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TODAY, IMPROVING THE MEDIA COVERAGE OF HIGHER EDUCATION INSTITUTIONS IS A PRIORITY

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Annotation: In order to further improve the quality of education in today's developing world, as well as to use new methods that have not been previously used in the teaching system, first of all, the increase in the mediasibility of each educator is one of the most pressing issues of this article.

Keywords: Mediacompetence, higher education, young staff, information, methodology, indicator, didactics, strategy, pedagogical, scientific innovation, modeling, module, creativity, approach.

There is no field today where information and communication technologies have not entered. It is difficult to imagine any field without information technology. It is becoming one of the most important factors, including in educating the younger generation. Therefore, the development of media coverage of students of higher education institutions is one of the most important issues of the current period. Electronic communication, Internet, The rapid development of satellites and the media requires pedagogical staff to work on their own. In the process of globalization, newspapers, magazines, radio, television, photography, documentary and feature film, news agencies, the Internet, the digital growth of information resources in the global network, significant changes in quality are taking place. Computer, fax, " mobile " phone technical. Our country has a high intellectual potential, modern knowledge and skills in accordance with the requirements of the times, and creates unparalleled opportunities to train specialists with a new worldview and independent thinking. In this regard, the use of information and communication technologies – media in the educational process is being widely used. In the educational process, the media, ie the Internet, television, radio, film, video, telephone.

According to Alexander Fedorov, mediocreism helps man to actively use information opportunities as a result of this process, an area provided by television, radio, video, cinema, press and the Internet.

Media and information literacy – " umbrella", i.e., two meanings in the context of a concept, was recommended by YUNESCO as a combined term. To understand its essence, it is necessary to know the core of each concept.

Being able to express one's opinion clearly, to be able to substantiate it, to consider events and happenings from different perspectives is an important component of mediocreism. This means that today, in the context of globalization of higher education institutions, it is expedient to study the secrets of media education in a theoretically thorough manner and to apply them sufficiently in the practice of education. Information is emerging in the context of globalization of communication. These requirements are directly related to media coverage[1,2,3,4,5,6,7].

Having knowledge that allows you to properly reflect on a particular situation, evidence-proof thinking, is a term that expresses a person's level in a particular area.

Some scientists consider «competence » to be a combination of practical and theoretical knowledge, cognitive abilities, behaviors, and values used to improve performance, or to have

good qualifications is a condition of being able to perform a specific role. For example, management competence may include systemic thinking and emotional intelligence, skills in exposure and negotiation.

Research on Competition (Compitence) shows that competence encompasses a very complex and comprehensive concept, and that different scientists have given different definitions of competence.

The concept of media coverage (media commerce) is a new term that is entering the field of education, which includes meanings such as the transmission and evaluation of media data in various forms, learning, knowledge.

The roots of the concept of media competence can be found in Dieter Baacke's " Communication and Competence " (1973/1980) gabilitation dissertation, in which the concept of communicative competence was first developed. Chomsky's Concept of Linguistic Competence (1972) and Habermas's Draft Theory of Communication Competence (1, media competence « actively uses all types of media for communication and action repertoire » represents ability

Media – is an analysis of the complex processes of media activity in society, the integral quality, types, forms and genres that are manifested in a person's readiness to select, use, critically analyze, evaluate, create and transmit media texts in various forms. The concept of media coverage is multifaceted. Because it represents both knowledge and methods of activity, it is a scientific feature that operates in several areas, because mastering it is a task in professional, social and daily life. Media coverage is developed within the framework of media education: mediasavodxonlik (media literacy), based on the concepts of media culture (media culture). This explains that media competence is sometimes understood as a synonym for media literacy, for example: media competence / media literacy (media content).» In many countries, this concept predominates in the study of media coverage.

There are different terms in the literature on the topic of " media coverage", which is understood differently in countries. Media, information, digital, audiovisual and IT education conditions work in place of each other. This is due to the rapid development of technology, the diversity of forms and methods of information transmission, as well as the change in attitudes of recipients who are all active participants in these processes. However, The general term « media and information education » should refer to different approaches (combining different means of expression and communication, different information and media) on this issue.

The term mediocomponent (German: Medienkompetenz, ing. Media competence, etc.) is already actively used in foreign pedagogy. For example: Baacke, 1999; Blumeke, 2000; Potinger, 1997. In Germany, mediocomponentism is understood as a qualified, independent, creative, and socially responsible approach to the media.

Teacher's media coverage (educator's mediacompetence) – has the authority of the press, its causes, knowledge, skills and competencies (indicators: motivational, informational, practical-fast, methodological activities, creative), all ages to promote media education knowledge to learners.

Media coverage refers to the ability to act competently, independently, creatively and socially responsible towards "AAV. In another study, 5 skill blocks that form the basis for the formation of media coverage, including the selection and use of what the media offers; developing their own media product, etc.

In conclusion, the development of media coverage has become one of the important tasks of the era of globalization. It is important for media teachers to be able to properly select and effectively use information and media from the media space throughout their careers. Media education in media coverage is not limited to the acquisition of factual and focused knowledge – although it is also important to classify new media events.

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SHARQ VA GARB UYGONISH DAVRI MADANIYATLARI VA ULARNING XUSUSIYATLARI

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ANNOTATSIYA. Ushbu maqolada sharq va garb uygonish davri madaniyatlari va ularning xususiyatlari, rivojlanishi xususida so'z boradi..

Kalit so'zlar: Madaniyat, tarix, sharq va garb uygonish davri.

KIRISH. Insoniyat tarixida Sharq uyg'onish davri pedagogikasi alohida ahamiyat kasb etadi. Chunki, bu davr pedagogikasida axloqiy fazilatlar va ta'lim-tarbiya masalalariga juda katta e'tibor qaratilgan. Shaxs kamoloti masalasi o'sha davr mutafakkirlarining diqqat markazida bo'lgan. Bu davrda ta'limiy, tarbiyaviy va axloqiy mazmunda yaratilgan quyidagi; "Fozil odamlar shahri", "Baxt saodatga erishuv haqida", "Axloq haqida risola", "Ishq risolasi", "Qutadg'u bilig", "Axloqi Nasriy", "Axloqi Jamoliy", "Axloqi Muhsiniy", "Hibatul-haqoyiq", "Qobusnoma", "Guliston", "Bo'ston", "Mahbub ul-qulub" kabi asarlarda ta'lim-tarbiya, milliy axloq-odob borasida, milliy urf-odatlar, turli-tuman an'analarni joy-joyiga qo'yish, milliy qadriyatlarni rivojlantirish masalalariga alohida e'tibor qaratilgan. Ma'lumki o'tgan asrlarda arab xalifaligida vujudga kelgan ijtimoiy-siyosiy, ma'naviy o'zgarishlar, Islom dinining vujudga kelishi madaniy hayotga ham o'z ta'sirini ko'rsatadi. Bu ta'sir katta ko'tarinkilik ruhini paydo qiladi va bu ruh arab xalifaligini, Sharqni qamrab olganligi uchun Sharq uyg'onish davri deb ataladi. Bu jarayon IX asrdan boshlanib, XV-XVI asrlargacha davom etadi. Tarixiy manbalar ma'lumotlariga ko'ra XI asrda Xorazmda ilm-fan ayniqsa taraqqiy etadi. Bu davrda ilm-fan rivojlanishi quyidagi uchta yo'nalishdan iborat bo'ladi.

Birinchi yo'nalish. Matematika-tibbiyot yo'nalishi (matematika, astronomiya, kimyo, geodeziya, mineralogiya, tibbiyot, farmologiya va boshqalar) kiritilgan.

Ikkinchi yo'nalish. Ijtimoiy-falsafiy yo'nalishi(falsafa, tarix, mantiq, fiqx, ruhshunoslik, notiqlik va shunga yaqin bo'lgan yo'nalishlar) kiritilgan.

Uchinchi yo'nalish. Ta'limiy-axloqiy mazmundagi yo'nalish bo'lib unga qomusiy olimlarning asarlaridagi didaktik va axloqiy fikrlari kiritilgan.

MUHOKAMA VA NATIJALAR. Sharq uyg'onish davrida ham komil inson tarbiyasi muammosi ma'naviy sohadagi eng asosiy masala bo'lgan. Shuning uchun ham ta'lim-tarbiya masalasiga katta e'tibor berilgan. Zero, insoniylik g'oyasida yuksak axloqiy xislatlar ifodalanganligi uchun ham Sharq uyg'onish davri pedagogikasida ta'lim va tarbiya yo'nalishi muhim ahamiyat kasb etgan. Axloq masalasi buyuk mutafakkirlarning, pedagoglarning diqqat markazida bo'lgan. Bu davrda Forobiy, Beruniy, ibn Sino, Yusuf xos Hojib, Ahmad Yugnakiy, Tusiy, Davoniy, Koshifiy, Kaykovus, Sa'diy, Jomiy, Alisher Navoiylarning ta'limiy-axloqiy asarlari inson shaxsini ma'naviy-axloqiy shakllantirish muammosini hal etishda sof pedagogik asarlar sifatida muhim ahamiyatga ega bo'ldi. Mazkur pedagogik asarlarda insonning ma'naviy kamolga yetishida yuksak xulq-odob, ilm-fanni egallash g'oyasi ilgari surilgan.

O'sha davr buyuk Sharq mutafakkirlarining ta'lim va tarbiyaga oid qarashlarining asosini ham "Qur'oni Karim" va "Hadis" ta'limoti tashkil etadi. Ular o'z qarashlarini yoshlar ta'lim-tarbiyasi uchun zarur odob-axloq me'yorlari, o'z turmush tajribasi, islom axloqi, Qur'on

talablari hamda Hadislar asosida bayon qiladi va shu asosda yoshlarning doimiy amal qilishi lozim bo'lgan harakatlari ketma-ketligi va odob-axloq me'yorlarining tizimli tartibini bayon qiladi. Ul buyuk zotlarning sermahzul ijod mahsullari bugungi kun ta'lim-tarbiya jarayonida yosh avlod tarbiyasida dasturulamal bo'la oldi. Ta'lim-tarbiya jarayonini tashkil etishda o'z o'git va yo'nalishlari bilan beqiyos hissa qo'shgan buyuk qomusiy olim Abu Nasr Forobiy bu borada quyidagilarni alohida ta'kidlaydi:

-"Ta'lim degan so'z xalqlar va shaharliklar o'rtasida nazariy fazilatni birlashtirish, tarbiya esa shu xalqlar o'rtasidagi tug'ma fazilat va amaliy kasb-hunar fazilatlarini birlashtirish";

-"Tarbiya jarayonining muvaffaqiyatli kechishi uchun tarbiya beruvchining o'zi tarbiyali bo'lmog'i shart";

-"Ta'lim faqat so'z va o'rganish bilan, tarbiya esa amaliy ish, tajriba bilan amalga oshiriladi";

-"Tarbiya - har bir xalq, millatning amaliy malakalaridan iborat bo'lgan ish – harakat, kasb – hunarga o'rgatishdir";

-"Inson - dunyo taraqqiyotining eng mukammal va yetuk yakuni".

Buyuk mutafakkir va qomusiy olim Abu Nasr Forobiy bu fikrlari orqali shaxs kamolotida ta'lim va tarbiya berish zarurati, ta'lim-tarbiya usullaridan kutilgan asosiy maqsad va bola tarbiyasida tarbiya usullari haqida qimmatli ma'lumotlarni bayon etgan hamda bolaning tug'ilgandan boshlab oyoqqa turguncha ma'lum tartibda tarbiyalanib borishga katta e'tibor qaratilishiga to'xtalgan. O'z tarixiy ijodi va buyuk ma'naviy-ma'rifiy merosi bilan dunyo ilm-fanini yuqori cho'qqiga olib chikgan, o'rta asrlar Sharqining qomusiy olimi, astronomi, geografi, ma'danshunosi, etnografi, tarixchisi, shoiri, faylasufi va pedagogi Abu Rayhon Beruniyning ham yaratgan barcha asarlari mazmun-mohiyatini ta'lim-tarbiya masalalari tashkil etadi. Uning ijodidan fanning turli sohalariga oid juda ko'p yirik asarlar o'rin olgan bo'lib, bu asarlar uning ana shu sohalarni nihoyatda yaxshi bilgan tadqiqotchi, fanda yangidan yangi yo'llar ochgan donishmand bo'lganligidan dalolat beradi. Beruniyshunos olimlarning ma'lumotlariga ko'ra Beruniy yoshligidan riyoziyot va falakiyotni o'rganib, 16-17 yoshlaridayoq Quyoshning balandligini o'lchagan, quyosh tutilishini kuzatish bilan shug'ullanib, 22 yoshida Markaziy Osiyoda birinchi bor yer globusini, turli xalqlarning yil hisoblari haqidagi ilk yirik asari – "Osorul boqiya"ni yaratadi.

Olimning fan taraqqiyotiga qo'shgan hissasi juda ulkan bo'lib, u 152-ta risola yaratgan, shundan 30 tasi bizgacha etib kelgan. Taniqli Rus olimi V.V.Bartold: - "Beruniy shunday serqirra olimki, o'z davrida mavjud bo'lgan ilm sohalaridan shug'ullanmagani uning shug'ullanganidan kamdir. Uning yozgan asarlari shunchalik ko'p va serqirraki bunga bir odamning umri kifoya qilganiga kishi hayron qoladi"- deydi. Yana bir buyuk rus sharqshunos olimi, akademik S.P.Tolstov xalqaro ilmiy anjumanlarning birida Evropa olimlaridan biri "Beruniy XI asr Leonardo do Vinchisi" degan ta'rifiga javoban "Leanardo do Vinchi XV asr Beruniysidir" deb vatandoshimizga juda katta ta'rif bergan.

XULOSA. Bugungi kunda Beruniyning boy ilmiy, adabiy merosi o'z ahamiyatini yo'qotmasdan avlodlar qo'lida qadr topmoqda. U ilm-fanning hamma sohalarini mukammal egallagan qomusiy olim sifatida o'zining asarlari bilan falsafa, astronomiya, geodeziya, geografiya, tarix va tarbiya fanlari rivojiga katta hissa qo'shgan. Buyuk bobokalonimiz, qomusiy olim Abu Rayhon Beruniy 1048 yilda G'azna shahrida vafot etgan. Buyuk olim nomini abadiylashtirish maqsadida yurtimizdagi ko'pgina ilmiy markazlar, ko'chalar, shahar va

qishloqlarga olim nomi berilgan. Buyuk Sharq mutafakkirlarining boy madaniy va ma'rifiy merosi yosh avlodni doimo halol mehnat qilishga, mardlik va saxovat, kamtarlik va adolat, va mehr va oqibatga chaqiradi. Har qaysi xalq yoki millatning ma'naviyatini, tarixini, o'ziga xos urf-odat va an‟analarini milliy qadriyatlarsiz tasavvur etib bo'lmaydi. Sharq olimlarining, jumladan, Abu Rayhon Beruniyning hikmatlari, Kaykovusning "Qobusnoma", Alisher Navoiyning "Mahbub ul-qulub", Husayn Voiz Koshifiyning "Axloqi muhsiniy" kabi asarlarida ta'lim va tarbiya masalasiga bo'lgan e'tibor o'z aksini topgan. Qayd etilgan asarlarda farzand ota-onaning baxti bo'lsa, tarbiya farzandning buguni, ertasi va kelajagidir degan ma'nj mujassam. Mutafakkir Ibn Sino tarbiya beruvchilarga qarata,"Kimga qanday pandu nasihat qilsang, unga, avvalo, o'zing amal qil", – deganidek, farzand tarbiyasida, ularning ma'naviy dunyoqarashini kengaytirish va boyitishda, mutafakkirlarning fikr-mulohazalari, pand-nasihatlari, hikmatlariga amal qilish va ulardan foydalanish barchamizning burchimizdir.

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DIFRAKSION PANJARA HAQIDA MA'LUMOTLAR

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Annotatsiya: Ushbu maqolada yorug'lik to'lqinining difraksiya hodisasini kuzatishning asosiy qurilmasi-difraksion panjaraning tuzilishi, undagi qonuniyatlar va tarixi haqida qisqacha yoritib berilgan.

Tayanch tushunchalar: difraksion panjara, tirqish, yig'uvchi linza, Gyugens-Frenel prinspi, interferensiya, sinusoidal difraksion panjara, konkav diffraktsiya, spektrograf.

Difraksion panjara- bu davriy ravishda tirqish va to'siqlardan iborat tiniq optik qurilma hisoblanadi. Tirqish kengligi b va to'siq kengligi a bo'lsa, difraksion panjaraning d davri:

$$d=a+b$$

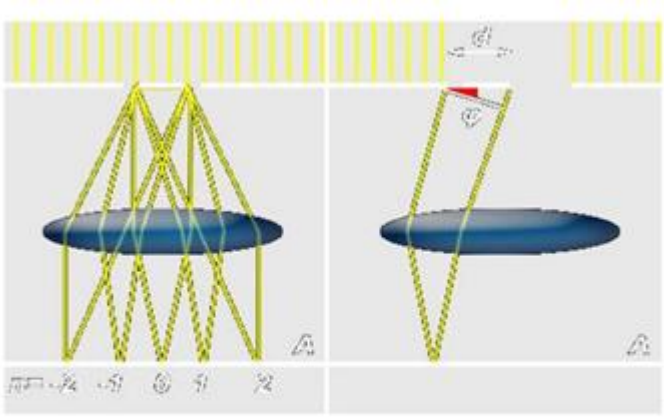
bo'ladi. Bu vaqtda panjaradagi tirqishlar soni:

$$N=\frac{l}{d}$$

Bu yerda l-panjaraning eni.

Bu tizimga parallel yorug'liklar tushganda Fraungoffer difraksiyasi vujudga kelib nurlar tushish yo'nalishiga nisbatan φ burchakka og'adi. Bu nurlar linza yordamida to'planganda, linzaning fokal tekisligida o'zaro bir-birini almashtiruvchi oq va qora tasmalar hosil bo'ladi.(1-rasm)

Bu vaqtda difraksion manzara bir nechta maksimumlardan iborat bo'ladi. Difraksiya vaqtida φ burchakning ma'lum qiymatlarida ikkala tirqishning mos nuqtalaridan kelayotgan nurlar bir xil fazada bo'ladi. Bu nurlarning interferensiyalanishi natijasida intensivlikning asosiy maksimumi kuzatiladi.



1-rasm. "Difraksion panjaraning ajrata olish qobiliyati" animatsiyasidan fragment

$$d\sin\varphi = 2k\frac{\lambda}{2}, \quad k = 0, 1, 2, 3 \ldots. (1)$$

Kuzatish burchagi φ ning ma' lum qiymatlarida nurlar qarama-qarshi fazada bo'lib yo'llar farqi yarim to'lqin uzunligiga juft karrali bo'ladi, bu holda nurlarning interferensiyalasnishi natijasida yorug'lik intensivligining so'nishi kuzatiladiva qo'shimcha minimumlik sharti bajariladi:

$$d\sin\varphi = 2k\frac{\lambda}{2}, \qquad (2)$$

Kuzatish burchagining ma’lum qiymatlari:

$$d \sin\varphi = (2k+1)\frac{\lambda}{2}, \qquad (3)$$

kuzatiladi va bu shart qo’shimcha maksimumlar sharti hisoblanadi.

Difraksion panjaraning ajrata olish qobiliyati .

Agar difraksion panjaraga monoxromatik yorug’lik tushmasdan murakkab oq yorug’lik ko’rinishdagi yorug’liklar parallel tushsa, difraksion manzara oq va yorug’ tasmalar o’rniga binafsha rangidan boshlab, qizil ranggacha bo’lgan tasmalar majmuasi, ular orasida esa, qora tasmalar kuzatiladi. Tasmalar rangdorligi quyidagi tartibda bo’ladi. Eng kichik og’ush burchagi binafsha rangli tasma, undan keyin esa havo rang, ko’k, yashil, sariq, zarg’aldoq va qizil rangli tasma eng katta og’ish burchagiga ega bo’ladi. Har bir rangdagi tasma o’zining maksimumlariga ega bo’ladi. Reley qoidasiga ko’ra, maksimumlarning bir-biridan ajrim chegarasi ordinata yo’nalishida umumiy maksimumning 0,8 qismiga teng bo’lsa, tasma ranglari o’zaro ajralgan deb hisoblanadi.

Difraksion panjara va disfraksion asboblrning ajrata olish qobiliyati burchakli dispersiya va chizig’li dispersiya ko’rinishda bo’ladi. Burchakli disperisya:

$$D=\frac{d\varphi}{d\lambda} \qquad (4)$$

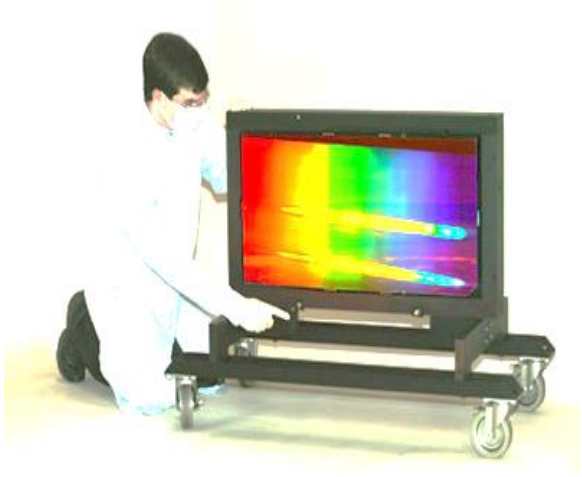
bu yerda: φ difraksiya vaqtida nurning og’ush burchagi, dλ - to’lqin uzunligining o’zgarishi, k – difraksion manzaraning tartib raqami, b – difraksion panjaradagi tirqish eni. Dispersiyaning chizig’li kataligi, ya’ni panjara yoki spektral asboblarning chiziqli ajrata olish qobiliyati quyidagicha aniqlanadi:

$$r=\frac{\lambda}{\Delta\lambda}=\frac{\lambda}{\lambda_2-\lambda_1} \qquad (5)$$

Difraksiya tarixi haqida.

Devid Rittenxaus (ing. Devid Rittenxaus) (1732-1796) - amerikalik astronom, ixtirochi, matematik, soatsoz. Rittenxaus Milliy falsafiy jamiyat a'zosi va Amerika Qo'shma Shtatlari zarbxonasining birinchi direktori edi. Devid Rittenxaus o’tkazgan tajribaga ko’ra hodisaning tavsifi: Cho'g'lanma lampaning yorug'ligi shaffof diffraktsiya panjarasidan o'tib, shunday ko'rinadi. Nol maksimal (m=0) panjaradan burilishsiz o'tadigan yorug'likka mos keladi. Birinchi (m=±1) maksimalda panjara dispersiyasi tufayli yorug'likning spektrga parchalanishini kuzatish mumkin. Burilish burchagi to'lqin uzunligi bilan ortadi (binafshadan qizilgacha). Ideallashtirilgan panjara diffraktsiyani keltirib chiqarish uchun qiziqish to'lqin uzunligidan kattaroq bo'lishi kerak bo'lgan d davriga ega bo'lgan yoriqlar to'plamidan iborat. To'lqin uzunligi bilan monoxromatik yorug'likning tekis to'lqini bo'lsin, panjaradagi har bir teshik Gyuygens-Fresnel printsipiga ko'ra yorug'lik barcha yo'nalishlarda tarqaladigan kvazi-nuqta manbai bo'lib ishlaydi. Barcha yoriqlar chiqaradigan yorug'likning interferensiyasi mavjud bo'lib, agar qaysidir yo'nalishda ikkita qo'shni

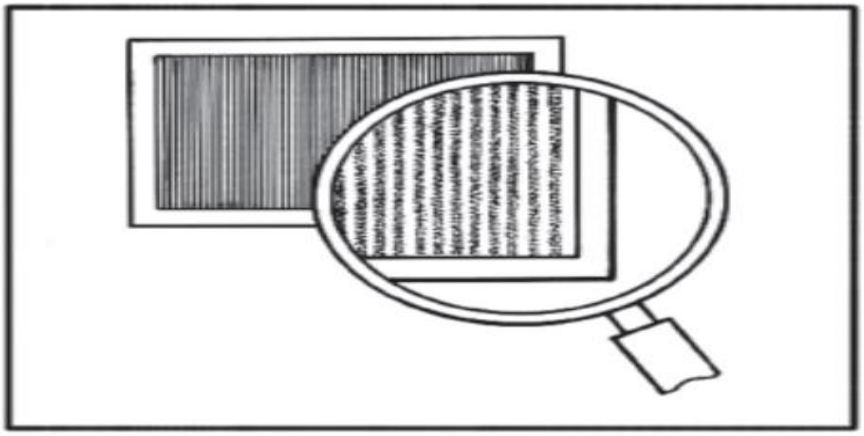
tirqishning yorug'ligi bir xil fazada bo'lsa, konstruktiv interferensiya yuzaga keladi va bu yo'nalishda maksimal paydo bo'ladi. Turli to'lqin uzunliklari uchun interferentsiya maksimallari turli burchaklarda bo'lganligi sababli (interferentsiya qiluvchi nurlar yo'lidagi farq bilan aniqlanadi), oq yorug'lik spektrga parchalanadi.



(Dastlab olingan tajriba surati.)

Difraksiya- yorug’likning bir jinsliligi bi-biridan keskin farq qiluvchi qismlarga ega bo’lgan muhitlarda tarqalishida kuzatiladigan hodisa. Xususan, yorug’lining to’siqlarni aylanib o’tishi va geometric soya sohasiga kirishi difraksiya natijasida vujudga keladi.Ushbu hodisa yorug’likning to’lqin tabiati asosida tushuntiriladi. Difraksion panjara o‘ziga tushayotgan yorug‘lik nurlarini spektrlarga ajratadi.Difraksion panjaraning muntazam va nomuntazam xillari mavjud. Tirqishlari tartibsiz bo‘lgan xili nomuntazam, tartib bilan joylashtirilgan xili muntazam difraksion panjara deyiladi. Optikada nomuntazam difraksion panjaraning amaliy ahamiyati yo‘q. Muntazam difraksion panjara yassi yoki sferik sirtga bir xil shaklda (teng oraliqda) chizilgan chiziqlar to‘plami bo‘lib, chiziqlar oralig‘i d difraksion panjara davri deyiladi. Difraksion panjaraga tik tushayotgan yoruglik nurlari har qaysi tirqishda f burchakka sinadi, natijada nurlar yo‘li farqi d-simp hosil bo‘ladi. Ba’zi tabiiy kristallar ham rentgen nurlarini tahlil qilish uchun muntazam difraksion panjara sifatida ishlatiladi.

Difraksiya hodisasini kuzatish uchun qo’llaniladigan qurollardan biri difraksion panjaradir. Difraksion panjara shaffof bo’lmagan to’siqlar bilan ajratilgan juda ko’p tirqishlardan iborat bo’lib,tirqishlar bir-biriga juda yaqin va parallel joylashgan bo’ladi.1-rasmda difraksion panjaraning kattalashgan tasviri ko’rsatilgan. Qalin taroq,qush pati, kiprik va shunga o’xshash narsalarni difraksion panjara desa bo’ladi.



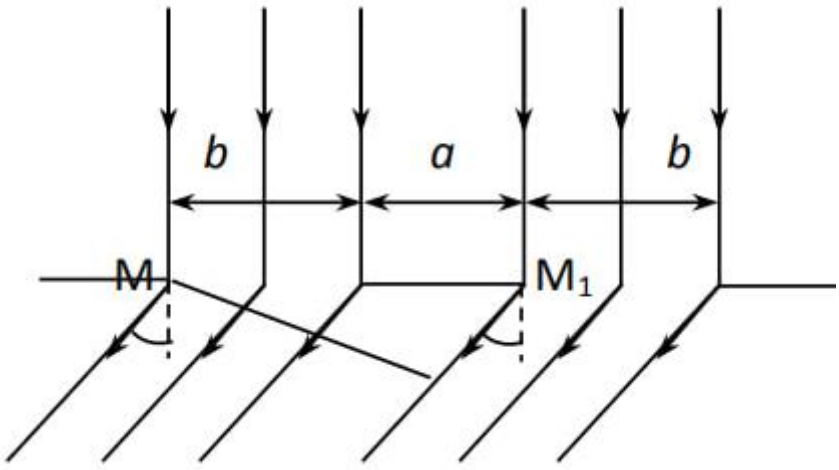
1-rasm.(difraksion panjara ko'rinishi)

Ko'pincha shisha plastinkaga maxsus mashina yordamida olmos keskich bilan zich joylashgan ingichka parallel shtrix (chiziqlar) chizib tayyorlangan difraksion panjaralardan foydalaniladi. Shtrixlar soni 1mm da bir necha yuzdan bir necha minggacha yetadi. Bunday panjarada shisha plastinkaning shtrix o'tkazilmagan toza (shaffof)joylari tirqish bo'ladi, shtrixlar o'tkazilgan joylari esa yorug'lik uchun shaffof bo'lmaydi.

Agar shaffof tirqishlar eni a bilan,shaffof emas oraliqlari eni b bilan belgilansa d=b+a kattalik difraksion panjaraning davri(doimiysi)deb ataladi.

Difraksion panjaraga to'lqin uzunligi λ bo'lgan yassi monoxromatik nur tushayotgan bo'lsin .Tirqishlarning har birida yorug'lik difraksiyalanadi, ya'ni tirqishlardagi ikkilamchi manbalar barcha yo'nalishlarda tarqaluvchi yorug'lik to'lqinlarini hosil qiladi.

Agar difraksion panjara orqasiga L yig'uvchi linza qo'yilsa,u holda linzaning fokal tekisligida joylashgan E ekranda difraksion manzara vujudga keladi.Bu difraksiya manzarasi ikki jarayon bilan aniqlanadi ya'ni yorug'likning har bir ayrim tirqishdan difraksiyasi va hamma tirqishda difraksiyalangan yorug'likning interferensiyasi natijasidir. Bir-biridan "a" masofada joylashgan



2-rasm.

"b" kenglikdagi ikki o'xshash tirqishlarga parallel nurlar dastasini tushiraylik. Tirqish ikkita bo'lgani uchun interferensiya tufayli qo'shimcha minimumlar hosil bo'ladi. Bu shartni quyidagicha ifodalash mumkin:

$$M_1F = MM_1 \cdot \sin\varphi = (2m+1)\frac{\lambda}{2}\ ;\ m=0, 1, 2, 3, \ldots \quad (6)$$

Birinchi tirqishdan hosil bo'luvchi maksimumlar

$M_1F = MM_1 \cdot Sin\varphi = m\lambda$ (7)

shart bajarilganda ikkinchi tirqish ta’sirida kuchayadi, bu maksimumlar boshmaksimumlar deyiladi. a+b=d desak, qo’shimcha minimumlar va bosh maksimumlar shartini quyidagicha yozish mumkin:

qo’shimcha minimum :

$$dSin\varphi = (2m+1)\,)\,\frac{\lambda}{2} \quad (8)$$

bosh maksimumlar uchun esa

$$dSin\varphi = m\lambda \quad (9)$$

oldingi, bir tirqish yolg’iz (alohida) hosil qiluvchi minimumlar sharti:

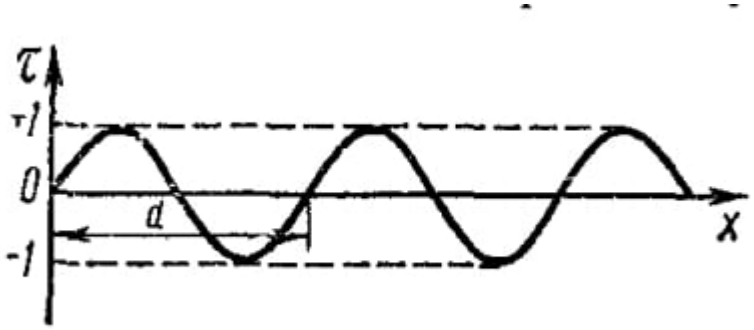
$$b \cdot Sin\varphi = (m+1)\lambda \quad (10)$$

bilan ifodalanadi. (3) va (5) dan ko’rnadiki, qo’shni bosh maksimumlar oralig’ida bitta qo’shimcha minimum kuzatiladi. Tirqish uchta bo’lganida esa ikkita qo’shimcha minimumlar kuzatiladi va h.k., N ta tirqishdan N-1 ta qo’shimcha minimumlar kuzatiladi. Ketma-ket navbatlashib keluvchi parallel tirqish va to’siqlar sistemasi difraktsion panjara deyiladi. Difraktsion panjara tirqishi o’lchami b va to’sig’ining kengligi a ni yig’indisi a+b=d difraksion panjaraning davri deyiladi. Bunday panjaraning shaffofligi (o’tkazuvchanlikning amplituda koeffitsenti) dan gacha sakrab o’zgaradi.

Yakka tirqish difraksiyasida tirqish torligi tufayli yorug‘lik energiyasining oz qismi o‘tadi. Natijada difraksion manzara xira bo‘lib, max-min larni bir-biridan ajratish qiyin. Bu kamchiliklarni bartaraf etish uchun difraksion panjaradan foydalanadilar. Difraksion panjara deb bir-biridan birday masofada turgan (to'siqlar bilan ajratilgan) tor tirqishlar sistemasiga aytiladi. Difraksion panjaralar tiniq jismga maxsus asboblar yordamida tilish yo‘li bilan yasaladi. Bunday tilimlar soni 1 mm da bir necha (25-400) ga teng bo‘lib, ularning umumiy soni $2 \cdot \mathbf{10^5}$ tagacha yetishi mumkin. Agar tirqishlar bir to‘g‘ri chiziq o‘qida joylashgan bo‘lsa chiziqli, ikki to‘g‘ri chiziq w-o‘qlari bo‘yicha joylashgan bo‘lsa yassi, o‘qlari bo‘yicha joylashgan bo‘lsa, uch o’lchamli yoki fazoviy panjaralar deb yuritiladi.

Bir o’lchovli sinusoidal difraksion panjaralar.

Shaffofligi sinusoidal qonunga muvofiq o'zgarib turadigan, d - panjara davri bo'lgan bir o'lchovli (bir hil bo'lmaganlarning almashinishi x yo'nalishi bo'yicha sodir bo'ladi) yorug'likning diffraktsiyasini ko'rib chiqaylik.



4-rasm

Shubhasiz, bunday panjarada shaffoflik (amplituda o'tkazuvchanligi) panjara bo'ylab τ = 0 dan τ = 1 gacha sakrashda o'zgarmaydi, sinuson qonuni vaqti- vaqti bilan ijobiy va salbiy qiymatlarni oladi .

$$\tau = \sin 2\pi * x/d \quad (11)$$

Uzunligi 2 bo'lgan tekis to'lqin frontini sinusoidal panjaraga yo'naltiramiz.Oddiylik uchun yorug'lik normal ravishda panjaraga tushadi deb faraz qilamiz. Ko'rinib turibdiki, ko'rib chiqilayotgan panjaraning barcha shaffof elementlari bir vaqtning o'zida ikkilamchi manbalarga aylanadi va agar panjara orqasiga yaqinlashuvchi linza qo'yilsa, u holda bir xil burchaklarda tarqaladigan nurlar linzalarning fokus tekisligining bir nuqtasida to'planadi.

Agar nurlarni ma'lum φ burchak ostida diffraktsiyalangan deb hisoblasak, u holda har bir buzilish uchrashish nuqtasiga oldingisiga nisbatan sistematik kechikish bilan kelad . Binobarin, fokus tekisligining ma'lum bir nuqtasida, uning holati difraksiya burchagi ph qiymati bilan belgilanadi, 2n vaqt ichida o'zgarib turadigan buzilish keladi.

Bu erda 7 ta'sir davri (qo'shni shaffof elementlardan buzilishlar kelishi momentlari orasidagi vaqt oralig'i). Agar T- vaqt davomida x ning qiymati panjara doimiysi d ga o'tishini hisobga olsak, ya'ni td=Tx u holda kuzatuv nuqtasida (fokus tekisligida) buzilishning o'zgarish qonuni quyidagi formula bilan aniqlanadi:

$$\sin 2\pi * x/d = \sin 2\pi * t/T \quad (12)$$

Shaffoflik koeffitsientining (-1 <r<+1) manfiy qiymati, demak, uzatilayotgan yorug'lik amplitudasi musbat (m > 0) va manfiy (r < 0) amplitudali to'lqinning fazalari qarama- qarshi ekanligini bildiradi. .

Sind x = sin7 ko'rinishdagi 2n 2l ni amalda vaqt bo'yicha cheksiz, ya'ni monoxromatik deb hisoblash mumkin.

Kuzatishlarni to'lqin uzunligi bilan monoxromatik deb hisoblash mumkin

$$\boldsymbol{\lambda} = vT = d \sin \varphi \quad (13)$$

Bu sinusoidal panjara uchun maksimal shartdir. Yuqoridagi formulalarni taqqoslash shuni ko'rsatadiki, agar oddiy diffraktsiya panjarasida diffraktsiya paytida noldan boshlab turli tartibdagi maksimallar (m = 0; 1; 2; ...) hosil bo'lsa, u holda a. sinusoidal panjara, nolga qo'shimcha ravishda, faqat birinchi tartibdagi difraksion maksimal (m1), ya'ni ikkinchi holda nurlar faqat burchak ostida tarqaladi.

Pog'onali panjaralar.

Shaffof fazali panjaraning turlaridan biri 1898 yilda Mishelson tomonidan taklif qilingan. Bu panjara o'z ixtirochisi sharafiga Mishelson eshelon deb nomlangan. Mishelson esheloni bir xil kenglikdagi qirrali narvon ko'rinishidagi qat'iy tekislik- parallel shisha plitalar qatoridan (30-40 gacha) iborat. Plitalar juda bir hil va aynan bir xil qalinlikda (1 dan 2 sm gacha). Bir- biriga bosilgan bir hil tekislik- parallel plitalar, xuddi qattiq bir hil shishadan yasalgan narvonni hosil qiladi.

5-rasm.

Л linzadan o'tuvchi S nuqta manbaidan kelayotgan yorug'lik Mishelson esheloniga parallel nur shaklida tushadi. Eshelondan o'tadigan yorug'lik nuri zinapoyaning chetlarida tarqaladi. Bir- biriga aralashib, ma'lum burchaklarda tarqaladigan nurlar mos keladigan maksimal yoki minimallarni beradi. Ayrim nurlar orasidagi yo'l farqi nafaqat shishaning sinishi ko'rsatkichiga bog'liq n , balki qadamlarning kengligi va balandligi va diffraktsiya burchagi φ ga ham bog'liq φ burchak ostida diffraktsiya qiluvchi qo'shni nurlar orasidagi yo'l farqini aniqlash qiyin emas:

$$\Delta = l\sin\varphi + h(n - \cos\varphi). \quad (14)$$

Kichkina difraksion burchak tufayli $\sin\varphi \sim \cos\varphi$ va $\cos\varphi = 1$. U holda asosiy maksimallarning sharti shaklga ega bo'ladi:

$$l\varphi + h(n-1) = m\lambda \quad (15)$$

ph kichik bo'lgani uchun tenglikning chap tomonidagi birinchi atama (15) ni e'tiborsiz qoldirish mumkin:

$$h(n-1) = m\lambda \quad (16)$$

h=1 sm , n= 1.5 va λ=5000 ni almashtirsak, biz m =10^4 ni olamiz.

Oldinga qarab, biz Mishelson eshelonining xizmatlarini qayd etamiz. Optik asboblarning spektral xarakteristikalari bilan tanishish. Difraktsiya panjarasining ajralish kuchi teng ekanligini ko'ramiz:

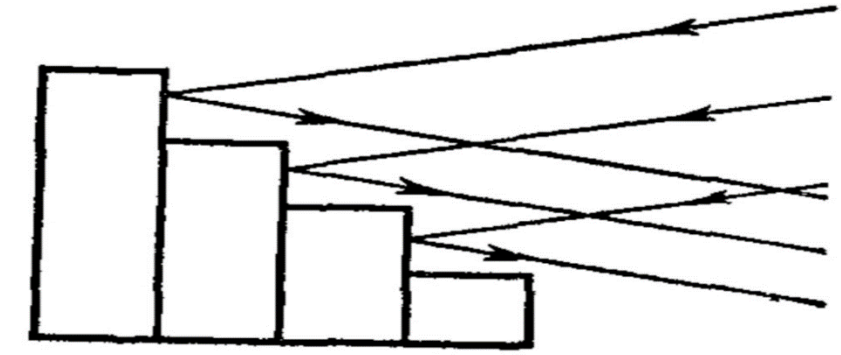
$$A = mN \quad (17)$$

bu erda N - interferentsion nurlar soni (yivlar soni va bizning holatlarimizda 30-40 bo'lgan qadamlar soni.

$$A = Nh(n-1)/\lambda \quad (18)$$

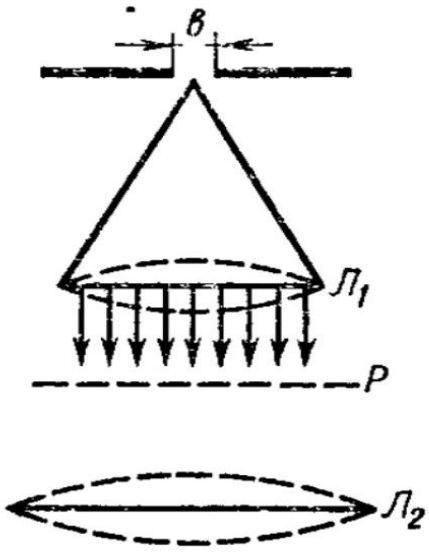
n = 1,5, h = 1 sm, N = 30,λ = 5000 A ni almashtirib, biz umumiy qalinligi 30 sm bo'lgan Mishelson eshelonining ajralish kuchi uchun profilli aks ettiruvchi fazali panjara bilan bir xil narsani olamiz. umumiy uzunligi 15 sm bo'lgan zarba Bunga asoslanib va bir xil qalinlikdagi ko'p sonli plitalarni

(0,12 aniqlik bilan) ishlab chiqarish bilan bog'liq katta qiyinchiliklarni hisobga olgan holda, biz buni amaliy emas degan xulosaga kelishimiz mumkin.



6-rasm.

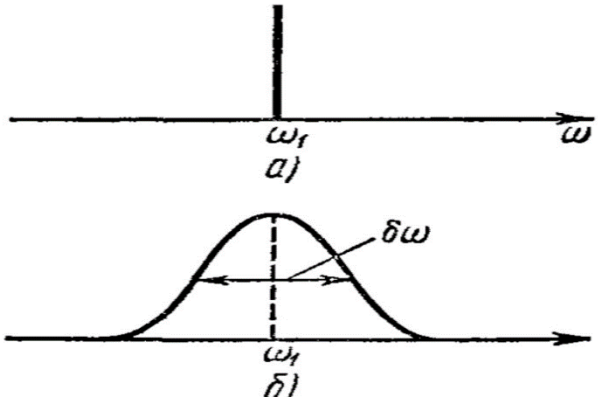
Eshelon Mishelson Uilyams. Amalda, ular odatda 1933 yilda Uilyams tomonidan taklif qilingan aks ettiruvchi eshelonlardan foydalanadilar (6.- rasm) va odatda Mishelson Uilyams eshelonlari deb ataladi. Mishelson Uilyams esheloni quyidagilardan iborat - bir qator eritilgan kvarts plitalari. Plitalarni maxsus qayta ishlash optik aloqaga erishishga imkon beradi. Natijada, butun qurilma eritilgan kvartsning bir bo'lagidan kesilganga o'xshaydi. Spektral xarakteristikalar, jumladan, Uilyams Mishelson eshelonining ajralish kuchi Mishelson eshelonining ajralish kuchidan yuqori. Reflektor eshelon, ishlab chiqarishning katta qiyinligi tufayli, spektrning ko'rinadigan hududida deyarli ishlatilmaydi. Odatda spektrning millimetr, mikroto'lqinli va infraqizil hududlarida qo'llaniladi. Ushbu sohalarda plastinka ishlab chiqarishning bunday yuqori aniqligi talab qilinmaydi. Aslida, Mishelson Uilyams poyezdi ultrabinafsha mintaqada ham ishlatilishi mumkin. Biroq, bu juda yuqori, amalda amalga oshirib bo'lmaydigan ishlab chiqarish aniqligi bilan bog'liq. Ultrabinafsha va uzun to'lqinli rentgen mintaqalarida konkav diffraktsiya panjaralari qo'llaniladi. Bu shuningdek, ma'lumki, konkav panjaralarning bir vaqtning o'zida rol o'ynashi bilan bog'liq.
Difraksion panjara-yorug’likni spektrga ajratuvchi asbob.



Maksimal va minimal pozitsiyalarning tushayotgan yorug'likning to'lqin uzunligiga bog'liqligi murakkab impulsni spektrga parchalash uchun diffraktsiya panjarasidan foydalanishga imkon beradi. Murakkab impulsni tarkibiy qismlarga ajratishda (xususan, oq yorug'likni monoxromatik to'lqinlarga aylantiradi), diffraktsiya panjarasi bir xil muammoni hal qiladi, uni matematik tarzda ketma-ket (chiziqli spektr) yoki Furye integraliga (uzluksiz spektr) kengaytirish orqali hal qilish mumkin. Murakkab impulsni monoxromatik komponentlarga parchalash uchun ishlatiladigan, komponenti difraksion panjara bo'lgan spektral qurilma difraksion spektrograf deb ataladi. Bu qurilmalarda diffraktsiya panjarasidan tashqari, kirish tirqishining aniq tasvirini ta'minlovchi fokuslash optikasi mavjud.7-rasm.
Bu qurilmalarda diffraktsiya panjarasidan tashqari, kirish tirqishining aniq tasvirini ta'minlovchi fokuslash optikasi mavjud. Spektrograflarda difraksion spektrografning hosil bo'lgan spektral tasviri rasmda ko'rsatilgan. L1 linzasining fokus tekisligida joylashgan , eni b bo'lgan tirqishdan chiqadigan yorug'lik nurlari difraksion panjara P ga tushadi. L2 linzaga tushgan difraksion nurlar

uning fokus tekisligida mos keladigan difraksiya naqshini beradi. fotoelektrik plastinka joylashgan. Agar tushayotgan nur monoxromatik bo'lsa, u holda berilgan to'lqin uzunligi diffraktsiya naqshidagi maksimallarning butun qatoriga to'g'ri keladi, bu turli tartibli spektral chiziqlar deb ataladi. Agar murakkab yorug'lik tushsa, unda har bir uzunlik mos keladi.
Yoriq spektral (prizma, difraksiya) asboblarning muhim qismlaridan biri hisoblanadi.U spektral chiziqlar deb ataladigan - tirqishning berilgan uzunligiga mos keladigan diffraktsiya naqshining maksimallarini olish uchun xizmat qiladi.Tiriqning ishlash printsipi. Fraungoferning bir tirqishdan diffraktsiya hodisasiga asoslanadi, bunda ma'lum bir kenglikdan boshlash tirqish tasvirining bulg'anishiga va diffraktsiya naqshining paydo bo'lishiga olib keladi. Diffraktsiya naqshining har bir maksimali ma'lum to'lqin uzunligiga mos keladigan spektral chiziq deb ataladi.2 Aniq vazifaga qarab, ikkita harakatlanuvchi pichoqdan iborat bo'lgan yoriqning kengligi bir necha mingdan bir necha o'ndan bir qismigacha (ba'zan ko'proq) o'zgaradi.

Diffraktsiya spektrining ish maydoni



8-rasm.

Binafsha rang (konkav diffraktsiya panjaralari bo'lgan spektrograf) to'lqin uzunliklari millimetr va submillimetrli mintaqaga (echeletli spektrograf - arra tishli kesimga ega bo'lgan aks ettiruvchi difraksion panjaralar). Echeletni yasashning qulayligi va deyarli barcha tushayotgan energiyani yuqori tartibli spektrlardan birida to'plash imkoniyati diffraktsiya asboblarini yanada foydali qiladi. Murakkab impulsning parchalanishi natijasi uning xususiyatlari - shakli va davomiyligi bilan belgilanadi. Biroq, eksperimental ma'lumotlar shuni ko'rsatadiki, parchalanish natijasi tushayotgan nurlanish parametrlari bilan yagona aniqlanmaydi, balki spektral apparatning xususiyatlariga ham bog'liq. Spektral qurilmaga beriladigan monoxromatik nurlanish 1-chastotaga mos keladigan ma'lum intensivlikdagi tor chiziq (8, a- rasm) shaklida emas, balki taqsimlanishini ifodalovchi egri chiziq (8- rasm, b) shaklida qayd etiladi. chastota energiyasi. Shakli berilgan spektral apparatning xossalari bilan belgilanadigan bunday taqsimot instrumental funktsiya deyiladi. Shunday qilib, qurilmaning o'zi tomonidan kiritilgan qurilmaga kiradigan signalning buzilishi ma'lum bir apparat funktsiyasi bilan tavsiflanadi. Shuning uchun murakkab impulsning monoxromatik komponentlarga parchalanishini aniq baholash uchun asboblarning spektral xususiyatlarini bilish kerak. Muayyan vazifaga qarab, ma'lum xususiyatlarga ega bo'lgan bir yoki boshqa spektral qurilma tanlanadi.

Yakuniy xulosa. Difraksion panjara - optik asbob; noshaffof ekranga qilingan koʻp sonli parallel tirqishlar yoki oʻzaro bir xil masofada joylashgan koʻzgusimon yoʻllar (shtrixlar) majmui; ularda yorugʻlik difraksiyasi xodisasi sodir boʻladi.

Difraksion panjara oʻziga tushayotgan yorugʻlik nurlarini spektrlarga ajratadi. Difraksion panjaraning muntazam va nomuntazam xillari mavjud.

Tirqishlari tartibsiz boʻlgan xili nomuntazam, tartib bilan joylashtirilgan xili muntazam difraksion panjara deyiladi.

Optikada nomuntazam difraksion panjaraning amaliy ahamiyati yo‘q. Muntazam difraksion panjara yassi yoki sferik sirtga bir xil shaklda (teng oraliqda) chizilgan chiziqlar to‘plami bo‘lib, chiziqlar oralig‘i d difraksion panjara davri deyiladi.

Difraksion panjaraga tik tushayotgan yoruglik nurlari har qaysi tirqishda f burchakka sinadi, natijada nurlar yo‘li farqi d-simp hosil bo‘ladi. Ba’zi tabiiy kristallar ham rentgen nurlarini tahlil qilish uchun muntazam difraksion panjara sifatida ishlatiladi.

To'lqinlarning difraksiyasi (lotincha diffractus - to'lqinlar tomonidan to'siq atrofida egilishi, sinishi) - to'lqin tarqalishi paytida geometrik optika qonunlaridan chetga chiqish sifatida namoyon bo'ladigan hodisa . Bu universal to'lqin hodisasi bo'lib, turli tabiatdagi to'lqin maydonlarini kuzatishda bir xil qonunlar bilan tavsiflanadi

Diffraktsiya usullari - bu o'rganilayotgan ob'ekt tomonidan tarqalgan fotonlar , elektronlar yoki neytronlar nurlarining diffraktsiyasidan foydalangan holda materiyaning atom tuzilishini o'rganish usullari to'plami.Diffraktsiya usullarida tarqalgan nurlanish intensivligining yo'nalishga bog'liqligi, ya'ni I (ph, th) funktsiyasi o'lchanadi . Bunday holda, tarqalishdan keyin to'lqin uzunligi o'zgarmaydi. Elastik sochilish deb ataladigan narsa sodir bo'ladi . Diffraktsiya usullari to'lqin uzunligi va tarqalayotgan atomlar orasidagi masofa o'rtasidagi oddiy munosabatga asoslanadi.

Rentgen strukturaviy tahlil eng oddiy birikmalardan murakkab oqsillargacha bo'lgan kristall moddalarning uch o'lchovli fazosidagi atomlarning koordinatalarini aniqlash imkonini beradi.

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5G SIMSIZ ALOQADA SUN'IY INTELLEKT ASOSIDAGI OPTIMALLASHTIRISH

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Annotatsiya. 5G simsiz aloqaning paydo bo'lishi kengaytirilgan ulanish, yuqori tezlikda ma'lumotlarni uzatish va past kechikishli ilovalar uchun misli ko'rilmagan imkoniyatlarni taqdim etdi. Biroq, 5G tarmoqlarining murakkabligi tarmoqni boshqarish va optimallashtirishda ham jiddiy muammolarni keltirib chiqaradi. Sun'iy intellekt (AI) tarmoq resurslarini dinamik, real vaqtda optimallashtirish, signallarni qayta ishlashni yaxshilash va umumiy foydalanuvchi tajribasini yaxshilash orqali ushbu muammolarni hal qilish uchun kuchli vosita sifatida paydo bo'ldi. Ushbu maqola 5G tarmoqlarini optimallashtirishda sun'iy intellektning turli ilovalarini o'rganadi, mashinani o'rganish, bashoratli tahlillar va real vaqtda qaror qabul qilish kabi asosiy usullarni ta'kidlaydi, shu bilan birga ushbu sohadagi muammolar va kelajakdagi yo'nalishlarni muhokama qiladi.

Abstract. The advent of 5G wireless communication has provided unprecedented opportunities for enhanced connectivity, high-speed data transmission, and low-latency applications. However, the complexity of 5G networks also poses significant challenges in network management and optimization. Artificial intelligence (AI) has emerged as a powerful tool to address these challenges by dynamically optimizing network resources in real-time, improving signal processing, and improving the overall user experience. This article explores various applications of artificial intelligence in optimizing 5G networks, highlighting key techniques such as machine learning, predictive analytics, and real-time decision making, while discussing challenges and future directions in the field.

Kalit so‘zlar: AI - sun’iy intellekt, 5G, Machine Learning, Tarmoqni optimallashtirish, Signalga ishlov berish, Real-Time qaror qabul qilish.

Keywords: AI - artificial intelligence, 5G, Machine Learning, Network optimization, Signal processing, Real-Time decision making.

5G simsiz aloqasi mobil tarmoqlarning oldingi avlodlaridan sezilarli pog‘onani ko‘rsatib, tezroq ma’lumotlar uzatish tezligi, o‘ta past kechikish va milliardlab qurilmalarni bir vaqtning o‘zida ulash imkoniyatini taqdim etadi. Ushbu yutuqlar narsalar interneti (IoT), avtonom transport vositalari va kengaytirilgan haqiqat kabi rivojlanayotgan texnologiyalarni qo'llab-quvvatlash uchun juda muhimdir. Biroq, katta hajmdagi ma'lumotlar, turli xil qurilmalar turlari va foydalanuvchilarning turli talablarini boshqarishni o'z ichiga olgan 5G tarmoqlarining murakkabligi jiddiy muammolarni keltirib chiqaradi. Ushbu muammolarni hal qilish uchun sun'iy intellekt asosidagi optimallashtirish 5G tarmoqlarini ishlab chiqish va joylashtirishda asosiy yo'nalishga aylandi.

5G tarmog‘ini optimallashtirishda sun’iy intellektning o‘rni. AI tarmoq resurslarini boshqarish va ulardan foydalanishni avtomatlashtirish orqali 5G tarmoqlarini optimallashtirishda hal qiluvchi rol o'ynaydi. Mashinani o'rganish algoritmlari va bashoratli tahlillar orqali sun'iy intellekt real vaqt rejimida katta hajmdagi tarmoq ma'lumotlarini tahlil qilishi mumkin, bu esa tarmoq konfiguratsiyasi, resurslarni taqsimlash va signalni qayta ishlashga dinamik sozlash imkonini beradi. Ushbu bo'limda 5G optimallashtirishda qo'llaniladigan o'ziga xos AI texnikasi ko'rib chiqiladi [1].

Real vaqt rejimida qaror qabul qilish. Avtonom transport vositalari va masofaviy operatsiyalar kabi 5G ilovalarining real vaqtda tabiati bir zumda qaror qabul qilish qobiliyatini talab qiladi. AI uzluksiz ulanish va past kechikishni ta'minlash uchun tarmoq sharoitlarini doimiy ravishda kuzatib borish va tezkor sozlashlarni amalga oshirish orqali real vaqtda qaror qabul qilish imkonini beradi. AI tizimlari doimiy tarmoq o'zaro ta'siridan o'rganadigan va shunga mos ravishda moslashadigan bunday stsenariylarda mustahkamlovchi o'rganish kabi usullar ayniqsa samarali bo'ladi [2].

Signalni qayta ishlashni optimallashtirish. Signalni qayta ishlash 5G aloqasining muhim jihati bo'lib, bu erda yuqori ma'lumotlar tezligi va past kechikish muhim ahamiyatga ega. AI algoritmlari modulyatsiya usullarini takomillashtirish, xatolarni tuzatish usullarini yaxshilash va signal shovqinlarini kamaytirish orqali signalni qayta ishlashni optimallashtiradi. Mashinani o'rganishning kichik to'plami bo'lgan chuqur o'rganish, ayniqsa, an'anaviy usullar o'tkazib yuborishi mumkin bo'lgan naqsh va anomaliyalarni aniqlashi mumkin bo'lgan signallarni qayta ishlashning murakkab vazifalarida samaralidir [3].

5G tarmoqlarida sun'iy intellektni qo'llash optimallashtirishdan tashqari kengayib, tarmoq xavfsizligi, energiya samaradorligi va foydalanuvchi tajribasi kabi turli sohalarga ta'sir qiladi.

Tarmoq xavfsizligini oshirish. 5G tarmoqlari murakkablashib borar ekan, ushbu tarmoqlarni kibertahdidlardan himoya qilish tobora qiyinlashib bormoqda. Sun'iy intellektga asoslangan xavfsizlik choralari tarmoq trafigini tahlil qilish, anomaliyalarni aniqlash va avtomatlashtirilgan qarshi choralarni qo'llash orqali real vaqt rejimida tahdidlarni aniqlashi va ularga javob berishi mumkin. AI, shuningdek, tarixiy ma'lumotlarga asoslanib, potentsial xavfsizlik buzilishlarini bashorat qilishi mumkin, bu esa faol mudofaa strategiyalarini amalga oshirishga imkon beradi [4].

Energiya samaradorligini oshirish. Doimiy ulanishni ta'minlash bilan bog'liq yuqori energiya iste'molini hisobga olgan holda, energiya samaradorligi 5G tarmoqlarini joylashtirishda muhim ahamiyatga ega. Sun’iy intellekt real vaqt rejimidagi talab asosida tarmoq operatsiyalarini dinamik ravishda sozlash, trafik kam bo‘lgan davrlarda quvvat sarfini kamaytirish va energiya resurslarini yanada samarali boshqarish orqali energiyadan foydalanishni optimallashtirishi mumkin. Bu nafaqat operatsion xarajatlarni kamaytiradi, balki ekologik barqarorlikka ham hissa qo'shadi [5].

Foydalanuvchi tajribasini oshirish. Foydalanuvchi tajribasi 5G tarmoqlari muvaffaqiyatining asosiy omili hisoblanadi. AI foydalanuvchi xatti-harakati va afzalliklarini tahlil qilish orqali tarmoq xizmatlarini shaxsiylashtirishi va shu bilan tarmoq resurslarini individual ehtiyojlarni qondirish uchun moslashtirishi mumkin. Misol uchun, sun'iy intellekt oqim yoki o'yin kabi yuqori talab qilinadigan ilovalar uchun tarmoqli kengligini birinchi o'ringa qo'yishi mumkin, shu bilan birga real vaqt rejimidagi aloqa ilovalari uchun kechikishni minimallashtiradi. Moslashtirishning ushbu darajasi 5G xizmatlarini qo'llashga turtki bo'lgan yuqori foydalanuvchi tajribasini ta'minlaydi [6].

5G tarmoqlarida sun'iy intellekt asosidagi optimallashtirishning muhim afzalliklariga qaramay, bir qator muammolar saqlanib qolmoqda. Bularga sun’iy intellekt modellarini o‘rgatish uchun katta hajmdagi ma’lumotlarga bo‘lgan ehtiyoj, sun’iy intellektni mavjud tarmoq infratuzilmasiga integratsiyalashning murakkabligi va sun’iy intellektga asoslangan tizimlarning tanqidiy stsenariylarda noto‘g‘ri qarorlar qabul qilish imkoniyati kiradi. Kelajakdagi tadqiqotlar ushbu muammolarni hal qilishga, kvantli mashinalarni o'rganish kabi yangi AI usullarini

o'rganishga va 5G tarmoqlarida AI integratsiyasi uchun mustahkam asoslarni ishlab chiqishga qaratilishi kerak.

Xulosa o’rnida Sun'iy intellekt asosidagi optimallashtirish 5G simsiz aloqa landshaftini o'zgartirib, tarmoqni boshqarish va undan foydalanishning murakkab muammolariga dinamik, real vaqtda yechimlarni taklif etadi. Mashinani o'rganish, bashoratli tahlil va real vaqtda qaror qabul qilish kabi usullar orqali AI 5G tarmoqlarining ishlashi, xavfsizligi va samaradorligini oshiradi. Sun'iy intellekt rivojlanishda davom etar ekan, u simsiz aloqa kelajagini shakllantirishda tobora muhim rol o'ynaydi, bu tez rivojlanayotgan sohada yangi ilovalar va innovatsiyalarga yo'l ochadi.

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XUDOYORXON SHAXSIYATI, BADIIY-TARIXIY TAVSIF TADQIQI
THE STUDY OF THE PERSONALITY KHUDAYARKHAN ARTISTIC AND HISTORICAL DESCRIPTION

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Anotatsiya: Maqolada Sa’dixon Mavlavixon o‘g‘lining “Tanazzul” romani va uning bosh obrazi Xudoyorxon shaxsiyati tarixiy va badiiy jihatdan tahlil qilingan. Badiiylik va tarixiylik jihatdan obrazdagi xilma-xillik qiyosiy jihatdan tahlil qilingan.

Kalit so‘zlar: shaxsiyat, pentologiya, Xudoyorxon, tarixiy asar, badiiy to‘qima, bosqinchilik, yozuvchi maqsadi, madaniy va me’moriy meros.

Annotation: The article analyzes the novel "Tanazzul" by the son of Sa'dikhan Mavlavikhon and the personality of its main character Khudoyarkhan from a historical and artistic point of view. The variety in the image from the artistic and historical point of view is analyzed comparatively.

Keywords: personality, pentology, historical work, invasion, artistic texture, author’s purpose, cultural and architectural heritage.

Tarix o‘z qariga, o‘z sir-sinoatiga juda katta buyuklikni hamda g‘ariblikni qamrab olar ekan, bunda turfa voqea-hodisalar: urush-tinchlik, farovonlik-qashshoqlik; turfa shaxslar: xonlar-u gadolar, ilm ahli, o‘ksik xalq vakillar-yu amaldorlarni dunyoga olib keldi va olib ketdi. Bu silsila yana va yana davom etaveradi. Biz buni madaniy va me’moriy me’ros va badiiy adabiyotimiz orqali o‘rganishga harakat qilmoqdamiz. Bunga bir misol Sa’dixon Mavlavixon o‘g‘lining “Tanazzul” pentologiyasidir. Unda XIX asr 2-yarmi Qo‘qon tarixi, unda asosan 1845-1875-yillar (tanaffuslar bilan) hukmronlik qilgan Qo‘qon xoni Xudoyorxon tarixiga oid roman-pentologiya hisoblanadi. Tadqiq jarayonida Xudoyorxon shaxsiyati va hukmronligini badiiy va tarixiy jihatdan tahlil qilishni obyekt sifatida olar ekanmiz, yozuvchining bunga qay tarzda munosabatda bo‘lganiga to‘xtalish o‘rinlidir.

“Tanazzul” romanidagi bosh qahramonlardan biri Xudoyorxon - tarixiy shaxs, minglar sulolasi vakili, Sheralixonning o‘g‘li mamlakatda Ibratning “Tarixi Farg‘ona” asarida keltirilishicha “...to‘rt martaba taxtga julus etgan,” – Qo’qon xoni obrazini asarga olib kirishda *“O‘n besh-o‘n olti yoshlar atrofida bo‘lishiga qaramasdan, o‘zining yoshidan katta ko’rinar, ovozi do‘rillashga o‘tgan, moylovlari endi sabza ura boshlagan, tabiatan qaysarroq, o‘qish-yozishdan ko‘ra otda chopishni, qilichbozlikni, ov qilishni xush ko‘radi.”* deb ta’riflangan. Asar kompozitsiyasini ochib berishda, tarixiy voqea-hodisalarning badiiy adabiyotda harakatlanish asosiy obraz sifatida gavdalantirilgan. Shuningdek bu obraz orqali Xudoyorxon o‘zining sodiq va ilmli xizmatchilari bilan kelishgan holda ish ko‘ruvchi, xalq farovonligini ta’minotchisi, fikr-mulohazalari ko‘proq o‘z-o‘zi bilan suhbat holatida tasvirlangan. Tarixda Xudoyorxon zolim hukumdor, ilm-ma’rifatdan yiroq xon sifatida ma’lum. “Qo‘qon tarixi” asarida ham “Bu hukumdor shunday xususiyati bilan farq qiladiki, xonlikni boshqarish natijasida uning oxirgi xonligiday hech qanday g‘amxo‘rlik yordam ko‘rsatmay uning ehtiyojlariga butunlay e’tibor bermas, jabr-zulum qilardi.” deb ta’riflangan. Lekin, romanda bunday xususiyatni uchratmaymiz. Yozuvchi qahramonga ijobiy jihatdan yondashib, bu tomonlama ochib berishga urg‘u bergan. Romanning to‘rtinchi kitobida Xudoyorxon ikkinchi marta taxtga kelganida “Hamma ko‘tarinki ruhda o‘z vazifasini bajarardi. Bozor, rasta, guzarlarda odam gavjum. Hamma xursand. Choyxonalarda askiya, kulgular ham eshitilib turadi. Saroyga yana fayz kirdi. Mahkama,

devonxona, sarbozxonalarda tartib-qoida o‘rnatilib, oldingiday izga tushib ketdi. ” deya izohlanadi. Professor Qozoqboy Yo‘ldoshev asar so‘zboshisida “…ilmiy, tarixiy bitiklarning hammasida Xudoyorxon zolim hukumdor, ayshu ishrat va xotinbozlikka mukkasidan ketgan kimsa, mamlakat butunligini saqlab qololmagan noshud xon, ilm-u ma’rifatdan yiroq johil shaxs sifatida tasvirlanar edi. Sadixon Mavlavixon …Xudoyorxon shaxsiyati to’g’risida qaror topgan ijtimoiy-estetik steriotiplarni buzib tashlashga jur’at etadi. Yozuvchi ilk bor bu shaxsni shunchaki Sheralixonning o‘g‘li bo‘lgani uchun taxtga chiqib qolgan epsiz hukmdor sifatida ko‘rsatmadi. Uni dovyurak, yaqinlariga mehribon, bir qadar kechirimli odam, mamlakat hayotiga yangiliklarni joriy etishga urinadigan, jasoratli, qat’iyatli hujumdor, ayni vaqtda, bir qator yoqimsiz sifatlarga ham ega kimsa, xullas, anglash uchun ichki olamiga chuqurroq kirish talab etiladigan ko‘p qirrali, murakkab shaxsiyat egasi tarzida tasvirlanadi.” Demak, ushbu obraz xususida yozuvchining ijodiy maqsadi o‘zgacha ekanini payqab quyidagicha fikr bildirishimiz mumkin:

- o‘z hukmdorlarimizga bo‘lgan ijobiy munosabat;
- ma’lum xon hech qachon qo‘llab-quvvatlovchisiz, ma’lum darajada xalq xohishisiz taxtga to‘rt marta kelmaydi;
- shuncha yillar hukmdorlik qilib biror yaxshilik qilmasligi, yurt qayg‘usida bo‘lmasligi haqiqatdan yiroq;
- ma’lumki biror kishining qattiqqo‘lligi, xatolari yaxshilikka nisbatan kishilar xotirasidan ketmasligi, Xudoyorxon tarixi bilan bog‘liq deb xulosa qilishga olib keladi. Yozuvchi ba’zi salbiy bo‘yoqni ijobiy baho munosabati bilan tarixiy haqiqatni badiiy to‘qimaga mutanosib holatda badiiylashtirgan.

Romanda Xudoyorxon va Bahodir shirg‘ovul suhbatiga e’tibor bersak, Bahodir shirg‘ovul xonning otasi Sheralixonning yaqin xizmatchilaridan bo‘lgan, xonlikka ko‘p hissasi qo‘shilgan bo‘lib, xonning oldiga kelganda *“Xudoyorxon uni kursiga o‘tqazib, o‘zi yoniga o‘tirdi.*

- Xon hazratlari men hazratlari bilan yonma-yon o‘tira olmayman. Axir bu qoidaga xilof.

- Qoida tartib boshqalar uchun shirg‘ovul janoblari, sizlar umr bo‘yi odob, tartib, qoidaga rioya qilib keldingiz, yetadi. Bo‘ldi endi boshqalar rioya qilsin.” deb javob berganida ham xon xarakterining ijobiy jihati, insonparvarligini ko‘rishimiz mumkin. Bunda yozuvchining ijodiy rejasi Vatan tarixini badiiy bo‘yagan holatda haqiqatga monand ko‘rsatish bo’lib, uni amalga oshirishga o‘z prinsip – maqsadi va rejasi tomonlama yondashgan.

Rus manbalaridan birida “U o‘z xalqini o‘n yil davomida har xil turdagi bosqinchilik, o‘g‘rilik bilan taladi, o‘ldirdi.” M.A.Terentevning yozishicha: “yana yangi soliqlar o‘ylab topildi: ekilgan barcha mevasiz daraxtlarga, ko‘mirga , tog‘dagi son-sanoqsiz yondirib yuborilgan burganlarga, yoqilg‘i uchun yig‘ib olingan shox-shabbalarga…chek olindi (2 tiyin) ….fuqaroning bor-yo‘g‘ini shilib, talab yig‘ishtirib olish ular noroziligining bitmas-tuganmas manbai bo‘ldi.” Romanda xon tomonidan xalqqa solingan soliqlarga to‘xtalmagan. Aksincha, xon tomonidan shimoliy viloyatlarni boshqarish uchun tayinlangan Mirza Ahmad o‘zboshimchalik bilan ko‘p soliq solgani tufayli qo‘zg‘alon ko‘tariladi. Uni bostirish uchun xon Mallaxonni yuboradi. Natijada bu xonning birinchi marta taxtdan ketishiga sabab bo‘ladi. Otasi Musulmonqul mingboshi va qipchoqlar qirg‘inidan alamzada o‘g‘il Abdurahmon maslahati bilan Olimbek dodhoh boshchiligida qipchoqlar Mallaxonni xon deb e’lon qiladi. Shu tufayli aka-uka o‘rtasida taxt uchun urush bo‘ladi. Xon nomidan tinch xalq talanadi, natijada xonga qarshi aholi, qipchoqlardan qo’shin yig‘ila boshlaydi. Xon nomidan ish qilish, albatta, unga nisbata adovat uyg‘otishga sabab bo‘ladi. Bu ajoyib taktika edi. Rus qo‘shini ham qal’alarni egallash uchun yo‘l davomida tinch aholiga

teginmadi. Bu bilan o‘zlariga nisbatan ijobiy fikr qoldirishni ko‘zlagandi. Shu zailda qilingan harakatlar natijasi o‘laroq xonlik asta-sekin yemirila boshladi. Xudoyorxon davrida tanazzulga yuz tutishiga olib keldi. Dushman tomonidan bosib olinishda juda ko‘plab sabablar mavjud: birinchidan, xonlikdagi harbiy soha Rossiya imperiyasinikidan ancha past edi va dushmannning zamonaviy qurol-yarog‘iga va taktikasiga yetish mushkul masala edi. Ikkinchidan, Qo‘qon xonligi va unga qo‘shni bo‘lgan Buxoro amirligi va Xiva xonliklar o‘rtasida ham dushmanlik kayfiyati bo‘lib, ichki birdamlikning yo‘qligi dushman uchun foyda bo‘ldi. Uchinchidan, ham kuch ham son jihatidan askarlar soni kamligi va Rossiyaning kichik-kichik qal’alardan boshlab qilgan hujumlarini qaytara olishga Qo‘qon xonligi ojiz qoldi. “Tanazzul” ga yuz tutish bu og‘ir judolik bo‘ldi, chunki asar epigrafida ham aytilganidek tarixga qaytib ish ko‘rmaslik bizning ajdodlarimizning barpo etgan ulkan tarixida qora bo‘yoq bo‘lib qoldi. Vatanimiz tarixida yuz bergan bu hodisalar bugungi kunga ham ta’sir qilmay qolmadi. Ro‘y bergan tanazzul bir asrdan ortiqroq orqada (qaloqlikda) qolishga olib keldi.

Yozuvchi romanda badiiy asar va tarix o‘rtasida ko‘prik yasashga harakat qilar ekan, bunda tarixiy haqiqat badiiy to‘qimaga mutanosib holda, biri-birini to‘ldirgani va u ishonarli chiqqani sababidan ko‘plab kitobxon ommasiga yetib boradi. Ayniqsa, u Vatan tarixi haqida bo‘lsa juda ham e‘tiborga molik hisoblanadi. Demak, bizda bunday asarlarning ko‘p bo‘lsa, u badiiylik va tarixiylik talabiga javob bersa faqatgina yutug‘imiz bo‘ladi. Xullas, yurtimizning shonli kunlarini esda chiqarmaganimizdek, qonli kunlari ham tarix yodidan chiqmaydi.

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SPECIFIC CHARACTERISTICS OF PHILOSOPHICAL OUTLOOK

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Abstract

Philosophical worldview focuses on the process of thinking. It calls a person to creativity and at the same time enriches its subject. Philosophical outlook also has its own special features. Because he pays more attention to theoretical aspects. Philosophical worldview is a process that seeks to answer questions and general ideas about the universe, man, society, and nature. Draws conclusions.

Key words: Philosophical outlook, science, man, mind, thinking.

Philosophical outlook also has its own special features. Because he pays more attention to theoretical aspects. Philosophical worldview is a process that seeks to answer questions and general ideas about the universe, man, society, and nature. Draws conclusions. First, and secondly, this philosophical worldview was formed as a science taking into account the national and universal values of mankind. In this sense, when talking about the subject of philosophy, if you pay attention, it is not difficult to notice that it is connected with the definition of worldview. Philosophical worldview differs from previously analyzed worldviews in the fact that when thinking about the world and its various aspects, the problems are posed, the methods of solving them, the subject matter, and the task are completely different. In addition, there is generality and scientificity in the philosophical outlook. In the philosophical worldview, in contrast to the religious worldview, its object is the problems of existence, man, society, time, and tries to explain them with the help of concrete evidence.

Philosophical worldview tries to cleanse society members from indifference. He invites all people to solve their life problems and live. They help to avoid life's difficulties and conflicts in it. In this sense, scientific philosophy is of great importance in human activity. The reason is that scientific philosophy presents evidence-based, philosophical thoughts about human activity. It illuminates the essence of his living.

In the center of scientific philosophy lies man and society, nature. In particular, he recognizes that man is a creative force. Scientific philosophy seeks to deny the creation of the universe and ideas about it. He denies the ideas of "worldly mind", "worldly absolute spirit", "absolute idea". Because, according to the supporters of the scientific-philosophical worldview, they exaggerate theology. In its activity, scientific philosophy tries to prove that the universe, all its processes and objects are the product of matter in constant motion. It advocates that the universe develops on the basis of its own laws, and those engaged in scientific philosophy criticize the idea that God created the universe and man in religious teachings.

Scientific philosophy considers that it is possible to know the world and characterize it. The human mind perceives it as infinite. Scientific philosophy, drawing conclusions from the theoretical knowledge created by philosophy, knows that the interrelationship of all phenomena can be understood with the help of logical thinking. Another positive feature of scientific philosophy is that it analyzes theory and practice together. It does not separate them from each other. It follows this principle of unity and connection.

Philosophical worldview focuses on the process of thinking. It calls a person to creativity and at the same time enriches its subject. Philosophical outlook pays serious attention to human manners and values. In the philosophical outlook, nationalism and nationalism are embodied. Thinking through a philosophical worldview also means appreciating higher universal human activities. If we look at the past, in the philosophical thoughts and da'wahs that were said by allama philosophers in the past and left as a spiritual heritage, the characteristics of universality are embodied, and they form the basis of moral and educational aspects in their essence.

As we mentioned above, worldview is important in human activity. Therefore, it is the demand of the time for the citizens of Uzbekistan, especially the youth, to have a new way of thinking and a new outlook. As long as life does not stop, human activity and society will change. As a legal, democratic and just society is being built in Uzbekistan, all people living in it have the right to enjoy the civility of life. In such a case, the Uzbek people should be armed with a new philosophical outlook. It should be natural that this worldview is completely different from the worldview of the former Soviet system and qualitatively new. It is known that pluralism and free-thinking were not supported in the former regime. Individuals who showed initiative and creativity were questioned. Ideas and practical activities that came to the world with creativity and initiative have been passed through a thousand steps. Even in the past, he was crying in the hands of bureaucrats and officials. Human thought was despised. The worldview was subordinated to a single communist ideology. Because of this, people used to think within a narrow worldview. Those who shared their thoughts about the national aspects of philosophy were against the "Party and Government". When the former regime collapsed, the "fuzzy" aspects of such approaches became visible. Changes in the republic began to notice that the Marxist philosophy was interpreted in a way that distorted life. Even then, there are some narrow-minded people They put forward crude ideas that philosophy should be abandoned and added the philosophy of their people to that philosophy. Such an approach would be blind. A dagger was thrown at the philosophy that had been formed for centuries. It is true that the Marxist-Leninist philosophy was reduced to a sacred idea and even to a religious status. However, it is necessary to draw a correct conclusion from this. Therefore, a new approach to philosophy is the need of the hour.

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THE INTEGRATING ARTIFICIAL INTELLIGENCE INTO DIAGNOSTIC AND MONITORING SYSTEMS

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Annotation. In this article, the development of technologies and progress in the field of artificial intelligence (AI) have led to significant changes in equipment diagnostics and monitoring systems. The introduction of AI into these systems makes it possible to more accurately and timely detect possible failures and malfunctions in the operation of equipment, as well as anticipate possible problems, deficiencies and damages.

Key words: analytical and statistical modeling, diagnostic and monitoring systems, quality and reliability of input data for analysis.

Introduction. The role of AI in the development of diagnostic and monitoring systems for equipment is to process a large amount of data and analyze it in real time. The use of AI allows you to automate the data processing process, which significantly reduces the time and resources spent on equipment diagnostics and monitoring. The modernization of diagnostic and monitoring systems of equipment using AI also contributes to improving the accuracy and reliability of the results obtained. Thanks to machine learning algorithms, AI is able to detect hidden and complex patterns in data, which allows it to recognize even minor changes indicating deviations from the norm. Another important role of AI in equipment diagnostics and monitoring systems is the ability to predict possible failures and malfunctions. By analyzing historical data and learning based on certain patterns, AI is able to predict the likelihood of a problem in the future. This allows you to take the necessary measures to prevent and eliminate possible breakdowns, which in turn saves time and resources of enterprises. Thus, AI plays a key role in the progress of equipment diagnostics and monitoring systems, ensuring more efficient and reliable operation of equipment. The introduction of AI into these systems allows you to prevent problems and deficiencies before they actually occur, reduce maintenance and repair costs, and increase the duration of equipment operation.

In recent years, the integration of artificial intelligence (AI) into diagnostic and monitoring systems of equipment has become a widespread practice. The use of machine learning, one of the varieties of AI, plays a significant role in improving the accuracy of equipment diagnostics. Machine learning allows diagnostic systems to process and analyze large amounts of data quickly and efficiently. Machine learning algorithms can detect hidden patterns and patterns in data that may not be visible to the human eye. One of the advantages of using machine learning in diagnostics is the ability to detect malfunctions early and predict equipment failures. Machine learning systems can analyze data obtained from various sensors and diagnostic devices, and based on them predict possible problems and recommend measures to prevent them[1.2.3].

The development of AI (artificial intelligence) in recent decades has led to the emergence of new opportunities in the field of monitoring and diagnostics of equipment. In particular, the use of neural networks in equipment condition monitoring systems has become a widespread approach. The integration of artificial intelligence (AI) into equipment diagnostics and monitoring systems has a significant impact on the development of automated failure forecasting. This technology provides an opportunity to significantly improve the accuracy and reliability of forecasts, as well as optimize maintenance and repair processes. One of the important aspects of the development of automated AI-based equipment failure forecasting is the analysis of large

amounts of data. Artificial intelligence provides the ability to process and analyze huge amounts of information collected from various sensors and sensors, which allows you to identify hidden dependencies and trends that are inaccessible to human analysis. As a result of the use of automated forecasting based on AI, enterprises are able to quickly respond to possible equipment failures, prevent them, and plan preventive maintenance [4]. This reduces equipment downtime and minimizes productivity losses, as well as optimizes the cost of repair and replacement of parts and components. Another important aspect of the development of AI-based automated equipment failure prediction is the training of machine learning models. Using AI, you can create models that are able to learn independently based on available data and improve their accuracy over time. Such models make it possible to solve complex problems of diagnostics and monitoring of equipment, identify abnormal behavior and predict failures with a high degree of accuracy. The integration of AI into diagnostic and monitoring systems requires the collection, storage and analysis of a large amount of data, including confidential information about the condition of equipment and production processes. This creates potential risks of data leakage and unauthorized use, which can negatively affect the business and reputation of enterprises.

Conclusions: The integration and use of artificial intelligence (AI) in diagnostic and monitoring systems of equipment have great prospects for the future. AI can significantly improve the efficiency and accuracy of diagnosis and prevention of possible problems in the operation of equipment.

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IMPORTANCE OF SOCIAL - HUMANITARIAN SCIENCES IN THE SYSTEM OF SCIENCES

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Abstract

Deeper understanding of the essence of social and humanitarian sciences is an important duty of every specialist. It is necessary to skillfully use the incomparably positive features of these sciences. The subjects "Philosophy", "Religion" cover not only theoretical, but also practical aspects of student activity.

Key words: System of sciences, social and humanitarian sciences, history, religious studies, philosophy.

The system of sciences is changing and improving from year to year, from century to century. They invite you to study the classification of sciences into three groups. First, social and humanitarian sciences; second: natural sciences; third: mechanical sciences;

Among these sciences, philosophy is distinguished by its various features. Social and humanitarian sciences reflect more social life, while natural sciences explain the characteristics of nature. Mechanical sciences represent the essence and content of the means of production.

Social sciences help to create the theory of the goals of personnel training, laws, legal norms, scientific-methodological, economic conditions and material-technical bases. Training and retraining of new pedagogical personnel, creating new educational standards, raising programs to the level of modern requirements, qualitatively updating the general education sector, providing continuous education and training, and social protection of workers in this field. -focuses on showing directions. Therefore, what is the role of social and humanitarian sciences in the activities of trained personnel and how should it be? Are social and humanitarian sciences the beginning of personality formation?

It also depends on the extent to which social and humanitarian sciences are taught in personnel training and retraining. It is known that social and humanitarian sciences include history, linguistics, philosophy, the idea of national independence: basic concepts and principles, foundations of spirituality, the theory and practice of building a democratic society in Uzbekistan, political science, religious studies, pedagogy - psychology and other how many subjects are included. These subjects cover the theoretical and practical aspects of education. For this reason, future personnel studying in universities cannot ignore these subjects.

Deeper understanding of the essence of social and humanitarian sciences is an important duty of every specialist. It is necessary to skillfully use the incomparably positive features of these sciences. The subjects "Philosophy", "Religion" cover not only theoretical, but also practical aspects of student activity. Expands worldview. These sciences mostly originate from the events of a person's lifestyle and reflect it in everyday life.

For example, in natural sciences: physics, chemistry, mathematics, informatics, geography, biology, zoology, you can find as many experienced subjects as you want. Life experience shows that the problems of philosophy, political science, foundations of spirituality, economics, and history cannot be demonstrated in most cases by experience. Moreover, there is a lack of developed exhibits. It is known that remembering these subjects is also difficult compared

to exact subjects. If we take the science of philosophy at this point, it is not for nothing that social and humanitarian sciences are called mathematics.

Professors of social and humanitarian sciences are specialists who understand more about social spheres. Therefore, if they do not explain life only on the basis of theoretical knowledge, but also connect with public organizations, it will be easier to assimilate this or that field. Organizations that encourage young people in the republic and the general population to high spirituality have been sufficiently established and conditions for their activities have been created.

Experience shows that it is still relevant to call on professional personnel for political knowledge. Therefore, it is more important to pay attention not only to the high morale of future personnel, but also to their political maturity. We see in life that people and youths who are not able to follow the political observation are involved in dirty work. They follow the activities of various extremist groups. As a result, they throw stones at their parents, community, nation and homeland. Aren't these the results of considering social and humanitarian sciences as secondary in their emergence? It should also be said that test questions alone do not determine a student's political level. For this, the professor-teacher should be given the opportunity. More attention should be paid to interactive question-answer processes. Only then can you fully understand the worldview of the student and listener. In our opinion, the fact that some officials insist that only test grades be given during the examination does not give good results.

There are many Central Asian scientists who contributed to the development of sciences and wrote works. It is true that the philosophical works of thousands of scholars who created on the territory of our country are still waiting for translators in libraries without being translated into our modern language. But even now there are still many translations needed for use. Among them, Musa al-Khorazmi, Mahmud az-Zamakhshari, Abu Nasr Farabi, Abu Rayhan Beruni, Ibn Sina, Abu Mansur Motrudi, Farghani, Omar Khayyam, Abu Isa Muhammad at-Tirmizi, Yusuf Khos Hajib, Burhoniddin al-Marginani, Mahmud Kashgari, Ahmed Yassavi, Bahauddin Naqshband, Abdurrahman Jami, Nizamiddin Shami, Nizam ul-Mulk, Mirza Ulug'bek, Ali Yazdi, Alisher Navoi, Zahiriddin Muhammad Babur, Boborahim Mashrab, Muhammad Aminkhoja Muqimi, Zakirjon Khalmuhammed son of Furqat, Mohlaroyim - Nadira, Jahan atin - Uvaisi, Abdulla Avloni, Mahmudhoja Behbudi, Sadriddin Ainiy, Abdurauf Fitrat, Hamza Hakimzoda Niyazi and hundreds of other thinkers in Uzbek. the existence of his works is proof of our opinion.

Philosophical, scientific and educational films reflecting socio-humanitarian fields are created by official centers. This will certainly contribute to the development of philosophical knowledge in the future.

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