development will prevail in our country," shows that improving education and enlightenment, raising a new generation that will realize the national ideal, is one of the most important tasks of our state.

To implement these ambitious tasks, the IX session of the Oliy Majlis of the Republic on August 29, 1997 adopted the Law "On Education", which served as a legal basis, and the "National Program for Personnel Training".

The adoption of the "Law on Education" of the Republic of Uzbekistan was due to a number of factors: firstly, the social system in our environment has changed, secondly, the attitude towards social production and property has changed, thirdly, old ideological views have ceased to meet new conditions, and fourthly, the activities carried out in educational institutions have required organization in accordance with world standards, instilling in students a sense of national and universal values, and preparing them as comprehensively well-rounded, deeply knowledgeable specialists. As is known, the Law "On Education" consists of 5 sections and 34 articles. The main principles of state policy in the field of education are: education is declared a priority in the field of social development of the Republic of Uzbekistan, therefore, educational work is one of the main principles of state policy.

The main principles of state policy in the field of education are:

- the humane democratic nature of education and upbringing;
- the continuity and consistency of education;
- the compulsory nature of general secondary, as well as secondary specialized, vocational education;
- the voluntary nature of choosing the direction of secondary specialized, vocational education;
- the secular nature of the education system;
- the openness of education to everyone within the framework of state educational standards;
- a unified and differentiated approach to the choice of educational programs;
- the promotion of literacy and talent;
- the harmonization of state and public administration in the education system.

The goal of the reforms being implemented in the field of education is to raise a well-rounded generation.

"First of all, we need to fundamentally change our attitude towards the education system. Education reform must be an internal force that boldly leads us along the path of democratic changes and building a new society, moving us all. Let each of us know as clearly as five fingers, as the old saying goes, nine coins, that without changing the education system, it is impossible to change the minds of people, and therefore their lifestyle."

Our Head of State has touched upon the necessity and importance of education reform in a number of his speeches.

In his speech at the IX session of the Oliy Majlis of the Republic of Uzbekistan on August 29, 1997, our Head of State stated that the measures implemented so far do not

meet the requirements, that we have not been able to completely get rid of the ideological views and stereotypes inherent in the education system left over from the old Soviet era, secondly, the changes are superficial and do not solve the problems of linking the structure and stages of education and training processes with each other, that is, organizing a continuous education system, thirdly, our current education system cannot meet the requirements of today's modern, developed democratic countries... etc. also showed the need for this reform. In this regard, our Head of State, in his speech on the topic "A well-developed generation is the foundation of Uzbekistan's development", justified the need and factors for reforming the education system.

The purpose of the Law on Education is to establish the legal basis for education, upbringing, vocational training of citizens, and to ensure the constitutional right of everyone to receive knowledge.

Section 1 of the Law is called "General Provisions". It reflects the basic principles of state policy in the field of education, the rights to receive knowledge, engage in pedagogical activities, the legal status of an educational institution, DTS, and the language of instruction.

Section 2 of the Law "On Education" covers the essence of the education system and its types.

The education system in our republic includes: state and non-state educational institutions implementing educational programs in accordance with state educational standards; scientific and pedagogical institutions carrying out research work necessary to ensure the development of the education system; state management bodies in the field of education, as well as enterprises, institutions and organizations affiliated with them.

Article 10 of this law states that education shall be implemented in the following types. Section 2, Articles 11-17 of the law briefly outline the essence of each educational stage. As it is noted, preschool education aims to form a healthy and mature personality of the child, prepared for school. Preschool education is implemented in state and non-state preschool institutions and families until the child reaches the age of six or seven. General secondary education is compulsory and is implemented at the following stages: primary education (grades I-IV); general secondary education (grades I-IX). General secondary education forms the systematic knowledge of students in the basics of subjects, the need for knowledge acquisition, basic academic, scientific and general cultural knowledge, spiritual and moral qualities based on national and universal values, labor skills, creative thinking and a conscious attitude to the environment, and the choice of profession. "Upon completion of general secondary education, a

certificate of a state-approved sample is issued indicating the subjects studied and the grades received in them."

The law states that everyone has the right to voluntarily choose the direction of study at an academic lyceum or vocational college on the basis of general secondary education for the purpose of obtaining secondary specialized, vocational education. "Academic lyceums and vocational colleges provide secondary specialized, vocational education, which gives the right to work in the acquired profession and serves as the basis for continuing such work or education at the next stage." In academic lyceums, students have the opportunity to improve their knowledge in the chosen field of education and develop special professional skills aimed at in-depth study of the subject. They can continue their studies at certain higher educational institutions or implement these skills in their work. Vocational colleges provide secondary specialized, vocational education within the framework of relevant state educational standards; they allow students to develop their professional inclinations, knowledge and skills, and acquire one or more specialties in the chosen profession.

Higher education trains highly qualified specialists, is carried out at two levels: bachelor's and master's degrees.

The third section of the law is devoted to the social protection of participants in the educational process, in which the issues of social protection of students and employees of educational institutions, education of orphans and children with disabilities in physical and mental development are legally reflected.

The fourth section indicates the powers of the Cabinet of Ministers, state bodies authorized to manage education and local government bodies in managing the education system, and the fifth section contains the final provisions.

The national model of personnel training and its essence On August 29, 1997, at the IX session of the Oliy Majlis of the Republic of Uzbekistan, the Law "On Education" and the "National Program for Personnel Training" were adopted. They provided the main guidelines for reforming the education and upbringing and personnel training system.

As is known, the "National Program for Personnel Training" consists of five sections, which define the factors of reforming the personnel training system, the purpose of the program, "tasks and stages of its implementation, the main directions of development of the personnel training system, and measures for the implementation of the program. Section 3 of the program highlights the essence of the national model of personnel training. The main components of the national model of personnel training are as follows.

"Person" - the main subject and object of the personnel training system, the consumer of services in the field of education and their implementer". State policy in the field of personnel training envisages the formation of a comprehensively developed individual-citizen through a system of continuous education, which is inextricably linked with the intellectual and spiritual and moral upbringing of a person. In this way, one of the most basic constitutional rights of a citizen is realized - the right to obtain knowledge, demonstrate creative abilities, develop intellectually, and work in his profession.

As a consumer of educational services, a person is guaranteed education and vocational training by the state. In the educational process, a person must fulfill the requirements set forth in state educational standards. As a provider of educational services, a person, having received an appropriate level of qualification, is engaged in teaching knowledge and experience to the younger generation in the educational process, in the fields of material production, science, culture and household services.

Each person is formed as a person only through the system of education, social upbringing and spiritual development, and vocational training.

As a result, a person achieves social maturity - his performance of useful functions for society, a thorough and creative understanding of his tasks and duties, and the entry into equal, independent relations with others.

The place and role of a person, rights and obligations in the personnel training system are constitutionally strengthened, legally protected and systematically spelled out in relevant documents.

"State and Society" is the guarantor of personnel training and admission, which regulates and controls the activities of the education and personnel training system, and coordinates the activities of educational institutions in the training of highly qualified competitive specialists."

The state and society guarantee the following, such as:

- the right of citizens to receive education, their opportunities for choosing a profession and improving their qualifications;

compulsory general secondary and secondary specialized, vocational education, which gives the right to choose a direction of study in academic lyceums or vocational colleges;

- the right to receive higher and higher education on the basis of state grants or on a fee-based basis;

financial support for state educational institutions;

- development of public administration to address issues of ensuring the conditions for studying, living and relaxing for students;

social support for participants in the educational process;

- the active implementation of regulatory legal acts on increasing the responsibility of pedagogical staff of educational institutions and parents for the upbringing and protection of children's lives. Thus, high-quality professional training, social incentives and protection for an individual, and assistance in emergencies are guaranteed by the state.

“Continuous education” is the basis for the training of qualified competitive personnel and includes all types of education: preschool education, general secondary education, secondary specialized, vocational education, higher education, post-university education, advanced training and retraining of personnel, out-of-school education, DTS, the structure of the personnel training system and its operating environment.

The continuous education system should meet the various educational needs of a person and society, create broad opportunities for raising the value and status of knowledge, and also provide fundamental knowledge and social protection of the individual by training specialists on a general educational, general cultural, professional and scientific basis in the conditions of changing needs of the economy.

The directions of reforming continuing education were identified as a radical improvement of the human resources potential of the education system, the development of various types of state and non-state educational institutions, ensuring the transition from compulsory general secondary education to secondary specialized, vocational education, improving the education management system, creating a system for objective assessment of the quality of the educational process and personnel training, expanding cooperation with foreign and international organizations related to education and science.

Science is directly involved in radically updating the content of education, preparing educational standards, educational programs, textbooks and manuals, and implementing scientific and methodological support. In addition, science, as a customer in personnel training, achieves direct correlation of scientific research with the educational process.

"Production" is the main customer, which determines the need for personnel, as well as the requirements for the quality and level of their training, a participant in the process of providing the personnel training system in financial and material and technical terms. "Production, performing the functions of a customer and consumer in the personnel training system, actively participates in the process of training, retraining and advanced training of personnel at the required high levels and for relevant industries.

The needs of production form the social order for personnel training, determine the purpose, tasks and content of vocational training, put forward qualification requirements, determine the conditions for choosing new technologies and forms of training. Production ultimately assesses the quality and competitiveness of personnel. The state and society ensure that the system of continuing education and personnel training is open to all and adaptable to life changes. Taking into account advanced world experience in the field of personnel training affects all aspects of the system of continuing education and personnel training and is one of the factors of its development.

#### **LIST OF REFERENCES:**

1. Азимова Н. Э., Насимова З. И. Маънавий-маърифий ишлар жараёнида бўлажак касб таълими ўқитувчисини тарбиялаш методикаси //psixologiya учредители: бухарский государственный университет. – №. 3. – с. 129-134.
2. Azimova N. E. Problems of development of new pedagogical technologies of training of teachers of professional education and their introduction into the educational and educational process //academicia globe: inderscience research. – 2022. – т. 3. – №. 1. – с. 1-3.
3. Azimova N. E. Formation of national and ideological education of students is an integral part of the learning process. – 2021.
4. Azimova N. E. A financially independent higher education institution is the foundation of our future //scientific progress. – 2022. – т. 3. – №. 3. – с. 130-134.
5. Azimova N. E. Et al. Youth is moving force of civil society //eastern european scientific journal. – 2019. – №. 1.
6. Азимова Н. Э. Технология духовно-нравственного воспитания преподавателя профессионального образования в процессе обучения //молодой ученый. – 2011. – №. 5-2. – с. 117-118.
7. Азимова н. Э. Роль профессионального педагога в подготовке гармонично развитой личности //международный журнал гуманитарных и естественных наук. – 2018. – №. 5-1.
8. Азимова Н. Э., Насимова З. И. К. Важные особенности человеческого образования в семье //academy. – 2020. – №. 5 (56).
9. Азимова Н. Э., Элибоева Л. С. Некоторые аспекты повышения уровня экологической культуры //наука, техника и образование. – 2019. – №. 1 (54).

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