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materiallar to'plami

5. R.Zulunov., Z. Ermatova. Python va Tensorflow yordamida sun'iy intellekt dasturini yaratish texnologiyasi. Journal of Integrated Education and Research, 2023, 2(3), 53–56.

TEXNIKA OLIY TA'LIM MUASSASALARI TALABALARINING TASHKILIY-BOSHQARUV KOMPETENTLIGINI RIVOJLANTIRISHNING SAMARALI METODLARI

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Annotatsiya: Ushbu maqolada texnika oliy ta'lim muassasalarida bo'lajak muhandislarning tashkiliy-boshqaruv kompetentligini rivojlantirishga qaratilgan samarali innovatsion ta'lim metodlariga bag'ishlangan.

Kalit so'zlar: Transport vositalari muhandisligi, auditoriya mashg'uloti, mustaqil ta'lim, kasbiy ko'nikmalar, tashkiliy-boshqaruv kompetentlik, muhandis, tizimli tahlil.

Texnika oliy ta'lim muassasalarida zamonaviy muhandisni tayyorlashni tashkil etish kasbiy rivojlanishda va doimiy ravishda takomillashtirilishda bo'lgan kelajakdagi mutaxassisning asosiy muhandislik kompetensiyalarini shakllantirishga qaratilgan bo'lishi kerak. Zamonaviy tushunchada muhandis bu oliy ma'lumotli mutaxassis bo'lib, nazariy bilimlarga, kasbiy malakalarga, ishchanlik xususiyatlariga tayangan holda texnik, texnologik va boshqa tizimlarni belgilangan ish ko'rsatkichlari bilan ishchan holatda saqlash, o'zgartirish va yaratishni ta`minlaydi. Muhandis ta'lim olish paytida, mavjud ishlab chiqarish masalalarini bajarishga qanchalik yaxshi tayyorlangan bo'lsa, uch yilgacha davom etadigan moslashish davri shunchalik tez o'tadi va mutaxassisning kasbiy faoliyati shunchalik muvaffaqiyatli kechadi.

Texnik tizimda muhandis – nazariy bilimlarga, kasbiy ko'nikmalarga, ishbilarmonlik sifatlariga suyanib, talab qilingan (berilgan) ish ko'rsatkichli texnik, texnologik va boshqa tizimlarni yaratish, qayta o'zgartirish va ularni ishga qobiliyatli holatda tutishni boshqaradigan va ta`minlaydigan oliy ma'lumotli mutaxassisdir.

Malakali muhandisni tayyorlashning asoslari ta'lim jarayonida o'qituvchi tomonidan o'quv jarayonida talabalar bilan faol ijodiy hamkorlik orqali talabalarda ijodiy faollikni shakllantiradi, to'ldiradi va rivojlantiradi.

Bularning barchasi o'qitishning interfaol metodlarini qo'llash orqali amalga oshiriladi. Interfaol ta'lim jarayonida talabalar tanqidiy fikrlashni, vaziyat va tegishli ma'lumotlarni tahlil qilish asosida murakkab masalalarni echishni, muqobil fikrlarni topishni, puxta o'ylangan tashkiliy va boshqaruv qarorlarini qabul qilishni, muhokamalarda qatnashishni o'rganadilar. Hozirgi zamon talabi nostandrt fikrlovchi, qiyin vaziyatlarda xotirjam, muammoning echimini topishda bir tomonlama emas, turli tomonlama yondashadigan va doimo muqobil qaror variantiga ega salohiyatli mutaxassislarni etishtirishdan iborat.

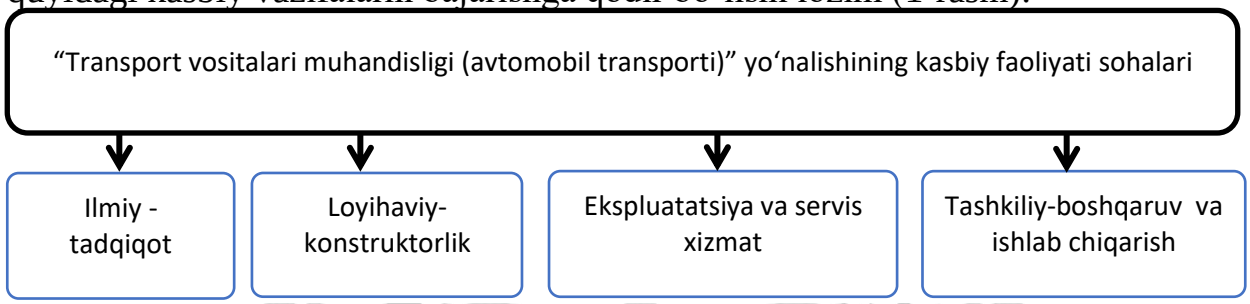
Oliy ta'lim muassasalari talabalarining texnologik faoliyatning zarur turlarini o'zlashtirish imkoniyatlarini aniqlash uchun biz oliy ta'limning bir qator texnika

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yo‘nalishlari bo‘yicha davlat ta’lim standartlari va malaka talablarini tahlil qildik, Bizning tadqiqotimizdagi 60712500-“Transport vositalari muhandisligi” *(avtomobil transporti)* bakalavr ta’lim yo‘nalishining malaka talablarida berilgan kasbiy faoliyatlarining sohalari, ob’ektlari va turlariga muvofiq bakalavriat bitiruvchisi quyidagi kasbiy vazifalarni bajarishga qodir bo‘lishi lozim (1-rasm):



1-rasm. 60712500-“Transport vositalari muhandisligi” *(avtomobil transporti)* ta’lim yo‘nalishi kasbiy faoliyati sohalari

60712500-“Transport vositalari muhandisligi” *(avtomobil transporti)* ta’lim yo‘nalishi kasbiy faoliyatining tashkiliy-boshqaruv faoliyati kasbga oid muammolar echimlarini rejalashtirish, amaliyotga tadbiq qilish, ishlab chiqarish jarayonini boshqarish, ijrochilar jamoasi ishini tashkil qilish, fikrlar xar hil bo‘lgan sharoitda boshqaruv qarorini qabul qilish, bajarayongan faoliyat bo‘yicha ish rejasini tuzish va uni bajarish, nazorat qilish va amalga oshirgan ishining natijalarini baholash bilan tavsiflanadi.

Yuqorida ta’kidlaganimizdek, bo‘lajak muhandis talalabalarning kasbiy faoliyatining tashkiliy-boshqaruv sohasiga oid bilim, malaka va ko‘nikmalarni shakllantirida ta’lim yo‘nalishining mohiyatidan kelib chiqqan holda, muhandislik yondoshuvi asosida innovatsion ta’lim metodlarini ishlab chiqish bugunda pedagoglarning oldida turgan muhim vazifalardan biridir. Quyida -“Transport vositalari muhandisligi” yo‘nalishi bo‘yicha muhandislarning tashkiliy boshqaruv kompetentligini rivojlantirishga qaratilgan “tizimli tahlil” metodini keltirib o‘tdik.

“Tizimli tahlil” metodi. Mazkur metod berilgan muammoning tizimli fikrlash, berilgan muammoning echimidagi asosiy g‘oyani kichik g‘oyalarga ajratish, har bir kichik g‘oyani amalga oshirish uchun alohida ijodiy faoliyat haritasini belgilab olish va amalga oshirish orqali asosiy g‘oyaga erishishga o‘rgatadi.

“Tizimli tahlil” metodi asosan muhandislik masalalariga oid topshiriqlarni echishga qaratilgan bo‘lib, talabalarning mustaqil ijodiy fikrlashi jarayonida yangicha tizimli fikrlash va yondoshuv, mustaqil va nostandart qaror qabul qilish orqali muhandislarda tashkiliy-boshqaruv kompetentligini rivojlanishini ta’minlovchi individual qobiliyatlarini rivojlantirishga yo‘naltirilgan.

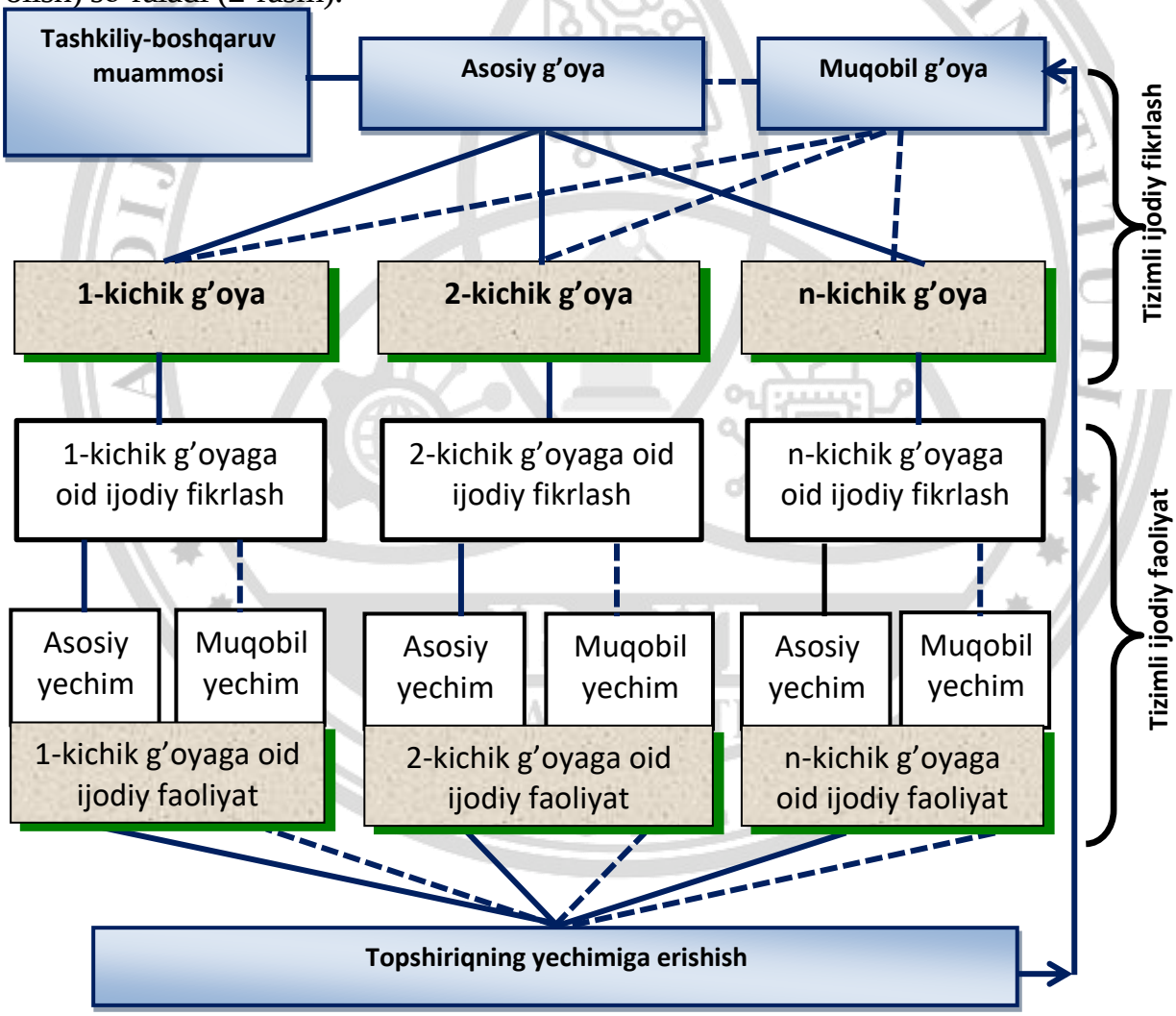
Yechimning murakkabligi talaba tafakkurida katta hajmdagi ma’lumotlarni tahlil qilish, qayta ishlash, echimni toppish, rejalashtirish va yodda saqlab turish kabi murakkab aqliy faoliyatni talab qiladi. Bu holda murakkab echimni soddalashtirish uchun uni alohida bo‘laklarga ajratish orqali hosil bo‘lgan aqliy bosimni kamaytirishga, echimni soddalashtirishga erishish talab etiladi. Shuning uchun topshiriqqa tizim sifatida qaraladi va uni soddalashtirish uchun elementlarga ajratiladi.

materiallar to‘plami

Ushbu metod asosan amaliy darslarga mo‘ljallangan bo‘lib, dars mashg‘ulotidan o‘qituvchi tomonidan talabalar uchun alohida individual ijodiy topshiriq tayyorlanadi va mashg‘ulot boshida topshiriqlar har bir talabaga etkaziladi va topshiriqni bajarish tartibi tushuntiriladi.

Odatda ijodiy fikrlash jarayonida asosiy g‘oya (shu o‘rinda muqobil g‘oya) bir necha kichik g‘oyalarga ega bo‘lishi mumkin, talaba oldiga qo‘yilgan maqsadlarga esa turli usullar bilan erishish mumkin. Shuning uchun qo‘yilgan maqsadga erishishga ta’sir qiladigan barcha omillarni imkoniyati boricha hisobga olish zarur va tizimning asosiy g‘oyani amalga oshirish uchun har bir omilning muhimligini hisobga olinadi. Bu metodda talabaga berilgan ijodiy topshiriqni bajarishning echimi “asosiy g‘oya” deyiladi.

“Tizimli tahlil” metodi quyidagicha amalga oshiriladi: dastlab oldindan tayyorlangan individual ijodiy topshiriqlar talabalarga taqdim etiladi. Bunda topshiriqning echimi aniq, talabalarda topshiriqni bajarishning bir yoki bir necha variantlariga ega bo‘lishi mumkin. Talabalarga ijodiy topshiriqni alohida iqsmlarga ajratib olish (yoki kichik g‘oyalarga ajratib olish) so‘raladi (2-rasm).



2-rasm. “Tizimli tahlil” metodini amalga oshirish strukturasi

Talabalarda tizimli tahlil usuli bayon qilingach, ularda topshiriqni echiga doir bir yoki bir necha asosiy va muqobil g‘oyalar tug‘ilishi mumkin. Talaba har bir asosiy g‘oyalarni tizimlashtirib, alohida kichik g‘oyalarga ajratadi va har biriga oid ijodiy fikrlaydi, asosiy va

muqobil echim variantlarini tahlil qiladi solishtiradi, qaror qabul qiladi. Navbatdagi bosqichda qabul qilingan qarorlar asosida har bir kichik g‘oyani amalga oshirishga oid ijodiy faoliyatni amalga oshiradi. So‘ngra barcha kichik g‘oyalarning echimlarini umumlashtirib, topshiriqning echimiga erishiladi.

“Tizimli tahlil” metodida o‘qituvchi topshiriqni tarqatib, bajarish jarayonini tushuntirib bo‘lgach, umumiy jarayonni kuzatib turadi, talabalarga zarur vaziyatlarda maslahatlarni berib boradi.

“Tizimli tahlil”ni amalga oshirishning **asosiy afzalliklari**. Talabalarda berilgan topshiriqlarni tizimli fikrlash orqali echish qobiliyati rivojlanadi. Talabalarda asosiy g‘oyani bir nechta kichik g‘oyalarga ajratganliklari, har bir kichik g‘oya ustida alohida ijodiy tafakkur qilishi natijasida tahlil qilinadigan ma’lumotlar kamayishi hisobiga talaba fikrlashiga tushayotgan bosimning kamayishiga erishiladi va bu orqali o‘z navbatida talabaning ijodkorligi ortishiga erishiladi. Talabalarda mustaqil ijodiy fikrlash qobiliyati rivojlanadi.

“Tizimli tahlil” metodini amalga oshirishning **asosiy kamchiliklari**. Natijaga erishish uzoq vaqtni talab qiladi. O‘qituvchidan individual topshiriqlar tayyorlash va topshiriqning natijalarini tekshirish va baholashi uchun vaqt talab etiladi.

Yuqoridagilardan umumiy hulosa qilib aytish mumkinki, talabalarning mustaqil ta’lim sharoitida kasbiy ko‘nikmalarini rivojlantirishning sifati pedagoglar tomonidan alohida tamoyillar va yondoshuvlar asosida uning tashkil etish metodikasining ishlab chiqilishi, tayyorlanishi, zarur tashkiliy va pedagogik shart-sharoitlarga aniqlik kitirish bilan va talabalar tomonidan uning bajarilishi sifati bilan ta’minlanadi.

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Telecommunication Systems in Smart Cities

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Annotation: Telecommunication systems play a very important role in the Infrastructure of smart cities. A plethora of networked devices interacts to provide safe, convenient and environmentally conscious new services. Residents in smart cities can enjoy their lives using these services, seamlessly and without being aware of the existence of the networks. To make such telecommunication systems possible, Hitachi is accelerating research into new network technologies, including gateways, highly reliable wireless communications, and network virtualization. Products and solutions under development include home gateways, wireless sensor networks, and M2M solutions.

Key words: Smart city, machine-to-machine, human-to-human.

If people are to enjoy comfortable lives in smart cities, telecommunication systems must be able to connect all manner of things, including human-to-human, human to- machine, and machine-to-machine connections. These connections and interactions between things make it possible for people to use energy efficiently while still enjoying comfortable lives. Examples include checking up remotely on what other people are doing, getting the information, you need from a portable device as and when you need it, and communication between vehicles and traffic signals to avoid congestion. This article describes the telecommunication systems necessary for smart cities.

Telecommunication systems necessary for smart cities*:* Adoption of the most appropriate communication technologies should make possible the seamless provision of a wide variety of services in smart cities Greater use of cloud services and visual communication tools using high speed broadband communication networks in the corporate and local government sectors is improving business efficiency and convenience while also being a source of new value creation. Meanwhile, sensor networks utilizing a variety of wireless technologies give access to information on the flow of goods and the status of equipment and the environment. They also facilitate the use of remote control. This makes possible the implementation of systems that are safe, secure, and environmentally conscious. In the home, network connections for products such as home appliances and cars, as well as telephones and PCs (personal computers), will make life more enjoyable, secure, and comfortable. In cities, transportation,