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ОБЕСФТОРИВАНИЕ ЭФК ИЗ ФОСФОРИТОВ КЫЗЫЛКУМ В ПРОЦЕССЕ РАЗЛОЖЕНИЯ

Шамшидинов Исраилжон Тургунович[1]
доктор технический наук, профессор
E-mail: israiljon2010@mail.ru
Тел: +998981501661
Арисланов Акмалжон Сайиббаевич[2]
PhD, доцент,
E-mail: arislanov2019@gmail.com
Тел: +998941591060
Исомиддинов Ойбек Нажмиддин угли[3]
студент 2-курса,
E-mail: oisomiddinov800 @gmail.com
Тел: +998941722040
[1]Наманганский инженерно-строительный институт.
[2]Наманганский инженерно-технологический институт.
[3]Наманганский инженерно-технологический институт.
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Аннотация: В работе установлено, что, из-за ничтожного содержания оксида кремний в обогащенном фосфорите Кызылкум фтор осаждается в виде фторида кальция. Для достижения полностью осаждения в твёрдую фазу использован карбонат кальция и установлен, что введение в экстрактор для связывания фтора на CaF2 от стехиометрии 100-120% (от веса фосфорита 7-9%) степень осаждения фтора составляет 85-90% и получают ЭФК, содержащая около 0,5% фтора.
Ключевые слова: экстракционная фосфорная кислота (ЭФК); реактор; фтор; карбонат кальция; фторид кальция; фосфорит; обесфторивание; фосфогипс.

В мире с сокращением пригодных для земледелия почв и ростом населения планеты обеспечение продовольственной продукцией является первостепенной задачей. В связи с этим обеспечение агропромышленного комплекса минеральными удобрениями, средствами защиты растений, стимуляторами роста и развития растений являются основным направлением повышения урожайности сельскохозяйственных культур. Правильное применение минеральных удобрений дает до 50% прибавки урожая. Поэтому обеспечение сельскохозяйственного производства необходимыми удобрениями является приоритетной задачей.

После провозглашения независимости Республики в результате реализации конкретных широкомасштабных мер были достигнуты высокие результаты научных исследований по развитию технологии производства минеральных удобрений и обеспечению сельского хозяйства азотными, фосфорными и калийными удобрениями. В этой связи следует особо отметить исследования по расширению ассортимента концентрированных фосфорсодержащих удобрений на основе местного сырья, необходимых для внесения под зябь. Исходя из стратегии действий по дальнейшему развитию Республики Узбекистан, направленной на подъем промышленности на качественно новый уровень, дальнейшую интенсификацию производства готовой продукции на базе глубокой переработки местных сырьевых ресурсов, освоение выпуска принципиально новых видов продукции и технологий особое значение преобретает дальнейшее увеличение мощности по добыче и обогащению фосфоритов

Центральных Кызылкумов, ее переработки на концентрированные фосфорные и сложные удобрения, обеспечение потребности Республики в фосфорсодержащих удобрениях.

На сегодняшний день в мире особое внимание уделяется разработкам технологии концентрированных фосфорных удобрений с вовлечением в производство низкосортных и высокомагниевых фосфоритов в связи с истощением богатых месторождений фосфатного сырья. В этом аспекте важной задачей является разработка технологии двойного суперфосфата с использованием экстракционной фосфорной кислоты (ЭФК) из магнийсодержащих, низкосортных фосфоритов. При разработке технологии концентрированных фосфорных удобрений необходимо обосновать ряд существующих научных решений, в том числе по следующим направлениям: разработка эффективного метода получения концентрированных и активированных растворов фосфорной кислоты с приемлемыми свойствами; определение оптимальных технологических параметров разложения фосфоритов упаренными, в присутствии нитрата аммония до концентрации 35-40% P2O5, магнийсодержащими растворами фосфорной кислоты; разработка технологии получения очищенной от сульфатов и фтора ЭФК и аммофоса высшего сорта на ее основе из низкосортных фосфоритов.

Эффективное использование сырьевых ресурсов, утилизация отходов производства и вредных для растений и живого организма веществ является общенародной задачей.

По данным ООН известно, что численность людей на земном шаре возрасла с 3,7 млрд. в 1970 году до 7,8 млрд. человек в 2020 году и в 2075 году превысит 15 млрд. Наибольший рост при этом будет приходиться на Азию.

В связи с ростом населения особенно остро стоит проблема продовольствия и развития технических сельскохозяйственный культур.

Решение таких проблем невозможно представить в отрыве от расширения сырьевой базы для производства высококачественных минеральных удобрений, интенсификации их технологии. Производство фосфорных удобрений в 2000 году увеличилось до 300 млн. тонн в натуре.

Мировое потребление туков по оценке ФАО (ЮНИДО) достигло в 1980 году 111,7 млн. т и в 2000 году до 307,2 млн. т питательных веществ. Потребление туков на душу населения в развивающихся странах возросло с 7 до 23 кг питательных веществ, а в промышленно развитых странах - с 55 до 145 кг.

В ряде Европейских стран интенсивность применения минеральных удобрений на 1 га обрабатываемой посевной площади достигает 260-750 кг NPK, что обеспечивает высокие урожай сельхозкультур. При этом растут требования к качеству выпускаемых удобрений, повышению концентрации питательных веществ, улучшению физико-химических, физико-механических и агрохимических свойств, а также к охране окружающей среды и ресурсосбережению.

Около полвека в качестве концентрированного удобрения в Центральной Азии используется аммофос как для самостоятельного внесения в почву, так и для получения сложных NPK - удобрений на его основе. Увеличение выпуска этого высококонцентрированного удобрения имеет большое народнохозяйственное значение, в виду его существенных агрохимических, экономических преимуществ перед многими другими видами удобрений, особенно, в отношении

транспортирования готового продукта на далекие расстояния. Однако необходимо учитывать тот факт, что 75-80% себестоимости продукта составляют затраты на сырье (фосфорит, серная кислота и аммиак), аммофос содержит в своем составе значительное количество растворимого в почве (1 т аммофос содержит 40-50 кг) фтора, загрязняющего биосферу. Так содержание 30-50 мг фтора в 1 кг кормов вызывает тяжелое заболевание (оказывает отрицательное воздействие на фосфорно-кальциевый обмен, работу печени, почек, сердца и нервной системы) у животных и человека, а если его больше 300 мг, то наступит гибель [1-4]. В составе удобрений фтор попадает в почвы и воды, с чем связано развитие флюорозы – крапчатость, т.е. разрушение зубов. Аналогичное заболевание встречается в районах развития фосфоритовых пород. Например, в США флюороз распространен в Техасе, существует даже особый термин "техасские зубы", на Хибинах и Казахстане, а также на Камчатке, где происходят вулканические извержения (дымы содержит фтористый водород). Флюорозом болеют и домашние животные, у которых от избытка фтора развиваются изменения в костях, копытах, рогах, снижается продуктивность. Однако известны растения, сильно концентрирующие фтор и растущие на породах, богатых этим элементом. Такая трава, например, встречается в Камеруне, трех-четырех ее листьев достаточно для гибели быка. Кроме того, фтор входит в состав скелета, его недостаток в питьевой воде приводит к развитию кариеса. Оптимальное его содержание в воде г/л. При меньшем содержании его проводят фторирование питьевой воды.

В районах сухого климата содержание фтора в водах выше, кариес там встречается реже. В ландшафтах, оптимально обеспеченных фтором, костный туберкулез протекает легче, полиомэлит и трахома встречаются реже.

Кроме `того, многолетние использование аммофоса, почти не содержащего соединения кальция (3□5%) приводит к обеднению почв кальцием, который непрерывно уносится растениями и вымывается. При этом почва теряет так много элемента кальция, что его уже недостаточно для полной нейтрализации гумусовых и других кислот. В результате возникает кислая среда, разрушается и вымывается гумус, начинается оподзоливание почв. Требовательные к кальцию растения не могут здесь существовать, они вытесняются типичными растениями "кислой" тайги. Для многих районов влажного климата характерен дефицит кальция, где домашние животные малорослые, у них слабый скелет, молочность коров падает, болеют рахитом, скорлупа яиц тоньше и т.д., так как фосфаты кальция являются основными компонентами в формировании скелета живых организмов. При недостатке этих соединений ожидается даже уродование потомств. Богатые кальцием почвы имеют нейтральную или слабощелочную реакцию, не оподзолены, очень плодородны. Кальций нейтрализует кислотность, закрепляет органического вещества гумуса почв – продуктов разложения растительных остатков [5].

Вертикальных и симпозиальных ветв хлопчатника будут крепким, плотным и плодоносным.

Кальций особенно необходим для песчаных, супесчаных, кислых и засаленных почв (соляная корка содержит в основном хлоридов и сульфатов натрия).

Продуктивность почв связано и с широким применением минераль-ных удобрений – азотных, фосфорных, калийных и микроудобрений. Поэтому в последние годы в земледелии Центральной Азии возникла проблема (так как в Европе из апатита

производят высококонцентрирован-ное кальций содержащее удобрение - двойной суперфосфат и успешно ис-пользуют в сельском хозяйстве) - разработка технологию производства удобрений типа суперфосфата. Однако для получения двойного суперфосфата из магнийсодержащих фосфоритов (руд Каратау, запасы которых являются, вторим, после Хибинского апатита) путем фосфорнокислотного разложения вторичного фосфата. Экстракционная фосфорная кислота, полученная на основе этих руд, частично нейтрализована катионными примесями и считалось непригодной для такой цели. Кроме того качества фосфоритовых руд Каратау понижается и возникает необходимость вовлечение в сферу производства низкосортных фосфоритов, содержащие 23-24,5% P_2O_5, 3-3,5% MgO, более 8% CO_2, 20% нерастворимого остатка и др. Исследованием процесса сернокислотного разложения апатитового концентрата в присутствии соединений магния показано [6], что степень извлечения P_2O_5 в раствор и фильтрующие свойства осадка (фосфогипса) улучшается при содержании MgO 1□1,5 %. Известна флотационный способ обогащения магнийсодержащих руд, однако он мало эффективен, потери P_2O_5 доходят до 40 % ее содержания в руде.

Отсюда и возникает проблема прямой переработки высокомаг-незиальных фосфоритов на экстракционную фосфорную кислоту (ЭФК) и получение на ее основе кальций содержащих фосфорных удобрений.

Некоторые ученые предлагают возвращаться к технологию производства простого суперфосфата. Однако простой суперфосфат содержит всего 14-16% P_2O_5 и значительного количества сульфата кальция. Во-первых это приводит к большим затратам для транспортирования, загрузочно-погрузочных работ, хранении и внесении удобрений. Во-вторых, геобиохимические процессы резко отличаются от химических процессов протекающих в колбе без участия микроорганизмов. Так например, сульфат кальция засолят почву и с помощью микроорганизмов взаимодействует с органическими веществами (при отсутствии кислорода в болотистой почве) образуя сероводород :

При этом микроорганизмы окисляют сахар до CO_2 и H_2O за счет кислорода, который они отняли у сульфатов. Выделившуюся при этом энергию они используют для жизнедеятельности. При наличии кислорода другие группы бактерий могут окислять сероводород до элементарной серы и серной кислоты. Таким образом, сульфат кальция, вводимый в составе удобрений может подкислят почву, кислота разрушает гуматов - стимуляторов роста и при спуске сточных вод в реки уничтожаются рыб и др. гидрофлор и гидрофаун.

Из-за низкого содержания питательных компонентов в простом суперфосфате некоторые ученые [7], предлагали технологию производства аммофосфата. При этом часть фосфорита смешивают с ЭФК (21% P_2O_5) и производят аммонизацию (pH 3,5-4,0), гранулируют и сушат. Аммофосфат содержит около 40% P_2O_5, однако более половины вводимого в ЭФК фосфорита неразлагается и безвозвратно теряется в неусвояемой форме. Кроме того, нами установлено, что повышение pH раствора свыше 2,5 приводит к ретроградацию усвояемых форм фосфатов. Для повышения степени разложения в процесс вводят серную кислоту, которая, разлагая фосфорит, образует сульфат кальция. При этом не установлены нормы серной кислоты, чтобы было оптимальным для конверсии сульфата кальция на сульфат аммония с образованием фосфата кальция. Как нами установлено, что оптимальным

содержанием сульфат аниона в свободном и связанном виде находится в интервале 4-6% в исходном ЭФК и во избежание протекании обратных процессов. pH раствора необходимо поддержать около 2,5.

Некоторые авторы [8] предлагают производства обогащенного (25-26% P2O5 или же 30-35% P2O5) суперфосфата, который так же содержит значительное количество сульфата кальция.

Сера также является питательным элементом и входит в состав белков. Однако велика роль азота и фосфора (а также калия) жизнедеятельности растений и животных.

Азот важнейший элемент жизни, т.е. является типичным биоэлементом: он входит в состав бельков, участвует в процессах клеткообразования, в синтезе крахмала и целлюлозы и многочисленных органических соединений в организме растений. Его дефицит резко ослабляет биологический круговорот. "Белковое голодание" - самый страшный и опасный вид голода. Как только появляются растворимые соединения азота, они сразу захватываются растениями. Большая часть атомов азота "вращается" в биологическом круговороте. Микроорганизмы связывают атмосферный азот и образуют сложные белковые соединения, которые, минерализуясь, дают нитраты и аммиак, доступные растениям.

Целесообразно наличие фосфатов, сульфатов и нитратов аммония в составе удобрений. Еще более необходим организмам фосфор, который входит в состав всех клеток. Скелет позвоночных животных в основном состоит из фосфатов кальция. Велика роль фосфора в развитии нервной системы. Участвует в образовании клеток и других органических соединений. Получение высоких урожаев невозможно без применения фосфорных удобрений.

Благоприятным в любых условиях являются фосфаты кальция, так как катионы и анионы этого соединения участвуют в важнейших процессах жизнедеятельности растении и животных, а также их можно внести в любую почву. Кроме того, алюминий и железо, содержащиеся в почве не могут ретроградировать усвояемого фосфора, так как ионный потенциал которых меньше чем у кальция.

С целью расширения сырьевой базы, интенсификации производства, повышении экологической чистоты и концентрации питательных компонентов в продукте и уменьшения расходов сырья и энергозатрат на единицы продукта, выбросов производства изучены физико-химические основы переработки высокомагнезиальных фосфоритов Каратау на ЭФК, на основании которых разработаны различные технологические процессы. Путем снижения магния в экстракционной суспензии с применением катионов, смешением фосфорита с апатитом, установлением оптимального режима по Ж:Т, температуры и времени, а также декарбонизации фосфорита найдены условия переработки высокомагнезиальных фосфатов на ЭФК. При этом получена обесфторенная ЭФК в процессе ее экстракции и разработаны способы дегидратации (упарки) и получены сложные фосфорные удобрения типа двойного суперфосфата на основе активированной, концентрированной (35-37% P2O5) ЭФК.

Кроме фосфора, фосфатные руды содержат большое количество минералов примесей. Так, фосфориты Каратау содержат наряду с фосфором (24-26% P2O5) от 0,5 до 5% MgO, 35-42% CaO, около 3% R2O3 от 2 до 3% F, 3-10% CO2, около10-20% нерастворимого

остатка. При получение минералных удобрений в процессе кислотной переработки фосфатов основная часть фтор, оставаясь в удобрениях, теряется безвозвратно. Алюминий и железо затрудняют переработку фосфатного сырья и являются балластом в удобрениях, снижая их качество.

В нами исследованном фосфорите Кызыл-кум содержание оксида кремния было незначительно. Так в процессе разложения могут образоваться незначительное количество кремнефтористоводородной кислоты и их соли. Фтор, после реакции, в основном находится в виде фтористого водорода и их солей. С целью осаждению фтора в виде соединения нерастворимого в экстракционной фосфорной кислоте (ЭФК) - фторида кальция (введением CaCO3 в экстрактор) проведены эксперименты по реакции:

$CaCO3 + 2HF = CaF2\downarrow + CO2\uparrow + H2O$

Использовали фосфорит состава масс.%:

P2O5 =25,62; CO2=12.84; CaO=48,56; MgO=1,87; Fe2O3=0,35; Al2O3=0,42; SO3=2,94; F=2,78; н.о.=0,61 и H2O=0,6.

Процесс проводили в двухсекционной модельной установке непрерывного действия с незначительном вакуумом, при этом в первом реакторе температуру поддержали +85°C, а во втором реакторе +80°C. Скорость вращения мешалки в первом реакторе составляло 120 об/мин, а во втором реакторе 80 об/мин. Стехиометрическое соотношение серной кислоты к фосфориту 102%, концентрация оборотного раствора фосфорной кислоты около 16% P205. В начале использовали термическую фосфорную кислоту, а в установившимся режиме использовали фильтрат, полученный после фильтрации пульпы и отмывки фосфогипса. Время пребывания экстракционной пульпы в первом реакторе 1 час, а во втором 3 часа, так объем второго реактора в 3 раза больше чем первого и скорость вращения мешалки в 1,5 раза меньше чем в первом реакторе. Это обеспечит благоприятную условию процесса кристалло-образования. Объектами анализа были состав полученной ЭФК и распределения фтора по фазам.

Для осаждения фтора во второй реактор вводили карбонат кальция марки «х.ч.», содержащего 99,00% основного вещества. При этом коэффициенты разложения составляли 97,50-98,00%, отмывки 98,50-99,20%, а выхода 97,00-97,50%.

Из результатов видно, что без введения CaCO3 в процессе степень перехода фтора в газовую фазу составляет 5,45% от общего количество в фосфорите, а в фосфогипс 40,5%, в ЭФК 54,05%.

На основании этого предполагаем, что в отсутствии (или в малом содержании) SiO2 в фосфорите, в ЭФК фтор находится в виде HF и могут протекать следующие реакции:

$CaMg(CO3)2 + 2H2SO4 = CaSO4 + MgS04 + 2CO2\uparrow + 2H2O$

$CaMg(CO3)2 + 2H3PO4 = Ca(H2PO4)2 + Mg(H2PO4)2 + 2CO2\uparrow + 2H2O$

$2Ca(H2PO4)2 + H2SO4 + 2HF = CaSO4 + CaF2 + 2H3PO4$

$2Mg(H2PO4)2 + H2SO4 + 2HF = MgSO4 + MgF2 + 2H3PO4$

$MgF2 + H2SO4 \leftrightarrow MgSO4 + 2HF.$

Известно, что полуторные окислы образуют фосфаты. Кроме того, A12O3 в фосфорнокислом растворе, содержащий фтористого водорода образует A1F3, который хорошо растворим в этой среде (растворимость в воде при 0°C=0,13, при 75°C=0,89 и растворим в HF).

На основании вышеизложенных стремились к частичному осаждению фторид-ионов в виде фторида кальция (CaF2) в твёрдую фазу.

Поэтому в экстрактор вводили CaCO3 от стехиометрии для связывания HF от 60 до 150% в расчёте на содержание фтора в фосфорите. При этом наблюдается переход фтора в твёрдую фазу при 60% от стехиометрии дополнительно 28,1%, всего 68,4%, а при 100% от стехиометрии дополнительно 42,0%, всего 82,5%. Повышение нормы до 120-150% от стехиометрии увеличивает степень перехода фтора в твёрдую фазу на 3,2-4,3%.

Таким образом, установлено возможность обесфторивания получаемых продуктов кислотной переработки обогащенных фосфоритов Кызыл-кума, в процессе получения ЭФК, с применением осадителя - карбоната кальция.

Список использованной литературы:

1. Шамшидинов И.Т. Разработка усовершенствованной технологии производства экстракционной фосфорной кислоты и получения концентрированных фосфорсодержащих удобрений из фосфоритов Каратау и Центральных Кызылкумов. Автореф.дис. … докт. техн. наук. – Ташкент, 2017.

2. Шарипов, Т.В. Переработка фосфоритов Каратау в гексафторосиликат натрия: Автореф. дисс. канд. наук. – Уфа: 2014

3. Рябов Д.В.Оптимизация стоматологической помощи школьникам с флюорозом зубов: Автореф. дисс. канд. медицинских наук. – Казань.: 2014

4. Шафикова Р.А., Юнусов М.И. Патолого-морфологические изменения органов у рогатого скота при отравлении соединениями фтора // Журн. Ученые записки Казахского ветеринарного института им.Н.Э.Баумана. 1967. – Т.98. – С.263-265

5. Перельман А.И. Атомы в природе. Геохимия ландшафта – М.: Изд. «Ленанд, Edifroial URSS», 2017.

6. Исаков П.А., Михайличенко А.И., Олифсон А.Л., Муллаходжаев Т.И. Экстракционная очистка технической фосфорной кислоты трибутилфосфатом на 14-ступенчатом противоточном каскаде смесительно-отстойного типа. Успехи в химии и химической технологии. Том XXIV. 2010. № 9 (114).

7. Хузиахметов Р. Х., Губайдуллина А. М., Бреус И. П. Технология фосфорных и комплексных удобрений из низкокачественных фосфоритов различных месторождений // Вестник Казанского технологического университета. 2009. №6. URL: https://cyberleninka.ru/article/n/tehnologiya-fosfornyh-i-kompleksnyh-udobreniy-iz-nizkokachestvennyh-fosforitov-razlichnyh-mestorozhdeniy (дата обращения: 28.06.2020).

8. Хузиахметов Рифкат Хабибрахманович.Физико- химические основы переработки нетрадиционного агрорудного сырья на пролонгированные комплексные минеральные удобрения. Диссертация на соискание учѐной степени кандидата технических наук. – Казань.: 2017.

9.Гафуров К. Обесфторивание удобрения из фосфоритов Каратау. -Ташкент: Фан, 1992.

10.Гафуров К., Шамшидинов. И.Т.,Арисланов А.С.Обесфторивание экстракционной фосфорной кислоты в процессе ее экстракции.«Вестник ФерПИ», Фергана, 2005 г., №1

11. Гафуров К., Арисланов А., Шамшидинов И. Снижение фтористых соединений в фосфогипсе // Научно-технический журнал ФерПИ. – Фергана, 2004. – № 3. – С. 63-66.

12.
Гафуров К., Шамшидинов И.Т., Арисланов А.С. Сернокислотная переработка высокомагнезиальных фосфатов и получение NPS–удобрений на их основе // Монография.– Наманган: Издательство «Истеъдод зиё пресс», 2020. – 136 с.
13. Гафуров К., Шамшидинов И.Т., Арисланов А.С. Сернокислотная переработка фосфоритов Каратау и сложных удобрений на их основе // Монография. Издательство LAP LAMBERT Academic Publishing, 2020. – 132 с.

ХАРАКТЕРИСТИКА ВИРТУАЛЬНЫХ ВАЛЮТА

Нурумбетов Амир Юсупбаевич
магистрант
Ташкентского университета информационных технологий имени Мухаммада ал-Хоразмий
E-mail: _amir_93@mail.ru
https://doi.org/10.5281/zenodo.7080786

Аннотация: В данной статье рассматриваются вопросы, характеристика виртуальных валют. Кроме того анализируются взгляды и мнения ученых по этому поводу и даются соответствующие рекомендации по понятие и классификация виртуальных валют.

Ключевые слова: Виртуальная валюта, интернет, цифровой форме, деньги, криптовалюта, характеристика, цифровое выражение, бумажных денег, электронных денег, банк.

В настоящем документе предлагается разделить виртуальную валюту на два основных типа: конвертируемая и неконвертируемая виртуальная валюта . Хотя в данном документе термины «неконвертируемая» и «закрытая», а также «конвертируемая» и «открытая», используются в качестве синонимов, следует подчеркнуть, что упоминание «конвертируемой валюты» никоим образом не подразумевает её официальной конвертируемости (например, как в случае золотого стандарта), а только указывает на её фактическую конвертируемость (например, по причине наличия соответствующего рынка). Таким образом, виртуальная валюта является «конвертируемой» исключительно до тех пор, пока некоторые частные участники предлагают с ней сделки, а другие принимают их, так как её «конвертируемость» никоим образом не гарантирована законодательством. Конвертируемая (или открытая) виртуальная валюта обладает эквивалентной стоимостью в реальной валюте и может обмениваться на реальную валюту и обратно .

Примерами конвертируемой виртуальной валюты являются: Bitcoin (Биткоин); E-Gold (Электронное Золото – более не существует); Liberty Reserve (Либерти Резерв – более не существует); Second Life Linden Dollars (Линден Доллары в игре «Second Life»); и WebMoney (ВебМани) . Неконвертируемая (или закрытая) виртуальная валюта предназначена для использования в конкретных виртуальных сферах или мирах, таких, как глобальные многопользовательские онлайновые ролевые игры или магазин Amazon.com, и которая по правилам, регулирующим её использование, не может быть обменена на фиатную валюту. Примерами неконвертируемой виртуальной валюты являются: Project Entropia Dollars (Доллары в игре «Project Entropia»); Q Coins (Кью Коинс); и World of Warcraft Gold (Золото в игре «World of Warcraft»). При этом следует отметить, что даже если по условиям, установленным администратором, неконвертируемая валюта может официально использоваться только в конкретном виртуальном мире и является неконвертируемой, возможно возникновение неофициального дополнительного чёрного рынка, на котором имеются возможности для обмена «неконвертируемой» виртуальной валюты на фиатную валюту или другую виртуальную валюту.

Под виртуальной валютой, как правило, понимаются нерегулируемые цифровые деньги, которые подлежат контролю со стороны своего разработчика, организации-учредителя или определенного сетевого протокола и принимаются к оплате в виртуальном мире. Виртуальные валюты могут быть конвертируемые (которые возможно обменять на фиатные деньги) и неконвертируемые (возможность обмена которых на фиатную валюту исключена, это, например, виртуальные деньги, использование которых ограничено рамками онлайн-игры); централизованные (у них имеются центральный администратор, регулирующий выпуск валюты, который обеспечивает централизованный платежный реестр и у правомочен выводить валюту из обращения) и децентрализованную (центральный администратор отсутствует, реестр операций хранится распределенно). При этом, на наш взгляд, сейчас все операции с криптовалютами рискованны. Но считать их противоправными, руководствуясь общими принципами права и здравым смыслом, нельзя, так как нерасторопность в принятии новых экономических явлений и, как следствие, разработке новых законов — это проблема управления, власти, а не участников уже сформировавшихся цифровых правоотношений.

С технической точки зрения криптовалюта — это запись транзакций в виде реестра, распределенного между участниками сети без эмиссионного или расчетного центра. Криптовалюты создавались как антипод фиатных денег, соответственно, как несанкционированные и не требующие доверия ни к государству, ни к денежно-кредитной системе инструменты, претендующие на роль денег .

Виртуальная валюта, согласно ФАТФ, представляет собой средство выражения стоимости, которым можно торговать в цифровой форме и которое функционирует в качестве (1) средства обмена; и/или (2) расчётной денежной единицы; и/или (3) средства хранения стоимости, но не обладает статусом законного платёжного средства (т.е. не является официально действующим и законным средством платежа при расчётах с кредиторами) ни в одной юрисдикции. Виртуальная валюта не эмитируется и не обеспечивается ни одной юрисдикцией и выполняет вышеуказанные функции только по соглашению в рамках сообщества пользователей виртуальной валюты. Виртуальная валюта отличается от фиатной валюты, представляющей собой монеты и бумажные деньги страны, которые являются её законным средством платежа, обращаются и повсеместно используются, и принимаются в качестве средства обмена в стране-эмитенте. ФАТФ (как и МВФ) подчеркивает, что виртуальная валюта также отличается от электронных денег, которые являются цифровым средством выражения фиатной валюты и используются для электронного перевода стоимости (выраженной) в фиатной валюте. Цифровая валюта может выступать как средство цифрового выражения либо виртуальной валюты (не фиатной валюты), либо электронных денег (фиатной валюты), и поэтому часто употребляется в качестве синонима «виртуальной валюты». ОЭСР и МВФ довольно либерально смотрят на технологию распределенного регистра, видя в ней инновационный потенциал. В то же время обе организации уделяют внимание при описании виртуальных валют рискам, которые присущи их использованию. Основным посылом работы ОЭСР является отделение технологии blockchain от биткоина. В работе подчеркивается, что хотя высокая степень анонимности технологии создает предпосылки для такой незаконной деятельности как отмывание денег, финансирование терроризма и уклонение от уплаты налогов,

кроме того повышается риск нарушения прав потребителей, необходимо отделять саму технологию, имеющую инновационный характер, от конкретного его воплощения, например биткоина (технология биткоина породила быстро растущую инновационную индустрию криптовалют, которые используют независимые вариации blockchain (например, биткоин, Litecoin, Dogecoin, NXT, BitShares и Ethereum); другие протоколы построены на основе blockchain биткоина (Coloured Coins, Mastercoin и Counterparty)). Автор указанной работы приходит к следующим выводам: • необходим общий запрет на любую форму использования криптовалют в расчетах между ЦБ и банками – чтобы гарантировать устойчивость денежной системы; • следует признать, что технология распределенного регистра отделима от идеи криптовалюты и потенциально очень полезна для будущей конкуренции в финансовой системе; • некоторая форма поддержки для криптовалют может быть целесообразной, например, при помощи золота; • необходимо использовать государственные полномочия для закрытия всех не соответствующих требованиям сетей. Общая цель политики, по ОЭСР, должна состоять в том, чтобы поощрять технологии, улучшающие конкуренцию в платежной системе, стремиться минимизировать «темные стороны» криптовалют и обеспечить соответствие минимальным требованиям защиты прав потребителей. МВФ , как и ОЭСР, рекомендует создать сбалансированную нормативно-правовую базу, которая не будет «душить» инновации. Отмечается, что распределенные регистры потенциально способны изменить принципы финансирования за счет снижения издержек и позволяют осуществить более глубокую финансовую интеграцию в долгосрочной перспективе. Введение распределенных реестров может также сократить время, необходимое для урегулирования сделок с ценными бумагами, которые в настоящее время занимают до трех дней. Тем не менее, в докладе отмечается, что необходимо учитывать риски для финансовой стабильности, при «автоматическом распространении негативных событий через финансовую систему». МВФ также рассматривает нормативные и политические проблемы цифровых валют в ряде областей риска, в том числе защиты прав потребителей, отмывании денег и финансировании терроризма, налогообложения и денежно-кредитной политики. В заключение, признавая трудности изложенных выше задач, документ рекомендует создание нормативно-правовой базы для виртуальных валют на внутреннем и международном уровнях, которая будет ограничивать риски без эффекта, «удушающего» инновации.

Обычно, администратор применяет санкции (включая аннуляцию учетной записи игрока и/или конфискацию оставшейся виртуальной валюты) к тем лицам, которые пытаются создать или использовать чёрный рынок в нарушение установленных правил использования валюты .

Развитие устойчивого чёрного рынка конкретной «неконвертируемой» виртуальной валюты может на практике привести к превращению такой валюты в конвертируемую виртуальную валюту. В этой связи характеристика «неконвертируемости» не обязательно является постоянной и неизменной.

Все неконвертируемые виртуальные валюты являются централизованными: по определению они эмитируются центральным администратором, который устанавливает правила, ограничивающие их конвертируемость. В отличие от неконвертируемых виртуальных валют, конвертируемые виртуальные валюты

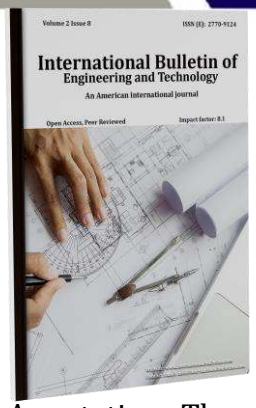
подразделяются на 2 подтипа: централизованные и децентрализованные. В системах централизованных виртуальных валют имеется единый администратор, т.е. лицо (третья сторона) , которое контролирует систему. Администратор эмитирует валюту, устанавливает правила её использования, ведёт централизованный реестр платежей и имеет право изымать валюту из обращения.

Обменный курс конвертируемой виртуальной валюты может быть либо плавающим, т.е. определяться рыночным предложением и спросом на виртуальную валюту, либо фиксированным, т.е. привязанным администратором к заданной величине в фиатной валюте или в других ценностях, используемых в «реальном мире», таких, как золото или валютная корзина. В настоящее время в подавляющем большинстве платежных операций в виртуальной валюте используются именно централизованные виртуальные валюты.

Примерами таких валют являются: E-Gold (Электронное Золото – более не существует); Liberty Reserve dollars/euros (доллары/ евро Либерти Резерв – более не существуют); Second Life Linden Dollars (Линден Доллары в игре «Second Life»); PerfectMoney (Перфект Мани); WM units (единицы ВебМани) и World of Warcraft Gold (Золото в игре «World of Warcraft»).

Виртуальные валюты ФАТФ рассматривает в комплексе новых платежных продуктов и услуг. Появление виртуальных валют привлекло инвестиции в платёжную инфраструктуру, основанную на протоколах их программного обеспечения. Такие платёжные механизмы предназначены для предоставления нового способа перевода стоимости через Интернет. В то же самое время, платёжные продукты и услуги на основе виртуальной валюты (ППУВВ) представляют риски отмывания денег и финансирования терроризма. ФАТФ осуществила предварительную оценку таких рисков ОД/ФТ в своём отчёте «Виртуальные валюты – ключевые определения и потенциальные риски в сфере ПОД/ФТ».

В рамках используемого ею пошагового подхода ФАТФ также подготовила Руководство , в котором главным образом рассматриваются центры, в которых пересекаются различные виды деятельности и обеспечивается возможность доступа к регулируемой финансовой системе, в частности – к провайдерам услуг по обмену конвертируемых виртуальных валют. С одной стороны, виртуальные валюты, такие как биткоин, открывают широкие возможности для инноваций в финансовом секторе. Но они также привлекают внимание различных преступных группировок и могут представлять риски финансирования терроризма. Эта технология позволяет осуществлять анонимные переводы денежных средств в международном масштабе.



SIGNIFICANCE AND SOURCES OF THE WORK OF ABUL BARAKOT NASAFI "AL-MUSTASFA"

Nargiza Abdurakhmanova
The doctoral student of International
Islam Academy of Uzbekistan
+998933852545
https://doi.org/10.5281/zenodo.7069803

Annotation: The article talks about the work "al-Mustasfa" by the great jurist of the Hanafi school, the famous commentator, the famous Imam Hafiziddin Abul Barakat Nasafi. Information about the creation, scientific significance and value of the work is given, and the definitions given to it in the sources are given. Famous works used in the writing of the work are also cited as examples.
Key words: scholar, conviction, fiqh, method, source, text, commentary, legacy.

INTRODUCTION. It is known that thousands of scientists, scholars, great thinkers, poets, and saints emerged from the land of our country, which is the crossroads of ancient cultures and civilizations, in the Middle Ages. Their invaluable heritage in the field of exact sciences and religious sciences is considered the spiritual property of all humanity" [1]. Hafizuddin Abul Barakat Nasafi (d. 1310) is one of our compatriots who left such a great spiritual heritage.

Scholar, one of the leading jurists of the Hanafi school, was a mature commentator and a skilled methodologist, and many texts and commentaries were inherited from him.

There are several works written by Abul Barakat Nasafi based on the Hanafi school. Next to Hidayah are Kanz al-Daqiq (Treasury of Subtle Matters), al-Wafi (The Complete) and his commentary al-Kafi (The Sufficient), al- Manor" ("Mash'al") and his commentary "Kashf al-asrar" ("Revealing the Secrets"), "al-Musaffo fi sharh al-manzuma an-Nasafiya" ("The definitive commentary on Nasafi poetry") and "al- Mustasfa fi sharh an-Nofe' fil-furu'" ("Perfect Commentary of al-Nofe on Fiqh") is one of these works. Among them, the work "al-Mustasfa fi sharh an-Nofe' fil-furu'" is one of the important and authoritative sources.

MAIN PART. "Al-Mustasfa" is a commentary written by the author on the work "al-Fiqh an-nofe'" written by Imam Abul Qasim Muhammad ibn Yusuf Hassani Samarqandi (d. 1161). The work "Al-Fiqh al-nofe'" is recognized as the main book on the science of Furu' al-fiqh by Nasiruddin Samarqandi and one of the authoritative sources of Hanafi fiqh. Commentaries and commentaries were written on it by many Hanafi scholars, and Abul Barakat Nasafi's work "al-Mustasfa" is the most famous and perfect among them.

Abul Barakat Nasafi enriched the work not only with his knowledge and conclusions, but also with the useful recommendations and teachings he learned from his teacher Hamididdin Romishiy. In the preface of the work "Al-Mustasfa" it is noted that the book was written on the recommendation of Hamididdin Romishi. Imam Nasafi says the following about the reason that motivated him to comment on the mukhtar: "The curtains in the mukhtar of our great sheikh, Ustaz Hamididdin Romishi, were lifted and the invisible aspects were revealed... He advised me to organize and systematize the benefits I received from him. I obeyed this instruction. Asking for help from Allah, the Helper, in order to increase its benefit, I enriched the commentary with thoughts and made additions from the books "Mabsut" [2].

This commentary passed through two stages in its creation: the first was the recommendations and lessons given by Imam Hamididdin Romishi from al-Fiqh an-Nofe', Imam Nasafi participated in these lessons and gathered the knowledge and experience he gained from it, and wrote "al-Manafi' fi favoid an-Nofe' wrote a work called In the second stage, Nasafi sorts these commentaries and taliqats, puts them into a single system, makes additions to it, and enriches it with reasoning and evidence. These two stages serve to make the work thorough, reliable and perfect .

This work is considered the foundation for Nasafi's writings on jurisprudence and method. Scholar wrote the work "al-Mustafa" after his work "al-Mustawfa". This, in turn, is considered the first work of the scientist. Hafiziddin Nasafi wrote the work "al-Mustasfa" in 1266. Therefore, the scholar quoted from this work in his later works such as "al-Wafi", "Kashf al-asrar", "Sharh al-Muntakhab", "al-Musaffo" [4].

Knowing the scientific significance and value of the work "Al-Mustasfa" directly depends on the sources used by the author. Nasafi used popular books as sources for writing the work. The sources and masdars relied on by the imam are among the works that are reliable in the madhhab and are referred to by scholars. He gave importance not only to fiqh works, but also to well-known and reliable sources in the sciences of Aqeedah, Tafsir, Hadith, Usul, Grammar and Dictionary. This shows that Imam Nasafi's knowledge is incomparable and that he is aware of the books of his predecessors and contemporaries in various fields.

Abu Mu'in used the work "Tabsirat al-adilla" by Maimun ibn Muhammad ibn Muhammad Makhuli Nasafi (d. 508/1114) in commenting on doctrinal issues. In the interpretation of the verses, there are many works of "al-Kashshof" by Abu Qasim Mahmud ibn Umar Zamakhshari (d. 538/1144) and "Sharh at-ta'wilot" by Abu Bakr Alauddin Muhammad ibn Abdulhamid Samarkandi (d. 552/1157). used in places.

Commenting on the hadith and its narrators, "Sunani Abu Dawud" by Imam Abu Dawud (d. 275/888-89), "Sharh mushkil al-asor" by Abu Ja'far Ahmad ibn Muhammad Tahawi (d. 321/933), "Ma'ani al-akhbar" by Abu Bakr Muhammad ibn Abu Ishaq Ibrahim ibn Yaqub Kalabadi Bukhari (d. 384/994), "al-Masabih" by Abu Muhammad Husayn ibn Mas'ud Baghawi (d. 516/1122), Abu Hotam used the works of Muhammad ibn Hiban ibn Ahmad Tamimi (d. 354/965) "Kitab al-Siqat".

In usul al-fiqh, Abu Zayd Ubaydullah ibn Umar Dabusi (d. 430/1038-39 y.) "Taqvim usul al-fiqh va al-tahamad adilla ash-shar'" by Abdulkarim Pazdavi (d. 482/1089 y.) "Usul al-Pazdawi" known as "Kanz al-wusul ila marifat al-usul", "Mezon al-usul fi natoij al-uqul" by Alauddin Muhammad ibn Ahmad Samarqandi (d. 539/1145) and Badriddin Mahmud ibn Zayd He used Amshi's works such as "Mukhtasar al-Amshi".

Nasafi relied on many sources in the field of jurisprudence. For example, "al-Asl", "az-Ziyadot", "al-Jame' al-saghir", "al-Jame' al-kabir" by Muhammad ibn Hasan Shaybani (d. 189/805), Muhammad ibn Samoa' ibn "Nawadir ibn Samoa" by Abdullah Tamimi (d. 233/848), "Mukhtasar al-Tahawi" by Abu Ja'far Ahmad ibn Muhammad ibn Saloma Tahawi (d. 321/933), "Mukhtasar" by Abu Abdullah Muhammad ibn Isa Abu Musa al-Zarir", "Sharh mukhtasar al-Tahawi" by Abu Bakr Ahmad ibn Ali Jassos (d. 370/980-81), Abu Lais Nasr ibn Muhammad ibn Ibrahim Samarkandi (d. 375/985) "Khizonat al-fiqh", "Mukhtalif ar-riwaya" and "al-Mukhtalifat fi furu' al-hanafiya", "Mukhtasar al-Quduri" of Abul Husayn Ahmad ibn Muhammad Quduri (d. 428/1037) and " Sharh mukhtasar al-Karhi", "al-Asrar" by Abu Zayd Ubaydullah ibn Umar Dabusi (d. 430/1038-39) and "Khizonat al-huda" by Abu Nasr Ahmad

ibn Muhammad Aqta (d. 474/1081 y.) "Sharh mukhtasar al-Quduri", "al-Mabsut" by Fakhrulislam Ali ibn Muhammad ibn Husayn Pazdavi (d. 482/1089) and "Sharh al-jame 'as-saghir", known as Bakr Khoharzada, Abu Bakr ibn Muhammad ibn Husayn Muhammad Bukhari (d. 483/1090), "al-Mabsut" of Abu Bakr Muhammad ibn Ahmad Sarakhsi (d. 483/1090), "al-Mabsut" Hisamiddin Omar ibn Abdulaziz (d. 536/1141-42).)'s "al-Waqe'ot", "al-Izah" by Abul Fazl Abdurrahman ibn Muhammad ibn Amirvaih Kirmani (d. 544/1149) and "Ta'liq Abul Fazl Kirmani", Alauddin Muhammad ibn Ahmad Samarqandi (d. 549/1154 y.) "Tuhfa al-fuqaha", "al-Manshur" by Abulqasim Muhammad ibn Yusuf Samarkandi (d. 556/1161), Abul Hasan Ali Ibn Abu Bakr ibn Abduljalil Marginani (d. 593/1197) "al-Hidaya fi sharh bidayat al-mubtadi", "Sharh al-jame' as-saghir" by Badriddin Mahmud ibn Zayd Amshi, "al- Muhit al-Burhani fil fiqh an-nu'mani" (this work appears in some places under the name "al-Jame' al-Burhani"), Muhammad ibn Ahmad Abu Bakr Bukhari (d. 619/1222) "al-Fawoid az- Zahiriya", "Fawoid al-mukhtas" by Badriddin Muhammad ibn Mahmud Kardari (d. 652/1254) ar", Abul Ma'li Muhammad ibn Ahmad ibn Yusuf Isbijabi's works such as "Zad al-Fuqaha" and "Sharh mukhtasar al-Tahawi" are among them [5].

Also, in the science of Nahv, "al-Mufassal fi siyad al-e'rab" by Abulqasim Mahmud ibn Umar Zamakhshari (d. 538/1144), in the interpretation of words and sentences in hadith, by Abu Ubaidulqasim ibn Sallam Ansari (d. 224/839). "Gharib al-Hadith" and "Jumal al-Gharaib" by Abulqasim Mahmud ibn Abulhasan Naysoburi (d. 553/1158), in the interpretation of jurisprudential concepts by Abul Fath Nasir ibn Abdussayid Abul Makarim Matrazi (d. 610/1213). "al-Mughrab fi tarib al-mu'rib" and "al-Hadi lil-badi" by Abu Bakr Muhammad ibn Mahmud Hamawi, "al-Ain" by Khalil ibn Ahmad Farahidi (d. 170/787) in explaining the dictionary meanings and definitions of words. ", "Devan al-adab" by Ishaq ibn Ibrahim Farabi (d. 350/961), "Tahzib al-lugat" by Abu Mansur Muhammad ibn Ahmad Azhari (d. 370/981), Ismail ibn Hammad Jawhari (d. 393/1003) "as-Sihah", Abul Hasan Muhammad ibn Abdullah Samarkandi (d. 343/955) "Taj al-masodir fil lug'at", Abu Ja'far Ahmad ibn Ali ibn Muhammad Bayhaqi (d. 544/1149) used the works of "Taj al-masodir fil dictionary"

The number and variety of sources used in the commentary can be seen from Haji Khalifa's definition of this commentary: "The commentary is all quoted from the books "Mabsut" and "Izoh" [6].

The scientist himself said in the preface of the work: "In order to increase its usefulness, I enriched the commentary with ideas and made additions from the books of "Mabsut". It is clear from the commenter's words above that he was not limited to a specific source while writing the book, but also used books from this field and other areas. Also, at the end of the book, the author said: "When necessary, the issues mentioned in the commentary are taken from "Mabsut", "Izoh" and other books" [7].

Nasafi's reference to the books of other scholars and their use does not affect the quality of the work, but in the process of interpretation, other aspects of the book are revealed. In it, the imam attaches great importance to directing evidence, justifying judgments, explaining them, sometimes correcting them, conveying judgments based on fatwa in his time, clarifying confusions and unclear sentences.

In the work "Al-Mustasfa" special attention is paid to jurisprudential evidence, the methods of providing evidence are clearly described and the real basis of the issues is revealed. Scholar deeply analyzed the issues and related situations in the work, solved the problems related to the issue and used logical-hypothetical rules in the form of questions and answers.

Another unique aspect of the work is that the author connected the issues in it with the reality of that time. He also clarified some words and phrases in the text of "al-Fiqh an-nofe'" and paid great attention to the accuracy of the words in it. In commenting on the work, Nasafi avoided using vague and incomprehensible words, and used an easy style, clear expression, beautiful, simple and popular words. This makes it easier to understand and use the work.

CONCLUSION. Scholars' reliance on a particular work indicates that that work is a reliable and valuable source. If you look at most of the books published in Hanafi jurisprudence, you can see that their authors understood the value of the work of "al-Mustasfa", used it and quoted it, and were based on it. Imam Badriddin Aini (d. 855/1451) in his commentary "Ramz al-haqaq" emphasized "al-Mustasfa" as one of the most interesting works in fiqh: "Abdullah ibn Ahmad ibn Mahmud in fiqh and method" al-Wafi" and his "al-Kafi" ", he is the owner of useful works such as "al-Musaffo sharh al-manzuma" and "al-Mustasfa fi sharh an-Nofe'"[8]. Abdulhay Laknavi (d. 1304/1886) mentioned Nasafi's commentary "al-Mustasfa" among the authoritative works of the Hanafi school: "I used his works "al-Wafi", "al-Kafi" and "al-Mustasfa"[9] , he said. Also, referring to al-Mustasfa as the main source of the book of Imam Zainiddin ibn Ibrahim ibn Muhammad (d. 970/1563), known as Ibn Nujaym, he said: "I used many commentaries and fatwas... Al-Mustasfa and "Al-Musaffo" commentaries are among them"[10]. I

n addition, Alauddin Abdulaziz ibn Ahmad Bukhari (d. 730/1330.) wrote his "Kashf al-asrar", Fakhriddin Usman ibn Ali Zayla'i (d. 743/1342) "Tabyin al-haqaiq", Akmaliddin Muhammad ibn Mahmud Babarti (d. 786/1384) quoted texts and meanings from "al-Mustasfa" in the works "al-I'naya sharh al-Hidaya".

Thus, the work "al-Mustasfa" is one of the rare sources, which includes not only fiqh, but also such sciences as tafsir, hadith, vocabulary, usul, grammar, and puberty. Today, researching this authoritative source is considered one of the important tasks in restoring the scientific heritage of our ancestors.

References:

1. Мирзиёев Ш.М. 2017 йилда амалга оширилган асосий ишлар якуни ва Ўзбекистон Республикасини 2018 йилда ижтимоий-иқтисодий ривожлантиришнинг энг устувор йўналишларига бағишланган Мурожаатнома. https://president.uz/uz/lists/view/3377.
2. Абул Баракот Насафий. Ал-Мустасфо. Қўлёзма/ Millet genel kutuphanesi. № 847. – В. 1/б.
3. Абул Баракот Насафий. Ал-Мустасфо фи шарҳ ан-Нофеъ. Истанбул: Мактаба ал-иршод, 2017. – Б. 45.
4. А.Маллабаев. Абул Баракот Ҳофизиддин Насафийнинг “ал-Мустасфо” асари муҳим фиқҳий манба// “Инфолиб” ахборот-кутубхона хабарномаси. № 4(16) 2018. – Б. 68-69.
5. Абул Баракот Насафий. Ал-Мустасфо фи шарҳ ан-Нофеъ. Истанбул: Мактаба ал-иршод, 2017. Б. 45.
6. Ҳожи Халифа. Кашф аз-зунун. Байрут: Дар иҳя ат-турас ал-арабий, Ж.2. – Б. 1921.

7. Абул Баракот Насафий. Ал-Мустасфо. Қўлёзма/ Millet genel kutuphanesi. № 847. – В. 245/а.
8. Маҳмуд ибн Аҳмад Айний. Рамз ал-ҳақоиқ. Карачи: Идарат ал-Қуръан вал улум ал-исламия, 2002. Ж. I. – Б. 9.
9. Абдулҳай Лакнавий. Ал-Фаваид ал-баҳия фи тарожим ал-ҳанафия. Қоҳира: Дор ал-китоб ал-исламий, – Б.102.
10. Ибн Нужайм. Ал-баҳр ар-роиқ. Тошбосма/ Ўзбекистон халқаро ислом академияси, Манбалар хазинаси. № 68. – Б. 2.

MINERAL RESOURCES

Abdulhamidova Hilola Sherzod qizi[1]
[1]Faculty of Industrial Technologies, Termez Institute of Engineering and Technology, Termez, Uzbekistan
Eshkoraev Samariddin Sadriddin o'g'li[2]
[2]Faculty of Industrial Technologies, Termez Institute of Engineering and Technology, Termez, Uzbekistan
Choriyeva Mahfuza Sadriddin qizi[3]
[3]Graduate student of Termez State University, majoring in physics of renewable energy sources and sustainable environment
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Key words: Mineral resources, periodic table of chemical elements, coal, oil, natural gas, metal ores, zinc, uranium, copper, gold.

Abstract: Natural resources found in nature in the form of minerals are called mineral resources (resources). Currently, more than 200 types of mineral resources are used for economic needs. In practice, mineral resources contain almost all the elements in D. I. Mendeleev's periodic table of chemical elements, and they lie underground in the form of minerals. Man has been using available resources since time immemorial. With the passage of time, the type and volume of mineral resources used has increased.

The volume of use of underground mineral resources, which is a finite and non-renewable natural resource, is also increasing year by year. These are coal, oil, natural gas, ferrous and non-ferrous metal ores, mining and chemical raw materials, construction materials. Some of them have large reserves, while others have not much.

Introduction. Analysis of the volume and rate of use of the main types of fossil resources shows that humanity's "appetite" for these resources is growing at an unprecedented level. For example, between 1950 and 1968, while the population increased by only 38%, the mining of coal and iron ore increased by 2 times, and the extraction of oil by almost 3.5 times. In 1913, the use of fossil resources was on average 5 tons per capita, in 1940 it was 7.4 tons, in 1960 it was 14.3 tons, and in 1990 it was 25 tons, i.e. increased by 5 times during the next 80 years. Now 150 billion tons of mineral raw materials are mined in the world every year. According to the information of the United Nations, 32 billion per year in the world. tons of coal, 2.6 bln. tons of oil, 6 bln. tons of iron ore, 3.6 mln. tons of chrome ore, 7.3 mln. tons of copper ore, 3.4 mln. tons of lead ore, 159 mln. tons of table salt, 120 mln. tons of phosphates, 1.2 mln. tons of uranium, mercury, molybdenum, nickel, silver, gold and platinum ores are mined. According to some data, if the mineral resources are used at this rate, the reserves of gold will last for another 30-35 years, zinc - for 36 years, mercury and antimony - for 70 years, uranium - for 47 years, copper - for 66 years, coal, oil and gas reserves will last only 150 years. According to other data, the reserves of aluminum should last for another 570 years, copper - 292 years, zinc - 232 years, iron - 150 years, and gold, silver and platinum reserves should be exhausted in 1990. These contradictory opinions based on Khomchot, although they cannot clearly show the picture of the future, in any case confirm that the reserves of fossil resources are limited. This gives experts the task of further studying the lithosphere, searching for new reserves, using non-traditional methods of using resources and making maximum use of ores, recycling their waste, and creating technology for extracting the necessary elements.

The land of the Republic of Uzbekistan has a huge amount of various mineral resources. Almost all the elements of Mendeleev's periodic system were found on this land. So far, more than 2,700 mineral deposits and their occurrences have been identified on the territory of the republic. There are about 100 types of raw materials in these deposits, the total amount of which is estimated at 3.3 trillion US dollars. Oil and gas reserves alone are worth $1 trillion, 900 of the identified mines have been found and studied, and the reserves in them are worth 970 billion. equal to a dollar. Currently, the number of mines in use in the republic is about 400. 5.5 billion from these mines every year mineral resources of USD 6-7 billion are being obtained. new dollar reserves are being found.

Uzbekistan is a rich country in fuel and energy reserves. Natural gas reserves found in it are 2 trillion cubic meters. around the cube. These gas reserves are enough to supply the republic with gas for 35 years. The reserves of gas in the Kokdumalak fields alone are 144 billion cubic meters. cubic meters, the oil in them is 54.2 million tons, and gas condensate is 67.4 million tons. The number of currently used oil fields is more than 160, and their reserves reach 30 years. In 1985-1994 alone, 38 new oil and gas fields were put into operation. In addition, 155 more promising oil, gas and gas condensate fields have been identified. Investigations show that almost 60% of the republic's land has underground oil and gas deposits. These layers are mainly located in 5 regions. These are: Ustyurt, Bukhara-Khiva, South-West Hisar, Surkhandarya and Fergana regions. More than 90% of the total oil obtained in the republic is obtained cheaply, that is, by the method of fountains. So far, only 32% of the oil reserves discovered in the territory of the republic have been exploited. This indicator is 61% in Turkmenistan, 60% in Tajikistan and 41% in Kyrgyzstan. The situation is similar in the development of natural gas reserves.

The total coal reserves are 2 billion tons, and our republic ranks second in Central Asia in terms of coal reserves. Coal is mined from Angren, Shargun and Boysun mines along with coal, valuable minerals such as kaolin, limestone and quartz sand are extracted from these mines. Alumina, i.e. aluminum oxide and aluminum, refractory materials, ceramic coatings, metlax tiles, porcelain, faience, white and other colored cement, refractory bricks are obtained from kaolin.

Uzbekistan has large reserves of precious metals. 32 types of precious non-ferrous metals were found in its territory. Currently, they are mined from 33 mines.

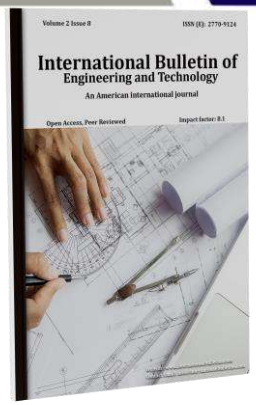
In terms of gold reserves, Uzbekistan ranks fourth in the world, and in terms of gold mining, it ranks seventh. The main deposit of gold is located in Central Kizlyukum. Currently, gold is extracted from 7 mines. The discovery of the Muruntov mine was recognized by the International Geological Society as the biggest gold discovery of the second half of the 20th century. Modern technology of affinage, i.e., the process of extracting the purest metal, is introduced here, and because of the high quality of mined gold, genuine gold with a purity level of "four nines" is obtained, which has the appearance of a premium product. Currently, the ore soil that was removed from the Muruntov mine and has been dumped for many years is being processed with the participation of the American company "Newmont Maying Corporation", and the remaining gold in it is being extracted. Gold is also found in Ajibugut, Bulutkon, Balpantov, Aristontov and Turboi mines in Kyzylkum region. Exploration of these mines continues. Later, gold was also found in Tashkent and Samarkand regions.

In conclusion: Applying the world's advanced technologies in mining operations, making large-scale investments, establishing joint ventures, fully involving in the production of ores,

extracting their accompanying minerals, and at the same time improving the economy and reducing waste reduction plans are being made. These works require a lot of effort, money and time. Currently, the first steps on this path have been taken, and the British company "Oxis Mining" has started to extract gold, and the companies "Omontaytov-Fred" have started to extract lead, zinc and gold. Undoubtedly, the planned plans and the work being carried out will raise Uzbekistan to the level of developed countries in the future, which will be the foundation for ensuring the prosperous life of the Uzbek people.

References:

1. Davronovna, K. M., Sadriddinovich, E. S., Ismatullayevich, R. B., & Jo'raevich Y. J. (2022). Dependence of Karst Processes on Physico-Chemical Properties of Salts. American Journal of Social and Humanitarian Research, 3(9), 25–28.
2. Betextin A.G. Kurs mineralogii. Moskva 2010.
3. Qo'shmurodov O.Q. Mineralogiya, Toshkent-2006.
4. Haidar. Introduction to mineralogy and petrology 2014y.
5. Bulax A.G. Obshaya mineralogiya. M.: Nauka, 1999.



TECHNOLOGICAL SCHEME OF FIRE SAFETY IN UNDERGROUND MINES, MODERN METHODS OF ENSURING FIRE SAFETY IN MINES

Djaksimuratov Karamatdin Mustapaevich[1]
[1] Candidate of Natural Sciences, Nukus Mining Institute
Rametullayeva Mehriban Po'latbek qizi[2]
[2]Student of Nukus Mining Institute
Maulenov Nurlibek Axmet o'g'li[3]
[3]Student of Nukus Mining Institute:
Joldasbayeva Aysulu Baxitbay qizi[4]
[4]Student of Nukus Mining Institute
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Abstract- As underground mines become deeper and larger with wide specifications it creates a diverse environment with multiple variables that make fire disasters difficult to manage. Therefore, developing an integrated fire safety system is of crucial importance in order to effectively deal with fire disasters and protect the life of every worker. The proposed prototype system in this study uses available technology that can integrate information about fire risk assessment, fire detection, safety situation awareness, and effective system for evacuation displayed on smartphone device to create an intelligent and two-way fire safety system. The proposed system uses sensors, detectors, smartphones, Internet of Things (IoT), cloud computing, application gateways, and application program interfaces for solving the problems of building the effective fire safety system. Two-way communication and 3D visualization with evacuation guidance are other possible functions of the proposed system for fire safety. Developing and implementing this prototype fire safety system can effectively provide information about fire risks, fire safety, fire detection, alarm responses, optimal evacuation routes, 3D visualization and simulation of evacuation routes, arrow and voice evacuation guidance from smartphone device and overall building fire safety with disaster response capabilities for every underground mine.

Keywords: underground mines, fire, detection, alarm, evacuation, system

Introduction

Fire is still a major problem in the underground mining industry, especially if it is uncontrolled and constitutes a significant hazard that leads to catastrophic events. Many underground mining workers are not aware of how quickly and seriously mine fires can spread, they have little knowledge of their escape routes and they lack experience in using firefighting equipment . Information on the latest strategies for fire risk assessment, fire detection, fire alarm, and evacuation may be difficult to obtain, and because of this there is the need for efficient fire safety system that uses the latest innovations in smart technologies that can provide continuous flow of information . Such technologies and techniques could significantly improve fire safety and evacuation procedures in underground mines. An ideal fire safety system for underground mines would be low cost, reliable, fast, and able to warn underground workers and guide them all to safety, regardless of their location in the mine. A fire safety system that is capable of alerting miners quickly would allow them to put on the self-rescue apparatus on time, which is crucial for safe evacuation. In order to ensure that the risks from underground fires are properly managed the latest technological developments should be implemented and used that can provide fire awareness and flow of crucial

information for fire detection and safe evacuation . The purpose of this paper is to develop a prototype model for fire safety system in underground mining to control the risks from fire events by providing continuous two-way flow of information for: Fire risks,fire detection,fire alarms,optimal routes for evacuation,evacuation guidance Fire safety systems have components of technology and people and they can work synergistically to bring the system back in balance. This paper is part of research aimed at improving fire safety and at obtaining a safer working environment in underground mines.

Literature Review

This section reviews the currently published studies on the application of smart technologies in mining industry for improvements in safety at work, fire management and evacuation planning. proposed a system for detecting fire hazard in a coal mines panel that uses wireless sensor networks (WSNs) and can be used to detect the exact fire location and spreading direction. proposed a system for the integration Wireless Sensor Network (WSN) assisted with Geographic Information System (GIS) that enables monitoring and controlling underground mining applications from surface office and also to use ZigBee nodes to sense environmental attributes such as temperature, humidity and gases concentrations, switching ON and OFF ventilation fans and texting emergency messages. Proposed work to showcase the impact of using real-time tracking, sensing and management system using active RFID, sensors and wireless mesh network for improving mine safety and underlay technology and system solutions for different mining applications. proposed wireless sensor–actuator system which aims at quick gas detection and immediate isolation of gas leak source. proposed tailings dam monitoring and prealarm system based on the Internet of Things (IoT) and cloud computing with the abilities of real-time monitoring of the saturated line, impounded water level and the dam deformation. proposed a system that uses the existing Cable Monitoring System (CMS) as the main body and the Wireless Sensor Networks (WSN) with multi-parameter monitoring as the supplementary technique and the test results indicate that the proposed integrated environment monitoring system for underground coal mines is feasible and all designs performed well as expected. discuss the design of a Structure-Aware Self-Adaptive Wireless Sensor Networks system, that is able to rapidly detect structure variations caused by underground collapses. proposed a positioning system of noncomplete coverage of the whole tunnel network by measuring point. This positioning system is made up of the monitoring center, gateways, underground base stations, reference nodes and mobile nodes that constantly compute their own locations and send them to the monitoring center for management. discusses the design of a system that by using available software, allows to work out complete evacuation plans that include analysis of fire scenarios and optimal routes for evacuation in underground mining. Although most studies have similar objectives, no study focused on integrated smart fire safety system that constantly communicate with the user's smartphone and provide it with all the necessary information related to fire risk assessment, fire detection, fire alarm, personal localization, calculation of optimal routes for evacuation, and evacuation guidance with visualization on 3d model.

Proposed Methodology.

System Structure for Wireless Network Setup

Installing an effective and reliable fire safety system in underground mines can allow people to reassess the procedures of structural fire protection required for safe evacuation. An automated underground mine communication and monitoring system based on the

integration of new smart technologies is introduced to promote this prototype model for fire safety system. In response, to support the large data requirements of modern mines is enabled by the installation of an IEEE 802.11 compliant backbone. This optical fiber infrastructure integrated with Wi-Fi nodes forms the backbone for this fire safety system that can also be used for other data hungry applications such as mine automation systems, remote control, video, etc. In the constantly changing topology of a mine, reliable and simplified communication backbone system is needed that can be capable of providing bilateral communications between the underground mine environment and the surface control center. Figure 1 shows the architecture of this underground communication backbone composed of optical fiber infrastructure, gateways, routers, and end devices. The entire system is composed of different Wi-Fi nodes connected through gateway with the surface control center and the fire safety system. Routers with the ability of communicating with the fire safety system were employed to relay constant flow of information through the network.

Figure 1. Proposed backbone for underground mine network

Prototype Model for Fire Safety System

Figure 2 shows the framework for the prototype model for fire safety system introduced in this research that uses smart technologies that can provide continuous flow of information and could significantly improve fire safety, detection and evacuation procedures in underground mines.

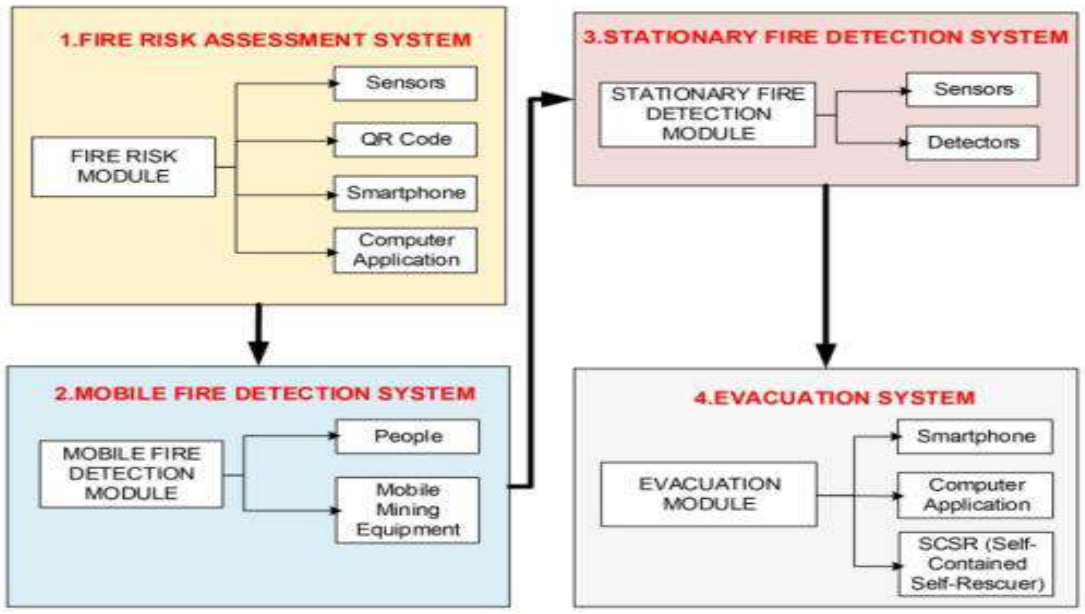

Figure 2. Framework of the prototype model for fire safety system

Fire risk assessment system

Fire risk assessment analysis in underground mining is a process of characterizing and understanding the fire hazards and the unwanted outcomes of fire occurrence. Fire risk assessment is defined as the product of the consequence to be expected from the fire and the probability of fire occurrence . The fire risk assessment system presented in this paper uses available smart technology to estimate the fire risk from identified hazards in underground mining environment. This systemc comprises two steps of fire risk identification and fire risk analysis. The fire risk identification and fire risk analysis process in this system use QR codes to understand how and why fire could happen. By placing the QR codes on highly flammable materials that are found in the underground mine along with magnitudes of consequence and probabilities from fire occurrence, by scanning the QR code with their smartphone each worker can obtain fire risk assessment expressed either in qualitative or quantitative terms depending on the type of risk and the information resources available (Figure 3).

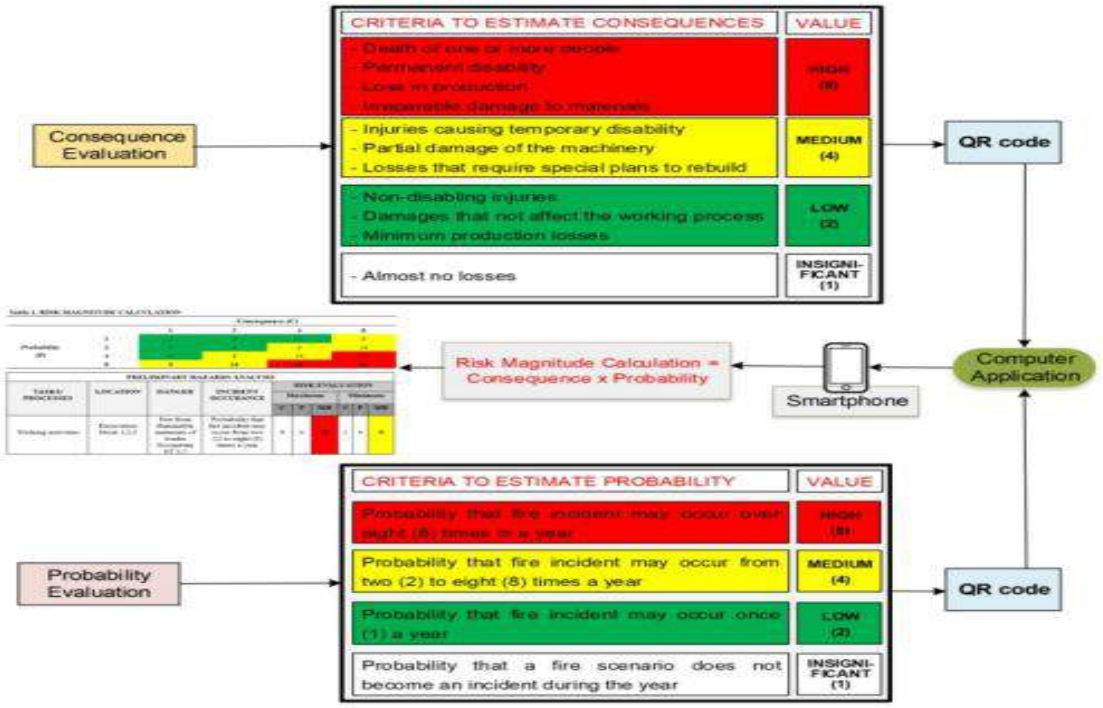

Figure 3. Fire risk assessment with QR codes and smartphone

Understanding the fire dangers, like the possible sources of ignition and the presence of dangerous substances, allows determination about the probability of a fire occurring. This methodology involves smart technology to establish the likelihood of fire occurrence and the personnel at risk. Figure 4 shows the fire risk assessment system presented in this paper. This system consists of sensors attached to regular PPE clothing, which are connected with smartphone via energy-efficient Bluetooth sensors. The sensors that are attached to the PPE can gather data points in real-time about smoke and heat exposure in underground mine environment, which data is then sent through Bluetooth to the local smartphone database from where it can notify the user about the presence of potential fire. With the help of a specially programmed computer application for this need that is installed on smartphone, the user can scan the QR codes that are put at high frequency work places and potential fire risk places and get automatic fire risk assessment from identified hazards in the underground mining environment. This data is then shown on the user's smartphone and when an internet connection is available it is sent via WiFi to the networking device that enables the data to be viewed in the control center at the surface from where data and messages can be sand back to the user.

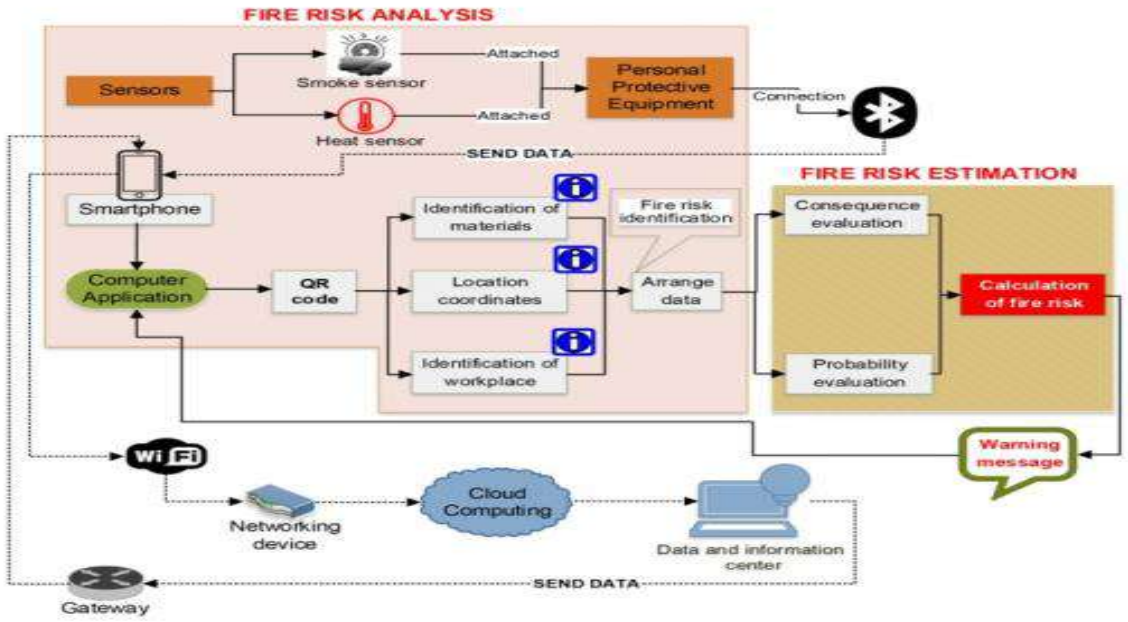

Figure 4. Framework of the fire risk assessment system

Mobile fire detection system

Accurate monitoring and constant flow of information about the underground mine environment is of crucial importance for miners' safety . Early detection of fire and rapid response of miners for successful evacuation are key elements to survival. An undetected fire could spread rapidly in underground mining facilities and, therefore, a combination of fire detection system is needed to overcome the difficult and hazardous environments of underground mines and to provide reliable early fire detection. This combination of a fire detection system presented in this prototype model consists of sensors that are attached to the PPE of every miner and sensors attached to the working machinery which are capable of detecting fire (Figure 5). Due to the constant movement of the mining workers and the working machinery through the mine, this system has the possibility of detecting fire at more locations within the mine, which shortens the time for detecting a fire with only stationary placed fire detectors. The sensors that are attached to the PPE were mentioned in the previous section can gather data points in real-time that are sent through Bluetooth to the local smartphone database from where they can notify the user about the presence of potential fire (Figure 4). In underground mines fuel and ignition sources are usually associated with infrastructure and mobile equipment. Most mining equipment is operated around the clock and virtually all of the working machinery used in mining operations contains large quantities of highly flammable fluids . The material or fluids coming in contact with ignition sources can quickly erupt into a spreading fire that can have catastrophic consequences. Rapid detection of this kind of fire caused by working machinery is crucial for quick suppression of fire and for safe evacuation. This proposed versatile system that can be installed on every working machinery can provide detection, alarm and fire suppression system for mobile equipment such as haul trucks, hydraulic excavators, LHD, etc. The system offers linear and spot detection that can be used individually or in combination. Thermal linear detection wire consists of conductors separated by a heat sensitive insulator which are melting at high temperature caused by fire. When the two conductors make contact they send a signal to the interface control module which signals the display module and the actuator device for the automatic fire suppression system. The thermal spot detectors used in this

system are for higher reliability of fire detection. Thermal spot detectors signal the interface control module to initiate the fire suppression system when the temperature is over 150 °C and also to signal the display module. When the signal is sent from either of the two forms of detection, the display module then sends data about fire information through Bluetooth to the operator's smartphone so that the operator may evacuate to a safe distance from the detected fire. This data is then automatically processed through the computer application installed on the operator's smartphone and then via Wi-Fi is sent through the installed backbone network of the mine to the surface control center (Figure 1). This mobile fire detection system can provide early fire detection that is connected with safe evacuation of miners before the underground passageways are filled with smoke.

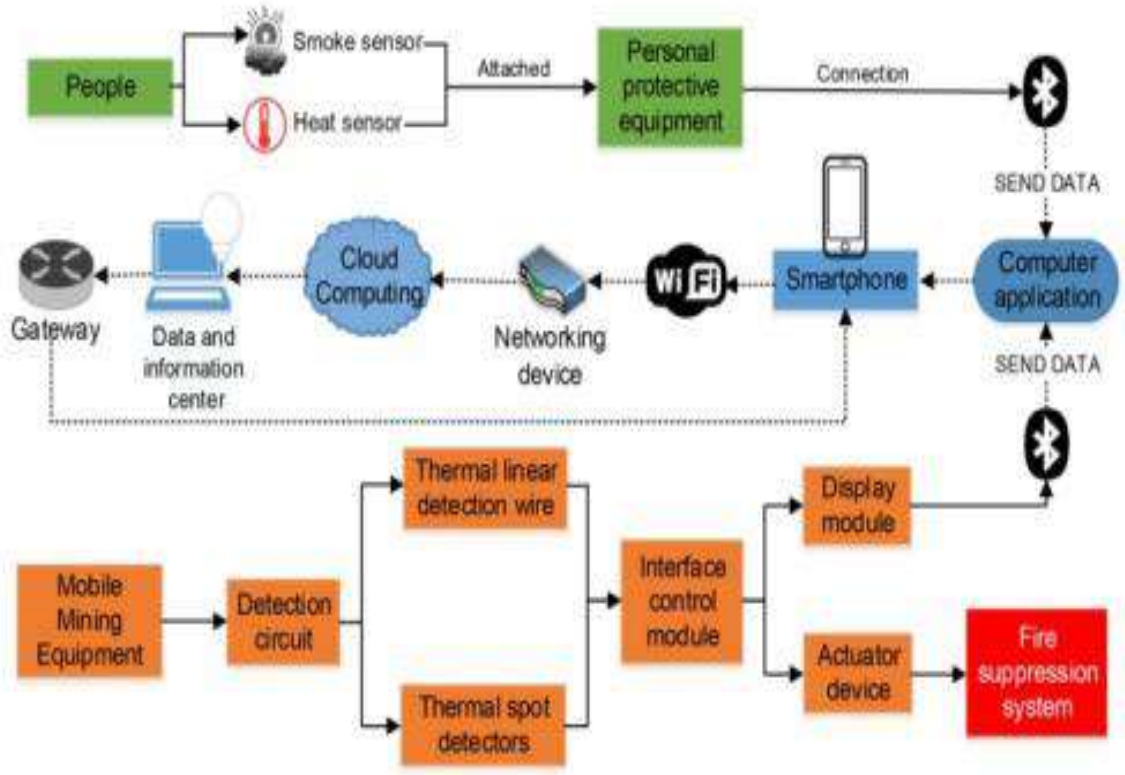

Figure 5. Framework of the mobile fire detection system

Stationary fire detection system

Fire detection system can be hindered by false fire alarms produced by smoke particulate and carbon monoxide (CO) emissions from diesel equipment and metal welding work activities. The constant generation of such false alarms can lead workers to ignore this repetitions of false alarms associated with these emissions and this can jeopardize their safety in the event of real fire. This proposed stationary fire detection system uses combinations of different types of fire sensors for early fire detection and nuisance signal discrimination (Figure 6). Characterizing and identifying the signatures of interfering sources in underground mines using combinations of different types of sensors' arrays coupled with a rule decision system with alarm algorithms offer the possibility of generating an alarm according to the real situation. Fire smoke detector, metal oxide semiconductor (MOS) sensors, CO sensors, optical and ionization smoke sensors were used in this proposed system to differentiate real combustion of fire products from emissions produced by diesel equipment and metal welding

work activities. In the presence of emissions produced by diesel equipment and acetylene torch cutting an MOS sensor can respond with a signal which is sensitive to nitric oxides (NOx). Without the MOS sensor signal, the ionization smoke sensor and the CO sensor would identify these emissions as a fire. An integrated system with a combination of fire smoke detector, MOS sensors, CO sensors, optical and ionization smoke sensors can reduce false fire alarms and provide early warning capability based on the real situation. This system integration with connection to the rule decision system can trigger an alarm and also send data through the installed backbone network of the mine to the workers' smartphones and also to the surface control center. This proposed stationary fire detection system can enhance the miners' safety by providing information about early fire detection and high emissions from diesel equipment and metal welding work activities.

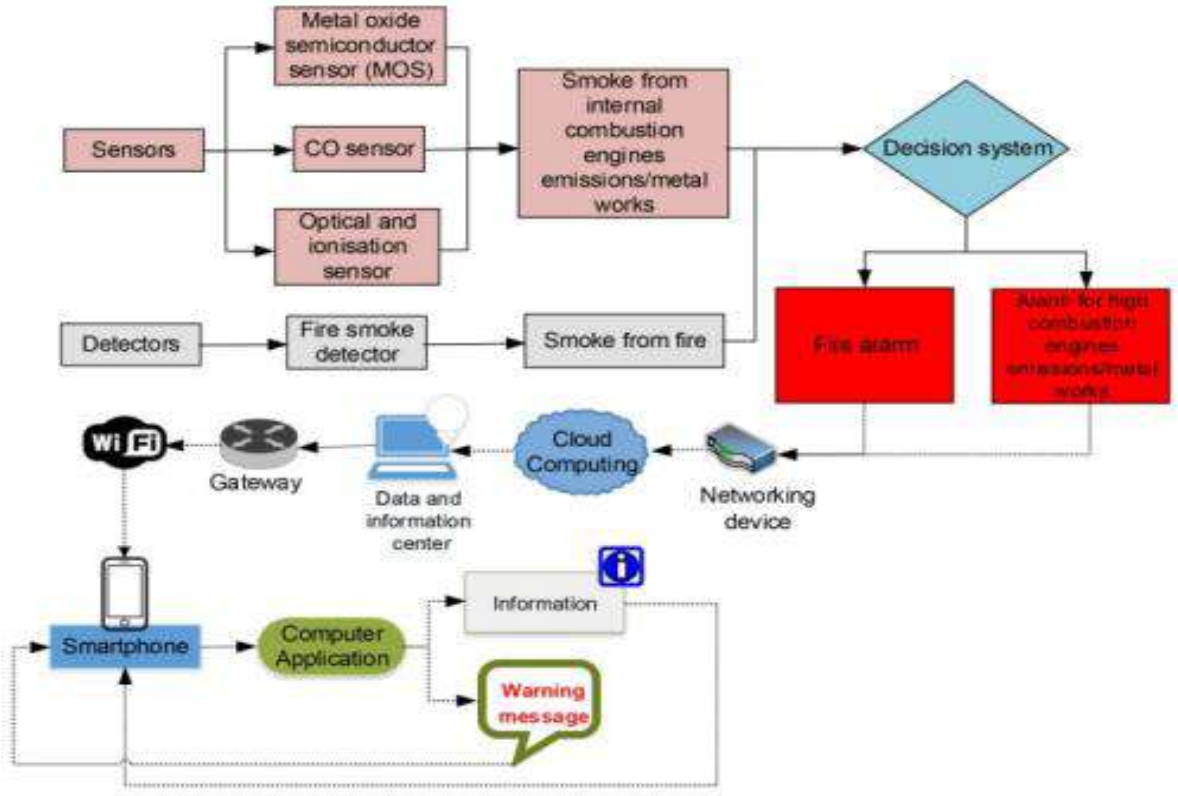

Figure 6. Framework of the stationary fire detection system

Evacuation system

Evacuation routes are commonly displayed in a two dimensional format (2D), and those charts usually cannot identify the location of the fire or recommend the ideal optimal evacuation route. Implementing evacuation system which can be displayed in a three dimensional format (3D) on smartphones can help users to visualize and understand the status of a fire or the evacuation plan. The need to improve the traditional 2D fire evacuation systems encouraged the development of new systems to prevent and minimize fire disasters using smart technology. For instance, the information from the smart evacuation system may help workers to identify evacuation routes, effectively reduce disaster response time, locate field personnel and fire facilities. This study proposes a prototype model for a fire evacuation system for underground mining industry that integrates and presents information on smartphone for SCSR (Self-Contained Self-Rescuer) capacity, evacuation and rescue routes, evacuation guide system and visualization on 3D model (Figure 7). When fire is detected, the mobile fire detection system and stationary fire detection system presented in the previous

sections (Figure 5, Figure 6) send fire alarm data to the workers' smartphones. Once workers receive the fire alarm data, they start to install the SCSR apparatus on themselves. The SCSR apparatus is connected via Bluetooth with the smartphones where it is showing its capacity. The smartphone with the computer application that contains 3D model of the underground mine is constantly sending packets of information about workers' location through the backbone network of the mine to the surface control center. This system instantly shows in the 3D model the locations in the underground mine that are affected by the fire. This data then passes through the evacuation routes calculation module in the surface control center where this data is preprocessed and the results in the form of an evacuation guide system are sent through the gateway back to the workers' smartphones. The evacuation routes calculation module combines the received data from the mobile fire detection system, stationary fire detection system, unique location of workers and SCSR capacity in order to calculate the optimal evacuation routes for each worker and facilitate evacuation guidance. The smartphone computer application with voice/arrow functions provides assistance in evacuation guidance of the workers. This function works with the built-in gyroscope and accelerometer sensor in the smartphone which calculates the horizontal azimuth of the smartphone device and provides visual and sound direction guidance using an arrow shown on the smartphone screen that constantly points in the direction of the currently recommended optimal evacuation route . The accelerometer sensor constantly calculates the workers' walking speed and this data, combined with the length of the evacuation routes and the remaining capacity of the SCSR apparatus, can significantly help in the calculation of an optimal evacuation route.

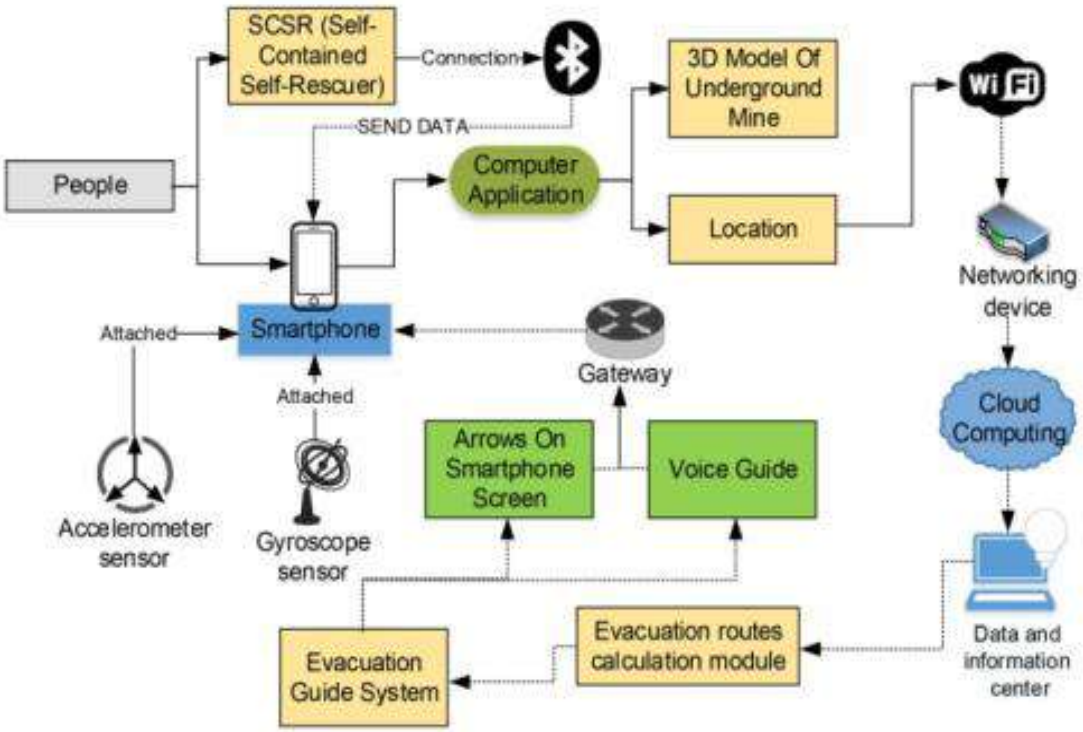

Figure 7. Framework of the evacuation system

Modelling of an Example Scenario Based on the discussions in the previous sections, this research proposes a prototype model for fire safety system in underground mining that can provide fire risk assessment analysis, fire detection, safety situationawareness and effective system for evacuation. Figure 8 shows an example scenario where some of the possibilities of

the proposed fire safety system can be seen. In this scenario the stationary fire detection system installed on specific workplaces in the underground mine detects fire with the help of the attached fire smoke detector. This data then passes through a decision system to differentiate it from emissions produced by diesel equipment and metal welding work activities. Once the data is processed as a real fire, the decision system triggers a fire alarm and also sends a warning message with fire location through the installed backbone network of the mine to the workers' smartphones and the surface control center. The smartphone is constantly sending packets of information about the location of the workers and with the received data from all the parts of the fire safety system the evacuation routes module calculates the optimal evacuation routes for each individual worker based on their location in the mine. This data in the form of an evacuation guide system is sent through the gateway back to the workers' smartphones. Moreover, this example scenario shows that this prototype model for fire safety system that combines information from multiple interconnected systems provides effective real-time evacuation in case of fire and also important information for fire rescue personnel.

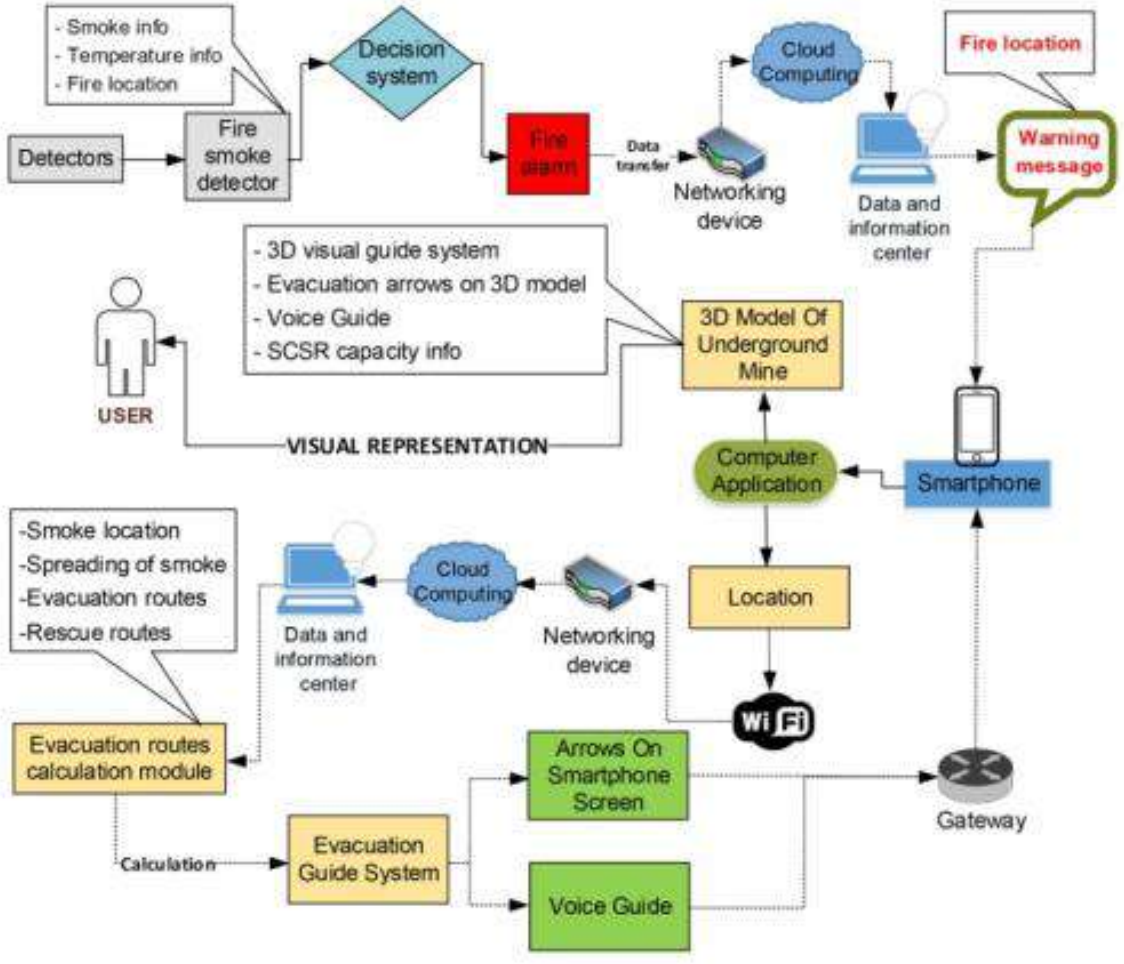

Figure 8. Modelling of example scenario

Conclusion

An underground fire is still a major problem in the mining industry that leads to catastrophic events such as loss of human life, injuries, damage to equipment, loss of property and production. The presented paper investigates the potential of developing and implementing smart fire safety system that can be used in the underground mining industry. This proposed system is designed to solve current key problems about fire risk assessment, fire detection,

safety situation awareness and effective system for evacuation. The crucial information that can be gathered from this prototype system that is connected with the backbone network of the mine can be sent and shown on smartphone devices. The potential of sharing this information with every worker is enormous, knowing the importance of giving the underground workers the earliest possible warning of potential fire. The developing and implementing of this smart fire safety system in the underground mining industry offers benefits in many areas:

• quick calculation of fire risk assessment;

• early fire detection and generating extra time that allows opportunities to respond to the fire and extinguish it;

• location tracking of each underground mine worker;

• interconnected alarms with decision systems that can differentiate real combustion of fire products from emissions produced by diesel equipment and metal welding work activities that can reduce the false fire alarms and provide early warning capability based on a real situation;

• optimal evacuation and rescue route calculation and planning;

• solving of key evacuation problems that affect fire response efforts, including slow evacuations due to human errors and confusions;

• escape from the hazardous fire area on time;

• fire alarms to monitor the status of disaster areas in order to plan and show the optimal evacuation routes on the smartphone devices;

• reduce response times for fire accidents and minimize the time necessary to find trapped underground mine workers;

• 3D visual information presented on a smartphone device for optimal evacuation route for each worker;

• real-time evacuation arrow and voice guidance presented on smartphone devices to assist evacuees; In this paper we introduced an initial effort towards an effective and efficient fire safety system. The benefits from the possible results of this study demonstrate that this smart fire safety system can significantly improve the fire safety management processes in underground mines.

References:

[1] Conti, R.S., Chasko, L.L. and Stowinsky, L.D., “Mine Rescue Training Simulations and Technology”, in Proceedings of the Fifth Annual Conference of the International Emergency Management Society, 1-12.

[2] Jo, B.W. and Khan, R.M.A., “An Event Reporting and EarlyWarning Safety System Based on the Internet of Things for Underground Coal Mines: A Case Study”, Applied Sciences, 7 (9). 925-950. 2017.

[3] Clif, D. and Grieves, J., “Improving emergency management in underground coal mines”, in 10th Underground Coal Operators' Conference, University of Wollongong & the Australasian Institute of Mining and Metallurgy, 281-287.

[4] Hu, S., Tang, C., Yu, R., Liu, F. and Wang, X., “Intelligent coal mine monitoring system based on the Internet of Things”, in 3rd International Conference on Consumer Electronics, Communications and Networks, 380-384.

[5]
Bhattacharjee, S., Roy, P., Ghosh, S., Misra, S. and Obaidat, M., "Wireless sensor network-based fire detection, alarming, monitoring and prevention system for Bord-and-Pillar coal mines", Journal of Systems and Software, 85 (2). 571-581. 2012.

[6] Moridi, M.A., Kawamura, Y., Sharifzadeh, M., Chanda, E.K., Wagner, M. and Jang. H, "Development of underground mine monitoring and communication system integrated ZigBee and GIS", International Journal of Mining Science and Technology, 25 (5). 811-818. 2015.

[7] Bandyopadhyay, L.K., Chaulya, S.K., Mishra, P.K., Choure, A. and Baveja, B.M. "Real Time Tracking and Sensing Systems for Improved Safety and Security in Mines", Journal of Scientific & Industrial Research, 68. 107-117. 2009.

[8] Somov, A., Baranov, A. and Spirjakin, D., "A wireless sensoractuator system for hazardous gases detection and control", Sensors and Actuators A: Physical, 210. 157-164. 2014.

[9] Sun, E., Zhang, X. and Li, Z., "The internet of things (IOT) and cloud computing (CC) based tailings dam monitoring and prealarm system in mines", Safety Science, 50 (4). 811-815. 2012.

[10] Zhang, Y., Yang, W., Han, D. and Kim, Y., "An Integrated Environment Monitoring System for Underground Coal MinesWireless Sensor Network Subsystem with Multi-Parameter Monitoring", Sensors, 14. 13149-13170. 2014.

[11] Li, M., and Liu, Y., "Underground coal mine monitoring with wireless sensor networks", ACM Transactions on Sensor Networks, 5 (2). 10-29. 2009.

ИССЛЕДОВАНИЕ СОСТАВА И ТЕРМИЧЕСКИХ ХАРАКТЕРИСТИК ОЛИГОМЕРНОЙ СИСТЕМЫ: НАТРИЙ ПОЛИСУЛЬФИД+ЭПИХЛОРГИДРИН+ФОСФОР (V) СУЛЬФИД

Нормуродов Б.А.[1]
Тураев Х.Х.[2]
Джалилов А.Т.[3]
Нуркулов Ф.Н.[4]
[1-2-3]Термезский государственный университет,
[4]ООО Ташкентский научно-исследовательский Институт химической технологии
https://doi.org/10.5281/zenodo.7100072

Резюме
Исследовали физико-химические свойства: плотность, температура плавления, растворимость, ИК-спектроскопия и ДСК системы: полисульфид + эпихлоргидрин + фосфор (V) сульфид. Синтезирован новый серо-, азот- и фосфорсодержащий олигомер марки NDP-1.

Ключевые слова: фосфорсодержащий олигомер, азотсодержащие соединения, вязкость, олигомеры.

Введение. Основной целью, которая преследуется при наполнении полимеров, является снижение себестоимости изделий на их основе. В подавляющем большинстве случаев введение герметиков приводит к увеличению хрупкости получаемого композиционного материала и катастрофическому снижению его морозостойкости, проявляющемуся особенно значительно при высоких объемных долях наполнителя. При этом максимально возможная степень наполнения для полимеров, перерабатываемых из расплава, лимитируется величиной вязкости расплава и, как правило, не превышает 40%.

Наполнение всегда приводит к затруднениям при формовании изделий, что связано с повышением вязкости расплава по сравнению с расплавом ненаполненного полимера [1,2].

В целом комплекс свойств наполненных полимеров определяется совместным действием ряда факторов, наиболее значимыми из которых являются: природа термопласта и наполнителя, форма и размер частиц наполнителя, взаимное расположение частиц наполнителя и изменение их локальной плотности по объему образца, концентрация наполнителя [3,4].

Природа термопласта и наполнителя в первую очередь определяет их совместимость при формовании композиционного материала. Если полимер и наполнитель оказываются несовместимы, то полученное изделие будет иметь пониженные механические характеристики, так как приложение нагрузки приведет к разрушению адгезионной связи, выражающейся в отделении матрицы от частиц наполнителя. Если работа адгезии, достигаемая при контакте полимера и наполнителя велика, то прикладываемая к композиционному материалу нагрузка будет распределяться более или менее равномерно без значительной концентрации напряжений на границе полимер – наполнитель. При высокой прочности адгезионной связи полимер –

наполнитель возможно получение композитов с относительно высокими механическими характеристиками [4].

Методы и материалы. Исследовали физико-химические свойства: плотность, температуру плавления, растворимость, ИК-спектроскопию и ДСК в серо-, азот- и фосфорсодержащего олигомера: полисульфид + эпихлоргидрин + фосфор (V) сульфид. ИК-спектры олигомера регистрировали на спектрометре «Avatarsystem 360 FT-IR» фирмы «Nikolet Justument Corporation»(США).

Термоаналитические исследования проводились на приборе Netzsch Simultaneous Analyzer STA 409 PG (Германия), с термопарой К-типа (Low RG Silver) и алюминиевыми тиглями. Все измерения были проведены в инертной азотной атмосфере со скоростью потока азота 50 мл/мин. Температурный диапазон измерений составлял 25-370^{o}C, скорость нагрева равнялась 5К/мин. Количество образца на одно измерение 5-10 мг. Измерительная система калибровалась стандартным набором веществ KNO_3, In, Bi, Sn, Zn.

Результаты и их обсуждение. Данная работа посвящена изучению физико-химических свойств эффективных герметиков на основе серо-, азот и фосфорсодержащих олигомеров для полиэтилена.

Поэтому модификация известных полимеров, разработка наполненных функциональными добавками полимерных композиционных материалов, либо смесевых композиций, является сегодня одним из приоритетных направлений в создании полимеров и композитов с прогнозируемыми свойствами.

Были изучены физико-химические свойства: плотность, температура плавления, растворимость, ИК-спектроскопия и ДСК в серо-, азот- и фосфорсодержащих олигомерах. Физико-химические характеристики синтезированного высоконаполнительного олигомера марки NDP-1 (Пятисернистым фосфором с серосодержащими органическими соединениями) представлены в табл.1.

Таблица 1.

Физико-химические показатели высоконаполнительного олигомера

Показатели	Высоконаполнительный олигомер
	NDP-1
Плотность, г/см^3 ГОСТ 15139-69	1,40
$T_{пл}$, ^{o}C	130
$\eta_{хв}$	0,070
Растворимость	Диметилформамид
Внешний вид и цвет	Вязкое вещество коричневого цвета

На ИК-спектре **NDP-1** в областях 2906-2858 см$^{-1}$ имеются полосы поглощения, подтверждающие наличие -CH_2- групп, и полосы поглощения в области 3244 см$^{-1}$, соответствующие не реагировавшим свободным гидроксильным –ОН группам. Деформационные колебания всех активных групп проявляются в виде сильных узких полос между обычными полосами деформационных колебаний –CH_2–CO– в области 1400 – 1465 см$^{-1}$. Полосы поглощения в областях 1712 см$^{-1}$, подтверждают наличие –CO–S- групп. Наличие групп, содержащих фосфор P=O и P–O–C в области 979–1014 см$^{-1}$, подтверждает широкая интенсивная полоса и серосодержащие соединения в областях 400-900 см$^{-1}$, 1014-1060 см$^{-1}$ и 1100-900 см$^{-1}$.

Кроме того, на ИК-спектроскопии в областях 600-800 $см^{-1}$ и 1460 $см^{-1}$ появляются узкие малоинтенсивные полосы, содержащие связи C–S серосодержащего соединения. При рассмотрении ИК-спектров NDP-1 видны интенсивные -CH_2-P- группы с показателями димера 1402 $см^{-1}$ и органические фосфаты 1126 $см^{-1}$ -1215 $см^{-1}$. (Рис.1).

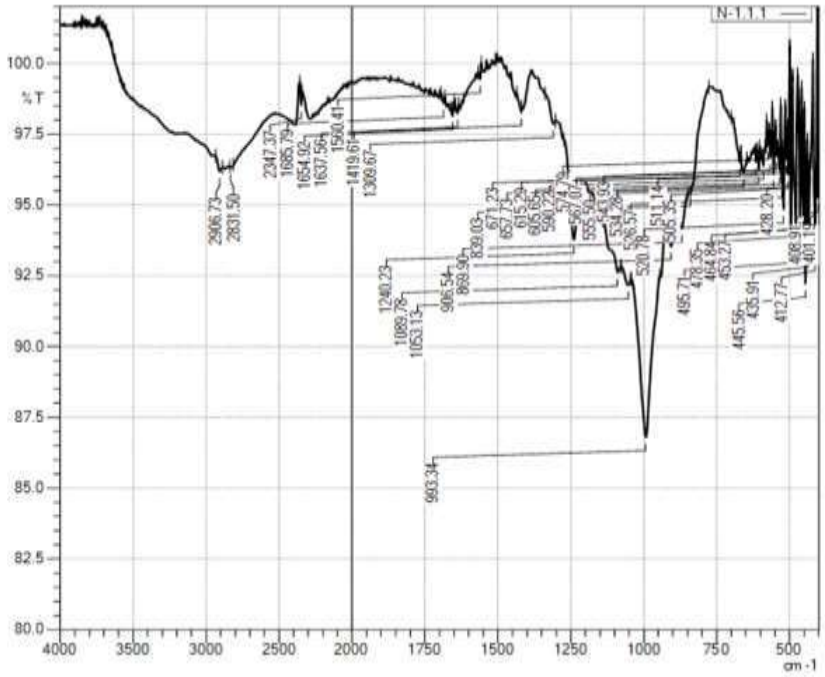

Рисунок.1. ИК-спектр серо-, азот- и фосфорсодержащего олигомера марки NDP-1.

Проводилось исследование влияния олигомеров на процесс ДСК серо-, азот- и фосфорсодержащего олигомера марки NDP-1. (Рис.2.)

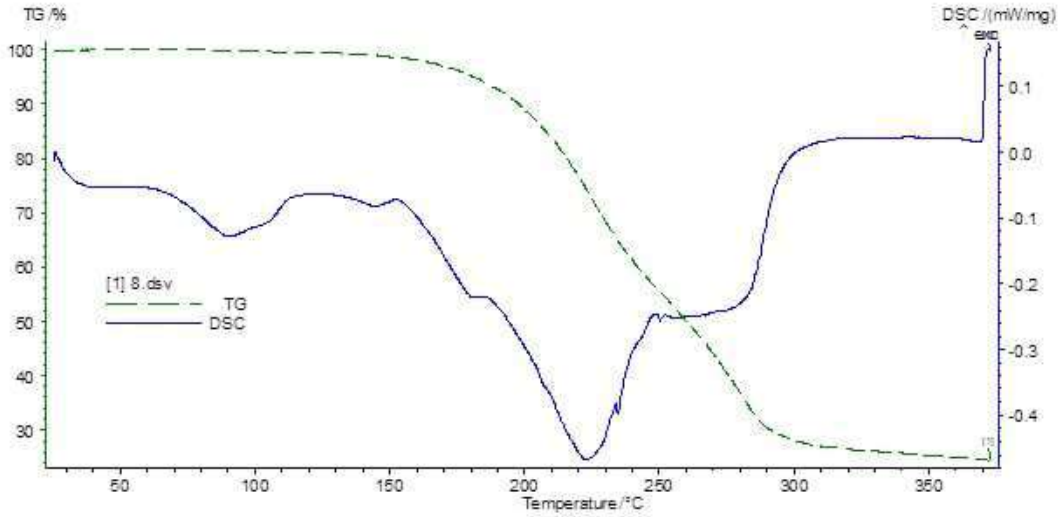

Рисунок.2. ДСК серо-, азот- и фосфорсодержащего олигомера марки NDP-1.

Масса образца не меняется до 193,4°C. На кривой ДСК в этом температурном диапазоне 20 -193°C наблюдаются один эндотермический пик (90,6°C), что соответствует плавлению образца, Выше температуры 194°C образец начинает разлагаться в два этапа – до 250°C со скоростью 4%/мин, потерей массы 45%, и выше 250°C со скоростью 3.5%/мин, потерей массы 28%. Оба этапа эндотермические (Общая энергия -398 J/g).

Заключение

Таким образом, характеристические свойства серо-, фосфор- и азотсодержащего олигомера были определены методом ИК-спектроскопии и ДСК, в результате лабораторных испытаний было доказано, что олигомер может быть использован в качестве герметика в строительстве.

Список литературы:

1. Кербер М. Л., Виноградов В. М., Головкин Г. С. и др. Полимерные композиционные материалы: структура, свойства, технология: учеб. пособие// СПб.: Профессия, 2008. 560 с.
2. Егорова О. В., Артеменко С. Е., Кадыкова Ю. А. Полиэтиленовые композиции, наполненные дисперсным базальтом//Пластические массы,2012. №9. С. 38 –39.
3. Шостак Т. С., Будаш Ю. А., Пахаренко В. В., Сташкевич И. А., Пахаренко В. А. Композиции на основе ПЭ, наполненные алюмосиликатом//Пластические массы, 2011.№4 .С. 39-43.
4. Ней Зо Лин., Аверьянова М.Н., Осипчик В.С., Кравченко Т.П. Структурно-механические свойства высоконаполненных полиолефиновых композиций// Успехи в химии и химической технологии, 2014. Т. XXVIII. №3(152). С.55-57
5. Тожиев П.Ж., Нормуродов Б.А., Тураев Х.Х., Нуркулов Ф.Н. *, Джалилов А.Т.* Изучение физико- механических свойств высоконаполненных полиэтиленовых композиций // UNIVERSUM : Химическая технология : электронный научный журнал 2018 № 2 (47).
6. Б.А. Нормуродов, П.Ж.Тожиев, Х.Х.Тураев, Ф.Н. Нуркулов, А.Т.Джалилов Изучение физико-химических свойств серо-,азот-и фосфорсодержащих олигомеров // Ташкент : Композиционные материалы-2017.-№ 4.-С.8-10
6.Б.А. Нормуродов, П.Ж.Тожиев, Х.Х.Тураев, А.Т.Джалилов, Ф.Н. Нуркулов Изучение физико-механических свойств базальтосодержащих полиэтиленовых композиций //Ташкент : Композиционные материалы-2017.-№ 4.-С.10-12
7. Б.А. Нормуродов, П.Ж.Тожиев, Х.Х.Тураев, А.Т.Джалилов Синтез и ик-спектроскопическое исследование серосодержащего олигомера // UNIVERSUM : Химия и биология : электронный научный журнал 2018 № 2 (44).

РАЗВИТИЯ ГОТОВНОСТИ КУРСАНТОВ ВОЕННЫХ ВУЗОВ К УПРАВЛЕНЧЕСКОЙ ДЕЯТЕЛЬНОСТИ

Жураев Шерали Махмудович
заместитель декана
Чирчикского государственного педагогического университета,
Узбекистан
https://doi.org/10.5281/zenodo.7100137

Аннотация. В статье анализируется проблема развития готовности к управленческой деятельности курсантов военных институтов. Современное развитие войск зависит от уровня эффективности управленческой деятельности его руководства. Одним из направлений повышения профессионализма будущих офицеров-управленцев является включение в образовательный процесс элементов предстоящей профессиональной деятельности, в частности управленческой. В целях решения данной задачи в высшем военном образовании мы планируем развивать готовность курсантов к управленческой деятельности посредством наполнения учебных дисциплин курсом лекций и практических занятий по основам управленческой деятельности в воинских частях и подразделениях.

Ключевые слова: актуальность, управленческая деятельность, управленческие функции, готовность, военно-профессиональная деятельность, профессиональная подготовка.

Возникает необходимость усовершенствования системы профессиональной подготовки офицерских кадров в военных учебных заведениях, соответствующей современному облику и задачам войск, гарантирующую эффективное развитие профессиональных качеств офицеров, готовых квалифицированно выполнять любые служебно-боевые задачи по предназначению на протяжении всей военной службы с учетом потребности государства.

Среди основных профессиональных качеств выступает готовность курсантов военных вузов войск к управленческой деятельности, формированию которой уделяется особое внимание в образовательном процессе.

Готовность является весомым компонентом эффективной профессиональной деятельности офицеров - выпускников военных вузов. Возможности категории готовности как методологического средства, его универсальная применимость ко многим процессам и явлениям объективной действительности объясняются, прежде всего, общими закономерностями развития этих процессов [2].

С.И. Ожегов в своем толковом словаре русского языка понятие «готовность» определяет как состояние, при котором все сделано, все готово для чего-нибудь [4]. Данное понятие включает в себя способность человека реализовать свои потенциальные возможности в любой момент времени.

В военно-профессиональной деятельности «готовность» связана со способностью офицеров немедленно выполнить заданные функции, от реализации которых во многом зависит эффективность выполнения боевой задачи как индивидуальной, так и коллективной (отделение, расчет, подразделение, воинская часть) [1].

Следовательно, возможно предположить, что результат, достигнутый в процессе целенаправленной подготовки курсантов военных институтов к осуществлению управленческих функций в воинских коллективах выразится аналогично как состояние готовности, а более конкретно - готовности к управленческой деятельности.

Управленческая деятельность офицера руководителя характеризуется: профессиональной коммуникабельностью; коллективностью и непосредственным взаимодействием военнослужащих в служебно-боевой деятельности; воспитанием и обучением подчиненных; экстремальными условиями выполнения должностных обязанностей; активным участием в управлении и организации труда подчиненных; единоначалием в управлении.

В настоящее время в войсках востребованы офицеры, обладающие высокими профессиональными качествами, умением точно, просто и кратко излагать свои мысли, ставить и доводить до подчиненных задачи. Мысль командира, его приказание и задача во всякой обстановке должны быть выражены настолько ясно и просто, чтобы никто не мог их воспринимать двусмысленно, толковать двояко. Это умение должно вырабатываться им целенаправленно и постоянно.

Проанализировав отзывы о прохождении военной службы выпускниками в воинских частях, опросив старших офицеров и основываясь на личный опыт, мы сделали вывод, что при вступлении в должность молодые офицеры проявляют слабые знания и навыки при осуществлении управленческих функций в военно-профессиональной деятельности [3].

В связи с чем, проблема эффективной организации образовательного процесса по формированию готовности курсантов к управленческой деятельности становится одной из первостепенных задач деятельности военных институтов, а её исследование - актуальным направлением педагогических изысканий.

Однако необходимо обозначить, что данное направление исследований не является новым. Военная управленческая деятельность офицеров и курсантов были рассмотрены в работах Ю.В. Фененко, Н.Е. Рогожкина, И.И. Мельникова, С.П. Кирикова, Р.А. Гусева, Е.А. Бондаренко и других.

Мы планируем на основе анализа результатов теоретического исследования и опытно-экспериментальной работы обосновать педагогическую модель и дидактические условия формирования готовности курсантов военных институтов к управленческой деятельности, а также определить основные пути повышения ее эффективности в современных условиях.

Проведя анализ научно-практических исследований которые посвящены проблеме профессиональной компетентности, вопросам военно-профессиональной подготовки, а, так же, на основе анализа педагогических и методологических положений о моделировании, разработан модель формирования готовности курсантов военных вузов к управленческой деятельности. Структура данной модели представляет собой взаимосвязанную систему, наполненную интегративно взаимодействующими компонентами (целевой, содержательно-процессуальный, оценочный и результативный блок).

Модель формирования готовности курсантов военных вузов к управленческой деятельности у необходимо более подробно описать каждый из составных блоков.

Целевой блок. Целеполагание представляет собой начальный элемент формирования готовности курсантов вузов к управленческой деятельности. Целью является так называемый ответ военного вуза на государственный заказ по профессиональной подготовке будущего офицера. Так же в целевой блок входят задачи, определимые учебным учреждением, сформированные на основе компетенций, установленных во ГОС ВО и квалификационных требованиях к специалистам.

Под целью в педагогике понимается заранее осознанные и планируемые результаты предстоящей педагогической деятельности. Цель (целеполагание) являются начальными элементами всего процесса достижения намеченного результата в формировании готовности курсантов вузов к управленческой деятельности. В нашем случае цели можно разделить на две составляющие: первая носит общий характер и определяется общественно-историческими условиями, возможностями выпускников и характером их будущей профессии и т.д.; вторая, более конкретизируется в аспекте учебно-воспитательного процесса вуза и включает деятельностные навыки, организационно-функциональные, личностные качества и степень сформированности готовности курсантов к управленческой деятельности.

Цели педагогической модели планируются как конечный результат учебно-познавательного и учебно-воспитательного процесса формирования готовности курсантов вузов к управленческой деятельности. Сложившаяся педагогическая практика выставляет определенные требования и конкретизацию основных педагогических целей, в которых должно быть определено какой уровень готовности к управленческой деятельности необходимо формировать у курсантов в процессе обучения в вузе. Кроме того, необходимо определить уровни сформированности компонентов готовности к управленческой деятельности на различных этапах ее формирования.

После определения целей и постановки задач необходимо выстроить содержание и приступить к процессу формирования готовности курсантов к управленческой деятельности, которые находят свое отражение в следующем блоке.

Содержательно-процессуальный блок является основой формирования готовности к управленческой деятельности. Основой данного блока являются педагогические принципы процесса формирования готовности к управленческой деятельности.

Функционирование любой педагогической модели должно основываться на определенных принципах, сущность которых наиболее ясно отражена в работах В.И. Загвязинского. Педагогический принцип в них представляется как «знание о сущности учебно-воспитательного процесса и его закономерностях, которые выражены в нормах деятельности и рекомендациях для практической реализации». Т.е. педагогические принципы - это практические рекомендации для достижения определенных целей в обучении. Любая педагогическая система построена на принципах обучения. Принципы обучения представляют собой определенные положения, отражающие закономерности протекания процесса обучения [5]. В проектируемой нами модели мы реализовали принципы последовательности, систематичности и практической направленности обучения, наглядности, объективности и определенности модели.

Таким образом, проведенное нами исследование показывает основные ценностные ориентиры и направления дальнейшего совершенствования проблем, выявленных в рассматриваемом сегменте готовности курсантов к управленческой деятельности.

Развитие и совершенствование готовности курсантов военных вузов к управленческой деятельности повысит их навыки эффективного руководства и способность самостоятельно принимать целесообразные решения, а также обеспечит качественную подготовку курсантов - будущих офицеров к их дальнейшей самореализации в профессиональной деятельности.

Литература:

1. Ефремов А.К. Военно-социальное управление: проблемы теории и практики / А.К. Ефремов, М.И Ломакин, А.А. Чертополох. - М.: Военный университет. - 2001. - 246 с.
2. Ихтисанов И.И. Готовность курсантов военных институтов к управленческой деятельности / И.И. Ихтисанов, А.В. Петкин // Ученые записки университета имени П.Ф. Лесгафта. - 2016. - № 7 (137). - С. 27-30.
3. Муралев А.А. Педагогическая среда и модель формирования документоведческой компетентности у курсантов // Современные проблемы науки и образования - 2015. - № 6. - С. 383.
4. Ожегов С.И., Шведова Н.Ю. Толковый словарь русского языка: 80 000 слов и фразеологических выражений // РАН. Институт русского языка им. В.В. Виноградова. - 4-е изд. - М.: Азбуковник, 1999. - 944 с.
5. Сластенин В.А. и др. Педагогика: Учеб. Пособие для студ. Высш. Пед. Учеб. Заведений / В.А. Сластенин, И.Ф. Исаев, Е.Н. Шиянов; Под ред. В.А. Сластенина. - М.: Издательский центр «Академия», 2007. - 576 с.

THE ADVANTAGES OF USING MOBILE TECHNOLOGIES IN EDUCATION.

Akbarova Dilafruz Akhtamjon Kizi
Interpreter of Innovative Academy.
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Annotation: This article provides information about mobile technology, current modern technologies and their role in the field of education, the advantages of using mobile technologies in conducting lessons using them and evaluating students.
Key words: modern technology, mobile technology, communicative competence, computer mediated communication .

Using the new technology in education has become a center point of many researches and studies. Modern education has to combine with modern technology to come up with best results. The teacher and the student both can use the technology to enhance the teaching and learning strategies. On the other hand, many people are worried of the possible harmful effects of using technology in the classroom or at home. Will children lose their ability to relate to other people? Will they become dependent on technology to learn? Will they find inappropriate materials? The same was probably said with the invention of the printing press, radio, and television. All of these can be used inappropriately, but all of them have given humanity unlimited access to information which can be turned into knowledge. Appropriately used- interactively and with guidance- they have become tools for the development of higher order thinking skills.

To begin with, TV the invention that helps us to get useful information in easiest way." I think, the most important advantage of television is that it is a huge source of informations, knowledge and entertainment." (Dodano, 2003). Although TV is not a new invention, people try to find many new ways to use it as a communication tool. Some of the TV's benefits that it may help the learners in different ways. For example, the learner of English Language -or any other language- can find a collection of programs, movies, series, documentary and educated programs and channels that they can use to learn the language they want. Moreover, TV is an easy, cheap, and available tool to communicate with all over the world and know the latest news anytime anywhere. To focus more on language learning, TV can help in many ways. For example, the learner can watch the movie while reading the subtitles, or watch a simple language program to strengthen the listening skills. TV can also present many different shows, not only entertainment, but also News, documentary programs, educated programs, historical and scientific movies.

Secondly, the internet, which become the most popular technology these days. It can be consider as the "best" way to keep in touch with friends from all countries over the world. In other words, the internet makes our earth as a small village. It actually has so many benefits; we can mention here the use to search for information and data for academic purposes. Students can always use the internet to get more information for their researches. It also became a popular way to communicate, you can send emails, use chat, voice chat, or even video chat with your friends and family. If we take a closer look, internet is playing an

essential role in education nowadays. In his article, Muthukumar said that the Internet is a complex storage area containing a huge maze of information from a variety of sources. It has become a famous source of information for many people worldwide. The Internet wave has also hit the educational landscape in many big ways. The use of technologies such as the Internet as a teaching tool in schools is not the issue now since it is pervasively used. Relatively, the issue is how to effectively employ such technologies and harness fully the new opportunities created by them to promote positive student learning experiences.

Computer assisted learning is being widely used by teachers and studied by researchers. Teachers use computers inside classrooms and give the students assignments to integrate the technology with the homework. A number of studies have been done concerning how the use of computer for language learning affects the development of language learners' four skills (listening, speaking, reading and writing). Most report significant gains in reading and listening and most CALL programs are geared toward these accessible skills because of the current state of computer technology. However, most reading and listening software is based on drills. On the other hand, using current CALL technology, even with its current limitations, for the development of speaking abilities has gained much attention. There has been some success in using CALL, in particular computer-mediated communication, to help speaking skills closely linked to "communicative competence" (ability to engage in meaningful conversation in the target language) and provide controlled interactive speaking practice outside the classroom. Using chat has been shown to help students routines certain often-used expressions to promote the development of automatic structure that help develop speaking skills. This is true even if the chat is purely textual. The use of videoconferencing gives not only immediacy when communicating with a real person but also visual cues, such as facial expressions, making such communication more real.

However, when it comes to using the computer not as a medium of communication (with other people) but as something to interact with verbally in a direct manner, the current computer technology's limitations are at their clearest. Right now, there are two fairly successful applications of automatic speech recognition (ASR) (or speech processing technology) where the computer "understands" the spoken words of the learner. The first is pronunciation training. Learners read sentences on the screen and the computer gives feedback as to the accuracy of the utterance, usually in the form of visual sound waves. The second is software where the learner speaks commands for the computer to do. However, speakers in these programs are limited to predetermined texts so that the computer will "understand" them.

Finally," Cell phones are having a great influence in our live and are very convenient to keep with us. Cell phones are a faster and more effective way to transfer information. Indeed, it is a resource that gives its user's great advantages. " (Gupta, 2010). mobile phones are the fastest way to communicate with people, and it can save many things with its 'pocket size'. Mobiles are mainly used as a tool to make calls and send short messages. However, nowadays they have been developed so much to be a device with multi-purpose use. As example, we can connect to the internet through mobiles. We can also use some applications in the system like GPS, dictionary, entertainments, and others. Mobile phones with cameras are now very popular also that anyone can use the camera to take pictures and videos when they have special events. These were the benefits of using the cell phones in general. However, if we want to narrow down the usage to the learning part, we can find many examples on how we

can use our mobile phones in language learning. As example, many cell phones nowadays have special applications for learning and communication. We can use our cell phones as a dictionary if needed, while we can also use the cellphone to access to the internet anytime anywhere. A powerful tool to improve their education is already in kids' hands. Cell phone delivery of knowledge to learn could richly supplement traditional book/print methods obsolete very soon. The two key factors are:

1. The students already have the cell phones in developed countries and are getting them very fast even in the least developed parts of the world.
2. Multimedia technology is maturing quickly on the cell phone screens.

A very immediate and practical way to improve education for kids right now is to push getting learning material to the cell phone screens!

To sum up, technology has many faces and means, and we should choose the appropriate use of technology to get the most benefits of it. We have to lead the technology, and don't let the technology leads us. TV, Internet, and mobiles are some examples of technologies we can't ignore using them in our daily life, and to follow the speed track you need to follow the speed of the technology. Using technology in education has become a fact in our lives. Advantages and disadvantages are issues to be further investigated in future researches.

Used literature:

Berg, C. A., & Upchurch, R., (2007). A developmental-contextual model of couples coping with chronic illness across the adult lifespan. Psychological Bulletin. 133(6), 920-954.

Chadda, R. K., (2014). Caring for the family caregivers of persons with mental illness. Indian Journal of Psychiatry. 56(3), 221-227. doi: 10.4103/0019-5545.140616

Freeman, E. M., & Couchonnal, G., (2006). Narratives and culturally based approaches in practices with families. The Journal of Contemporary Social Services. 43(3), 198-208.

Grotcher, J. M., & Edwards, R., (1990). Coping strategies of cancer patients: Actual communication and imagined interactions. Health Communication. 2, 255-266.

Hamond, J. D., & Schrodt, P., (2012). Do parental styles moderate the association between family conformity orientation and young adults' mental well-being?. The Journal of Family Communication. 12, 151-166. doi: 10.1080/15267431.2011.561149

SPECIFIC ASPECTS AND PROBLEMS IN INDIA'S MULTI-VECTOR GEOPOLITICS

Rano Tuychiyeva Almamatovna
Doctor of Philosophy in Political Sciences,
Uzbekistan state university of world languages,
Department of Social Studies,
Tashkent, Uzbekistan,
Email: rano-tuichiyeva@mail.ru,
tel.: +998974046454
https://doi.org/10.5281/zenodo.7107943

Abstract
This article is devoted to the analysis of India's multi-vector foreign policy, its main aspects and the main problems facing the country in the context of changing global geopolitical processes. It mainly discusses directions and problematic situations in India's relations with the USA, Russia and China.
Keywords: global power centers, strategic cooperation, coalitions, Indo-Pacific region, BRICS, SCO

Introduction

According to Indian experts, "the world is moving in the direction of multipolarity, which may turn into a U.S.-China bipolar system for a long time." Delhi, for its part, is trying to guard against China's claims of global dominance. At the same time, India's current government has ambitious, long-term goals to strengthen its international reputation as a "serious global power" while creating new opportunities to accelerate its development and economic growth. According to experts, India can attain the status of a great power only if it succeeds in "creating multilateral organizations that independently protect its interests and express its values."

Main part

India is currently trying to balance its growing strategic partnership with the United States by strengthening and diversifying ties with Russia and establishing a comprehensive partnership with China.

The developments currently taking place in greater Asia and the Asia-Pacific region (what Americans and many others call the Indo-Pacific region) appear to be in India's interests. Almost all the countries interested in this huge area, which is gradually becoming one of the main regions of the world, are seeking to cooperate closely with Delhi in order to achieve both their tactical and long-term strategic goals. This means that the full implementation of Washington's Indo-Pacific project and Beijing's concept of "Community of Shared Destiny" can be realized with India's integral participation. Without India's participation, the Chinese project may not be completed and may continue only in continental status. The same is the case with the US Indo-Pacific strategy.

However, it should be noted that both of these initiatives impose a supporting role on Delhi. India is also seeking to enhance its role as a South Asian "system builder" while trying to maintain maximum freedom of maneuver and flexibility in international relations.

Thus, the geopolitical aspect of relations between India, China and the US is becoming increasingly complex and multifaceted. On the one hand, Beijing and Delhi recognize the objective need to restore the walls, China is interested in strengthening cooperation with

India, especially in the context of the current confrontation with Washington. On the other hand, the structural factors that hinder the qualitative improvement of Sino-Indian relations remain very relevant. These are manifested, first of all, in the struggle for spheres of influence in Asia and the persistence of a large difference in growing economic indicators. Therefore, Delhi is taking steps to prevent China's influence from spreading over a wide area from the Indian Ocean to the Pacific Ocean. Delhi would first gain some leverage against China by strengthening ties with the United States, Japan, and Australia as part of a hypothetical "Asian Entente." India is also counting on Shiite Iran to offset Beijing's growing influence in Sunni Pakistan, India's "main historical rival".

As for the US, it is playing a very important partner for India, primarily as a counterbalance to China. Washington, for its part, considers India a "vital and necessary partner" in protecting its interests in the entire Indo-Pacific region. At the same time, Washington's long-term political goals are multifaceted: a) to limit China's growing influence throughout Greater Asia, including Pakistan; b) preventing a military-political alliance between China, Pakistan and Iran; c) strengthen relations with India by working primarily through Pakistan and Afghanistan. Meanwhile, any escalation of tensions between Delhi and Islamabad could further strain relations between India and China. American political observers analyze that this situation does not correspond to the main interests of the two major countries, which are considered "doomed" to remain strategic rivals in the entire Indian Ocean region. Therefore, there is a high probability that the two giants of Asia will remain in the "middle" position for many years. As some experts put it, "they are torn between not being ready to give up and not being able to move forward."

The relatively slow pace of socio-economic development remains the main obstacle to strengthening India's position in Asia and other countries of the world. India is suffering from "standard growing problems" that usually accompany accelerated changes in the economy and society. Social inequality is increasing, corruption is widespread, the country lacks natural resources, and the environmental situation is deteriorating. These include repeated terrorist attacks, manifestations of separatism, and vestiges of traditionalism that constrain efforts to modernize Indian society. For this reason, intense discussions about the sustainability of the current models of socio-economic development in the country are increasing.

N.Modi's government, seeking to correct the growing imbalances in the country's development, is preparing and implementing large-scale reform programs in the economic, administrative and financial spheres. Officials are talking about increasing the national gross domestic product to 5 trillion dollars by 2024. At a time when the country's need for investment is increasing, the main goal is to attract both Chinese and US investors. Chinese money is not only giving a new impetus to India's economic development, but is also becoming a factor in mitigating existing contradictions.

Indian leaders had high hopes for the United States, but with a change of guard in the White House in early 2017, Washington began a policy of "bringing home" US investment and industrial capacity. Along with fundamental trends in the global capital markets, this has led to a significant decline in the interest of American investors to channel their money into projects in India. In addition, in June 2019, former President D. Trump declared an essentially trade war against India, stripping Delhi of trade privileges that would have prevented up to $5.6 billion worth of Indian goods from being delivered duty-free to the US market. .

On December 1, 2018, the leaders of Russia, India and China met for the first time since 2006 within the framework of the G20 summit held in Argentina. At the meeting, Russia called on its partners to "closer coordination of the approaches of the three countries, primarily in the field of security and establishing constructive interstate relations in Eurasia." They also emphasized the partnership nature of relations between Beijing, Moscow and Delhi, and the compatibility of their interests and goals "in the field of development".

Moscow has been helping its Indian partners on a wide range of issues, from high technology and defense to modern infrastructure and poverty reduction. Delhi is interested in cooperation with Russia within BRICS and SCO. Before Prime Minister N. Modi's visit to the 5th Eastern Economic Forum in Vladivostok in September, Russian Deputy Prime Minister Yuri Trutnev and Indian Trade and Industry Minister Piyush Goyal discussed measures to increase the volume of mutual trade to 30 billion dollars by 2025. Also, the North-South International Transport Corridor is one of the long-term joint strategic projects for India and Russia.

At the second meeting within the framework of the G20 summit held in Japan in June 2019, the leaders of Russia, China and India praised the highly effective work being done in a single format to create an "equal and indivisible security architecture in Eurasia". However, India's reluctance to join China's Belt and Road Initiative shows the contradictions in India's foreign policy. On the one hand, India has reason to consider itself the country that will "ultimately determine which way the geo-economic pendulum swings" in almost the entire Eastern Hemisphere. On the other hand, it remains unclear to what extent India will be able to balance its interests between Greater Eurasia and Indo-Pacific projects.

Conclusion

Since India's independence in 1947, a multi-vector foreign policy has been a hallmark of the country's geopolitics. It is to this day that Delhi tries to stick to this line. The increasing uncertainty in the existing international system is one of the objective trends of the last few decades, and India remains one of the many countries that participate in several rival coalitions at the same time, although the real nature of these coalitions goals often conflict with each other.

References:

1. Foreign Policy and Diplomacy with special reference to India. https://archive.mu.ac.in/myweb_test/M.A.%20(Part%20-%20I)%20pdf
2. David M. Malone, C. Raja Mohan and Srinath Raghavan. India and World. The Oxford Handbook of Indian Foreign Policy, July 2015, https://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780198743538.001.0001/oxfordhb9780198743538-e-1
3.AleyaMousami Sultana. India Foreign Polices and The Contemporary World.https://www.cbpbu.ac.in/userfiles/file/2020/study_mat/pol_sc/principles%20%20and%20objectindian%20foreign%20policypdf
4. Uzair Younus. India’s Foreign Policy Evolution, The Diplomat, March 26, 2019, https://thediplomat.com/2019/03/indias-foreign-policy-evolution/

5. Harsh V. Pant, How economic reforms influenced India's foreign policy conversations, Observer Research Foundations, July 24, 2021, https://www.orfonline.org/expert-speak/how-economic-reforms-influenced-indiaforeign-policy-conversations
6. Pavan Kumar. Seminar on India's Foreign Policy at 75: Issues and Challenges. H-Announce. 05-27-2022. https://networks.h-net.org/node/73374/announcements/9528645/seminar-indias-foreign-policy-75-issues-and-challenges Licensed under a Creative Commons Attribution-Noncommercial-No Derivative Works 3.0 United States License.

COMMON MISTAKES IN LEARNING ENGLISH

Tulaboyeva Gulorom Tulaboyevna
Tashkent State Transport University
Senior teacher of The Foreign Languages Department
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Abstract: In today's rapidly developing globalization, the demand for young personnel who master foreign languages is increasing day by day. This is the reason for the increase of interest in foreign languages among young people and the wide popularity of learning foreign languages. In this article, we will consider some mistakes, problematic situations and their analysis that are made by young people who have just started learning foreign languages.
Key words: one-sided goal; fear of speaking; learning styles; to become attached to the teacher; language environment.

Of course, every person aims to achieve a certain goal by doing something. In addition, new language learners who have started to learn English, French, German or any other Eastern languages aim to achieve a certain goal and result by learning these languages. Unfortunately, some language learners make mistakes at this step and face a number of difficulties later in the language learning process.

The fact is that nowadays, most of the young people who learn foreign languages try to achieve a one-sided result by learning this language, that is, by learning a new foreign language, they only want to achieve good results in entrance tests, the language they are learning. they aim to obtain a language certificate or simply to develop conversational skills in this language. This causes the formation of a superficial attitude to the language being studied. Instead, such a superficial attitude towards the language they are learning prevents them from fully understanding the language, its unique expressions and complexities, and as a result, they will not be able to achieve the success they expected from learning this language. This has a negative effect on their desire to learn foreign languages, and they come to the conclusion that "this is not my mother tongue, I don't need to know this language completely." In fact, this view of the language learning process is completely wrong. Learning foreign languages and being able to speak fluently in the studied language requires a serious approach to learning this language. Only a serious, not superficial, approach to language learning will open the way to a full understanding of this language, its complexities, and to communicate in this language without difficulties in the future.

Another problem faced by young learners who have just started to learn Khori languages is their fear of making mistakes while learning and using this language. Of course, avoiding making mistakes in the process of language learning builds the ability of language learners to be responsible for the language, but this process slows down language learning and the learner gradually loses the ability to speak the language. may lead to difficulties in full development. Usually, a language learner tries to avoid making mistakes in grammatical rules during the conversation in the language he is learning, which causes him to get distracted and confuse the content of the thought being spoken. This leads to the listener not being able to fully understand the idea. It should not be forgotten that there are mistakes and shortcomings

in any newly started work, it is natural. Pronunciation disorders and grammatical errors in the speech of new language learners can be solved by constantly working on yourself and increasing the practice of speaking the given language.

Another mistake made by new language learners is that they become too dependent on the teacher's support and avoid working on themselves. Of course, it is optimal to rely on the teacher's explanations and help in the process of language learning, but it is a solution to minor complications related to language learning that occur in the process of independent work, when students avoid working on themselves or work less on themselves. Failure to find them will lead to slow learners' language learning skills and poor results. It should not be forgotten that foreign language skills cannot be built based on the speech of one person, because usually the speech of teachers in that foreign language is very different from the speech of indigenous people who speak that foreign language. One of the best ways to avoid such problems is to watch movies and listen to podcasts and radio broadcasts in that language. One of the problems faced by new foreign language learners is the overabundance of foreign language programs and the inability of young people to choose the most suitable training programs and then transfer them to training programs. is the inability to get away. Sometimes, which method is more effective in learning foreign languages? face-to-face with a teacher or in groups? This question arises in front of young people who have just started to learn the language.

Observations show that the above two methods of learning foreign languages have their own advantages and disadvantages. For example, by learning foreign languages in groups, it is possible to quickly develop the ability to speak a foreign language, and to strengthen the information learned in the lesson through mutual questions and answers. However, during the study of foreign languages in groups, it is also possible to face problems such as the time allotted is not enough to work with all the students, the information given in the lesson is not equally understandable to everyone[1, 2]. In the process of learning foreign languages alone with the teacher, the learner should have the opportunity to get answers to all the questions that arise in relation to the language, the subject should be relatively understandable and not be distracted by unnecessary things during the lesson. will have amenities. But learning a language prevents the development of speaking skills in this language. Regarding this problem, Tony Robbins states that "Even the best methods and rules are only 20 percent of success, and the remaining 80 percent depends on human psychology" [2, p. 73]. It should not be forgotten that the key to success is hard work and effort. One of the problematic situations that arise in the process of language learning is inability to adapt to a new language environment, difficulty in understanding that language. Usually such a problem is the absence of speakers of this language or those who know this language around the language learner. This problem can cause the language learner to quickly forget the newly learned words and information. An optimal way to solve this problem is to create the environment of the language being studied by the learner. In this regard, it is very useful for a language learner to first of all try to remember the names of the things he uses the most in daily life and, if possible, to write down the names of these things in the language he is learning. This method helps the names of objects in a foreign language to be easily learned and kept in memory for a long time. In addition, listening to music in a foreign language and observing the pronunciation of words while listening to music with the text of this music helps to develop listening and pronunciation skills more successfully.

In conclusion, it can be said that in order not to make mistakes and face problems in the process of learning foreign languages, it is necessary to be more responsible for language learning, to work on oneself regularly. Consistency is necessary to achieve success not only in language learning, but in any task. Only then can you achieve complete mastery of the language being studied.

References:

1. Bopp, M. (2007). “Storytelling as a Motivational Tool in Digital Learning Games”. Münster: Waxmann. 261-279 p.
2. Brezinka, W. (1995). Der Gegenstand der Erziehungswissenschaft und die Aufgabe der erziehungswissenschaftlichen Forschung. In: Brezinka, W.: Erziehungsziele, Erziehungsmittel, Erziehungserfolg.
3. Bohn Rainer. (2000). “Probleme der Wortschatzarbeit”. Ferstudienprojekt. Muenchen.
4. INNOVATIVE METHODS OF TEACHING ENGLISH; Kharatova Sh.Kh; "Экономика и социум" 3 (82) 2021 www.iupr.ru
5. Bopp, M. (2007). “Storytelling as a Motivational Tool in Digital Learning Games”. Münster: Waxmann. 261-279 p.
6. Dieling Helga; Hirschfeld Ursula. (2000) “Phonetik lehren und lernen”. Ferstudienprojekt. Munchen.
7. Bohn Rainer. (2000). “Probleme der Wortschatzarbeit”. Ferstudienprojekt. Muenchen.
8. “THE IMPORTANCE OF FOREIGN LANGUAGE TEACHING IN HIGHER EDUCATION INSTITUTIONS” KHARATOVA SHAKHLO KHAKIMOVA; “SCIENCE AND EDUCATION” IN VOLUME #2 ISSUE #5, MAY 2021;
9. “PROBLEMS OF FOREIGN LANGUAGE TEACHING AND ITS SOLUTION” Kharatova Shakhlo Khakimovna; «Актуальные научные исследования в современном мире» ISCIENCE.IN.UA Выпуск 4(72) ч. Стр 60; ISSN 2524-0986.
10. Харатова Ш.Х. ЭФФЕКТИВНЫЕ СПОСОБЫ ИЗУЧЕНИЯ АНГЛИЙСКОГО ЯЗЫКА; Academy 2 (53) «Олимп» 2020;
11. Kharatova Shakhlo “USE OF INNOVATIVE TECHNOLOGIES IN THE EDUCATIONAL PROCESS” Science and Education ISSUE 3, March 2022;

IMPROVING ENGLISH LANGUAGE TEACHING IN HIGHER EDUCATION INSTITUTIONS

Ishankulova Diyora Allovidinovna
Assistant Tashkent State Transport Universitety
Email: diera.ishankulova@yandex.ru
https://doi.org/10.5281/zenodo.7112406

Abstract: This article contains scientific opinions on further improvement of English language teaching in higher education institutions.
Key words: English language, innovation, methodology, teacher, skill, ability, educational program.

Currently, there are many areas that determine the bright future of our country and ensure its strength. The higher education system is undoubtedly of special importance among them. Because the future of our nation and people is closely related to the fate of young specialists who are receiving higher education today. From the first years of our country's independence, attention has been paid to the issue of reforming the education system at the level of state policy, to ensure that our young people receive education in conditions corresponding to world standards, to mature into physically and spiritually mature people, to bring out their abilities and talents, This noble goal is embodied in the heart of the incomparable efforts made to form feelings of loyalty and devotion to the country.

In our country, every year, several areas of science are selected and developed with special attention. In 2022, physics and foreign languages are defined as such priority areas in Uzbekistan. Uzbekistan's policy of openness, its active entry into the world market, and the expansion of international cooperation in all fields increase the need to know foreign languages. Today, teaching is conducted in foreign languages in 25 higher educational institutions of our country. In 2016, they were only 7. The number of graduates who received an international language certificate has increased 10 times in the last 3 years. In 2021, 350 students were awarded scholarships to study at prestigious foreign universities through the "El-Yurt Umid" fund. This is 5 times more than in previous years. Tashkent State University of World Languages and Oriental Studies, together with the Samarkand Institute of Foreign Languages, has a branch of foreign languages as a base university in each region.

The head of our state emphasized the need to create suitable conditions for teachers and encourage them, taking into account their qualifications. Teachers with international certificates of primary and secondary education will receive a 40% salary increase, and those who have achieved high results will receive a 50% salary increase. In addition, high-scoring teachers will be reimbursed for the cost of taking tests for international certification. Starting next year, new foreign language teachers will have to have national and international certificates. In the next three years, all 53,000 foreign language teachers in schools must obtain an international certificate. Using the created opportunities, the task was set to fill vacancies in schools with qualified specialists. 207 schools in districts and cities were selected for in-depth teaching of foreign languages. In these schools, foreign books, advanced educational programs and teaching methods, and teaching of subjects in a foreign language

will be free of charge. Regional governments were instructed to allocate 1 billion soums from the local budget to each district and city to improve the quality of teaching foreign languages in schools. It was emphasized the importance of attracting foreign teachers who speak this language to specialized schools and higher educational institutions, holding competitions in each district, and organizing foreign language teachers' internship abroad.

The quality of teaching also depends on textbooks and methodical manuals conforming to international standards. Therefore, the task of approving the English textbooks of the Cambridge University Publishing House in 200 schools and implementing them in all schools next year was set. He said that such works will be organized in Russian, German, Korean, Chinese and French languages. 1 million soums will be allocated from the budget to each foreign language teacher so that they can keep up with changes in the field, buy new literature and manuals. The Ministry of Preschool Education, in cooperation with UNICEF, has been assigned the task of developing and implementing a methodological guide on teaching foreign languages to children under 7 years of age. I believe that we, teachers, in order to ensure the performance of these tasks, should first of all fundamentally reform our educational and methodological materials and bring them to the level of perfect learning of foreign languages, including English, based on the requirements of today's times. For this, I believe that it is appropriate to abandon the old traditional methods of teaching, and to use new methods of teaching, such as memorizing by hearing, strengthening by speaking, and correcting pronunciation by speaking.

CONCLUSIONS AND SUGGESTIONS

It is known from the evidence presented above that today attention is paid to the issue of providing educational institutions with qualified foreign language teachers and training personnel with in-depth knowledge at the level of state policy. As we mentioned above, special requirements are placed on foreign language teachers in higher education institutions, and they are required to have an appropriate certificate in order to work as a foreign language teacher. In addition, it is required to have a certificate of knowledge of one of the foreign languages in order to enter the master's degree, which is considered the second stage of higher education, and the doctorate, which is considered post-higher education. In addition, it is mandatory for professors of higher education institutions to know foreign languages. In addition, it has been established that after the specified period, specialized subjects in higher education institutions will also be conducted in foreign languages. It can be seen that special importance is attached to teaching foreign languages, including English, in higher education institutions. We believe that it is appropriate to implement the following in order to ensure the implementation of these specified tasks, to bring the teaching of foreign languages, including English, up to date in higher education institutions, and to improve students' learning of foreign languages.

It would be appropriate to carry out an inventory of the material and technical bases of higher education institutions for teaching foreign languages, including English, with the help of experienced specialists..

References:

1. ARBERRY, A. J. Omar Khayam, a New Version Basod upon Recent Discoveries.- London: Murray, 1959.- 58 p.

2.
BURGESS, A. Graves and Omap.-Encountev, 1968, vol. Jan., № 1, p. 77.
3. Zhukovsky, V. Omar Khayyam and the "wandering" foursome / V. Zhukovsky // Collection "Al-Muzaffarie" .- SPb, 1897. p. 325-363.
4. Johannan, J .; Secrets of Asian Literature /J.Johannan//Economist.-1967.-2-December.
5. Miqdadi, B. Suspicious translation of a forged copy / B. Quantitative // Book Guide.-1970.-№ 5-7.-P.430-459.
6. Miqdadi, B. Speech in the Translation of Poetry / B. Quantitative // University Journal.-№ 10.-S. 76-81.
7. Nazirova, H. Jilvahoi sheiri kuhan / H. Nazirova // Voice of the East. 1976.- № 5.-P.140-144.
8. KHAVVAM. O. The Rubaiyat / Anev transi. With critical commentarias and Omar Ali-Shah.-London: Cassel, 1967.-38p.
9. Hidayat, S. Songs of Khayyam / S. Guidance // Voice of the East. 1991. - № 1. - C. 129 - 142.
10. Hashim, R., Belan, W. Noise around a manuscript / R. Hashim, W .; Belan // Voice of the East. - 1971. - № 12. - C. 119 - 124.
11. Ishankulova D.A Исследования Рубаийата Омара Хайяма в Англии\International Journal of Philosophical Studies and Social Sciences -C.135-140
12.Ишанкулова Д.А Поиски продленного Хайяма-\Узбекистан -С-474
13.Ишанкулова Д.А Предпосылки к перспективе перевода и исследования рубаийата Омара Хайяма в Англии\ Academy\ Россия
14. Д А Ишанкулова Переводы Фицджеральда открытие Хайяма в Англии\ Экономика и социум, 2020
15.Ishankulova D.A Opening Khayyam in England \Academic Globe:Inderscience Reserch 3(04),17-23
16. Ишанкулова Д.А. \Вопросы методики преподавания английского языка в вузе\ Academy 69 (6), 27-30
17 Ишанкулова Д.А\ Новые методы преподавания английского языка\ Вестник науки и образавание 1 (15), 27-30
18. Ishankulova D.A\ The benefits of useing drama activities on languages\Situation\Motivation\ International Scientific Journal Theoretical and Applied Science 1 (11), 462
20.Ишанкулова Д.А \The paculiarities of forogirn language training students in conditions of competence approach\ Таълим,фан ва инновация, 35
21. Д Ишанкулова\ Teaching ESP using the CEFR : Principles of good practice\Актуальные научные исследования в современном мире 6 (12), 53

CONCEPT, ESSENCE, CHARACTERISTICS OF METHODS AND METHODS USED IN TEACHING FOREIGN LANGUAGES

Mansurova Shokhista
Assistant of department of foreign languages
Tashkent state transport university
ORCID identifier: 0000-0003-2178-8098
Email: usevara14@gmail.com
https://doi.org/10.5281/zenodo.7112412

Abstract: This article analyzes the concept, essence, features and methods of teaching methods used in teaching foreign languages.
Key words: foreign language, methodology, reading, listening, speaking, grammar, theory, language materials.

In the beginning of the 60s of the last century, attempts were made to define the methodology as a set of teaching methods in the methodology of teaching foreign languages. Methods of familiarization with language materials, teaching methods and similar things appeared. In this regard, there was a duality in the understanding of this term. Before considering methodological directions, some clarifications regarding the term "method" should be made. In local methodical literature, this term has two meanings: method as a methodological direction and method as a method - a set of teaching methods. The duality of the meaning of this term is related to the following circumstances. Initially, the first meaning of this term came from methodological literature: natural method, direct method, etc. This term meant a set of special teaching principles, that is, a special educational system characterized by basic instructions. It should be noted that in this sense, the method is distinguished by a complex of principles, because individual principles may coincide in different methodological systems.

The review of stylistic directions begins with the oldest method - grammatical translation, which has existed for two centuries and has not been used since the beginning of the twentieth century. Representatives of this tendency believed that learning a foreign language in secondary educational institutions has a general educational value related not only to the gymnastics of the mind and the development of logical thinking achieved as a result of the systematic study of grammar. The formation of thinking based on the study of grammar originated from the Latin language, and studying its grammar was considered the best means of developing logical thinking.

The main principles of teaching this method were as follows.

- The course is based on a grammatical system, which determined the choice of material, including the choice of vocabulary, and the construction of the course as a whole. This position was justified by the fact that learning grammar allows for the development of thinking, a general educational problem.
- The main material for teaching was, according to the teachers of that time, texts that reflected the original language for written speech.
- The dictionary was considered only as an illustrative material for learning grammar. Since it is believed that the words of different languages differ from each other only in sound and graphics, and not in meaning, compatibility and difference, it is recommended to memorize them out of context as a separate unit.

- Analysis and synthesis were recognized as leading processes of logical thinking. In this regard, much attention was paid to analyzing the text from the point of view of grammar, memorizing the rules, and building foreign language sentences on this basis. Sometimes this method is called analytical-synthetic.
- The main means of semanticizing linguistic material was translation (from a foreign language to a native language and from a native language to a foreign language).

Let's take a look at the learning process using this method. As mentioned above, the training is based on selected texts to reflect the grammatical material being studied. Analysis and translation of the text took an important place in the educational process. Some Methodists, such as G. Ollendorf, believed that the content of translations should be funny and disgusting for students, so they should pay attention to the grammatical side of the sentences. It is not difficult to understand that with such a "method" it is impossible to know even elementary languages.

At the end of the 18th century, another type of translation method appeared - the text translation method. Representatives of this trend also believed that the main goal of education is general education. However, they understood it as the general intellectual development of students based on the study of original works of art. The main rules of this method are reduced to the following principles:

1. Education is based on the original foreign text, which includes all the linguistic phenomena necessary for understanding any text.
2. Assimilation of linguistic material is carried out as a result of text analysis, mechanical memorization and translation, as a rule, verbatim.
3. The main learning process is related to analysis - the main method of logical thinking.

It follows from these rules that the text is the center of all work in language - a position that has been held in methodology for a long time.

It should be noted that, despite certain shortcomings, a number of techniques developed by the text-translation method entered the arsenal of subsequent methodological trends. Thus, working on the text served as a basis for the formation of such types as reading (or explanatory) reading. The technique includes the practice of reverse translation.

Both methods considered above have common aspects and are related to translation, because translation is the main means of semanticization and assimilation of linguistic material. Both methods are characterized by separating form from content. So, in the grammar-translation method, all attention is focused on grammar, and the content and vocabulary of the texts are not taken into account. In the method of textual translation, all attention is focused on the content and features of the texts, grammar is studied out of order, and rules are given from time to time.

The main principles of teaching according to the method of M. Berlitz were as follows:

- The purpose of the training is to develop oral speech.
- Perception of linguistic material should be done directly. The words of a foreign language must be associated with an object or action, and grammar must be learned intuitively, as a similar process is characteristic of a child's acquisition of his native speech.
- Learning the material should be based on imitation and similarities. Therefore, the comparison with native language and rules is redundant.
- Unraveling the meaning of words, grammar should be done with the help of Visualization (objects, actions, pictures).

- The main form of work is dialogue.
- All materials of the language are first received by ear (acquiring pronunciation), then it is developed orally (with different authors in different ways in terms of duration), and after a long time, from individual words is read from.

All exercises are built according to these principles. Thus, in M. Berlitz's textbook, the first pages of the book are mainly filled with pictures drawn with plates depicting individual objects for the school audience. This oral opening, involving the introduction of new material in the following paragraphs, was justified by the author on the grounds that the student should first hear the original pronunciation and the pattern to be imitated. Vocabulary semanticization was carried out with the help of visualization, facial expressions played an important role. In cases where the indicated tools could not help, the teacher switched to semanticization with the help of the context. Question-and-answer exercises were widely used as exercises. Learning to read is built in an interesting way. At first, previously learned words were read without dividing them into parts, and only after several lessons was explained the reading of individual letters and phrases. In other words, learning how to read words, questions, and answers happened as if from the "voice" of the teacher. Thus, the main attention was paid to dialogic speech. The vitality of M. Berlitz's schools lies in the fact that the ability to conduct dialogue was achieved on the basis of a small material, that is, demanded in connection with the struggle for commodity markets.

Unlike M. Berlitz, F. Guen was a teacher and, by his own admission, used different methods. In general, he concluded that it was ineffective. Once, while observing the children, they found that the children, while learning their native language, accompanied their actions with toys in chronological order with comments: "The bear is lying down. The bear falls asleep. The bear sleeps well "and similar things. Therefore, the main place in F. Gouin's system is occupied by the position that it is natural to teach language in a chronological sequence based on human actions, emotions. This led to the second position of his system - around a sentence that combines both grammar and vocabulary. F. Guen first began to distinguish the concepts of three groups of phrases: objective, subjective and figurative. According to these groups, lines are built based on the breakdown of action. Let's explain this with a concrete example of "writing a letter": I take the paper. I take out the pen. I remove the cap from the inkwell. I dip my pen into the inkwell and so on, he proposed a sequence of up to 75 sequences in a sentence-based textbook. The workflow in such a sequence proceeded as follows. a does comments to them. Then the students repeat each sentence after the teacher. After that, the teacher says separate phrases, students perform actions.

All these methods of semanticization have survived many methodological directions and entered our methodology. Of course, the modern methodology uses different types of grouping proposed by M. Voltaire as one of the possible methods of systematizing the dictionary, first of all, on the thematic basis. It has found its place in modern styles and interpretation of actions, especially in the initial stage, as well as in the performance of scenes. All this allows us to confirm that the heritage of the natural method has not been lost.

References:

1. Bopp, M. (2007). “Storytelling as a Motivational Tool in Digital Learning Games”. Münster: Waxmann. 261-279 p.

2. Brezinka,
3. Bohn Rainer. (2000). “Probleme der Wortschatzarbeit”. Ferstudienprojekt. Muenchen.
4. INNOVATIVE METHODS OF TEACHING ENGLISH; Kharatova Sh.Kh; "Экономика и социум" 3 (82) 2021 www.iupr.ru
5. Bopp, M. (2007). “Storytelling as a Motivational Tool in Digital Learning Games”. Münster: Waxmann. 261-279 p.
6. Dieling Helga; Hirschfeld Ursula. (2000) “Phonetik lehren und lernen”. Ferstudienprojekt. Munchen.
7. Bohn Rainer. (2000). “Probleme der Wortschatzarbeit”. Ferstudienprojekt. Muenchen.
8. “THE IMPORTANCE OF FOREIGN LANGUAGE TEACHING IN HIGHER EDUCATION INSTITUTIONS” KHARATOVA SHAKHLO KHAKIMOVA; “SCIENCE AND EDUCATION” IN VOLUME #2 ISSUE #5, MAY 2021;
9. “PROBLEMS OF FOREIGN LANGUAGE TEACHING AND ITS SOLUTION” Kharatova Shakhlo Khakimovna; «Актуальные научные исследования в современном мире» ISCIENCE.IN.UA Выпуск 4(72) ч. Стр 60; ISSN 2524-0986.
10. Харатова Ш.Х. ЭФФЕКТИВНЫЕ СПОСОБЫ ИЗУЧЕНИЯ АНГЛИЙСКОГО ЯЗЫКА; Academy 2 (53) «Олимп» 2020;
11. Kharatova Shakhlo “USE OF INNOVATIVE TECHNOLOGIES IN THE EDUCATIONAL PROCESS” Science and Education ISSUE 3, March 2022;

GOALS AND TASKS OF ENGLISH LANGUAGE TEACHING

Shakhlo Khakimovna Kharatova
Associate Professor of Tashkent State Transport University
ORCID identifier: 0000-0002-6535-0197
Email: SHAHLO-70@mail.ru
https://doi.org/10.5281/zenodo.7112416

Abstract: This article contains scientific and theoretical opinions about the goals and tasks of teaching English.
Key words: Educational system, English language, methodology, goals and tasks, form of education, pedagogue.

Learning teaching English in non-philological higher educational institutions has its own characteristics and requires the use of special teaching methods. The teaching methodology is a holistic system, consisting of such components as educational conditions, goals, content, methods, and tools.

It is known that any goal arises out of necessity. A goal is a general direction in education, a plan for solving a specific task(s). Practical, general educational, educational and developmental goals are recognized in foreign language teaching.

Vocational (professional) goals are also set in educational institutions specializing in foreign languages.

The purpose of teaching English is to form the skills of using the studied language as a means of exchange of ideas, to increase students' cognitive activity, and to develop their speech and professional skills. All the goals are interrelated and require each other in the educational process.

The meaning of the practical goal can be understood from its name: it is intended to use the studied language in the student's activity (practice). Despite the fact that the term learning a language for practical purposes has been given different definitions and descriptions in the methodology of foreign language teaching, among teachers there are also misconceptions about learning a language for practical purposes, such as understanding oral speech or speaking activities. Such an understanding is considered one of the wrong interpretations, and it is appropriate to emphasize that giving/receiving information is carried out not only in oral speech (speaking, listening comprehension), but also through written speech (reading, writing).

Methodist scholars do not have the same opinion on the existing interpretations of the practical purpose of the methodology of foreign language teaching, that is, they interpret the practical purpose in different ways in different conditions.

A group of foreign language teaching methodologists accepted the term practical goal in the sense of mastering the language at an insufficient professional level, depending on the requirement of the specialty or the interest of the language learner, which allows to learn it more thoroughly later. At the same time, knowledge of a foreign language at a non-professional level, learning the main types of speech activity, according to another point of view, knowing all types of speech activity or conducting oral and written communication in a foreign language are discussed within the framework of practical goals.

Another group of Methodist-scientists recognized the practical goal of expressing thoughts in a foreign language orally and in writing and understanding the thoughts of others. There are also guardians of this concept as teaching the culture of the people whose language is being studied.

According to the modern concept, the practical goal is to provide students with communicative (speech communication), linguistic (language knowledge), country studies (the country where the language is being studied) and linguocultural (the culture of the peoples whose language is being studied) information. requires the formation of speech skills.

In the English language program, as a practical goal, it is necessary for students to know the following:

1. Reading and understanding of sectoral, socio-political and scientific-popular literature on the chosen specialty.

2. Ability to communicate in English orally and in writing within the framework of the program requirement.

The final practical goal of teaching English to students is the formation of speech skills and competencies such as reading, oral speech (speaking and listening comprehension) and writing. In short, learning English for practical purposes means getting the necessary information and conveying it to others using this language. The acquired information serves to increase the level of knowledge of students, educate and develop them.

The practical purpose is to serve as the basis and conditions for education, upbringing and development of the student's personality through communication in English. At the end of the education, the student will be able to understand (listening or reading) the learned English speech and express his/her opinion in this language (speak and write).

According to the Law "On Education" and the "National Program of Personnel Training", the main task of secondary schools and non-philological higher educational institutions is to improve the intellectual, moral, aesthetic and physical development abilities of a person in all aspects. it was specially emphasized that it is necessary to create favorable conditions for education and upbringing as much as possible, as well as to form national pride and national moral qualities in students.

These tasks require the teaching of all subjects included in the curriculum of this educational institution to be subordinated to this goal. English, which is considered as a subject of general education, contributes its share to education and upbringing and comprehensive development of students, along with other subjects. Before expressing an opinion about the general educational goal of the English language, it is permissible to dwell on some thoughts and considerations about the didactic interpretation of this goal.

Learning as a type of activity is interpreted as follows in pedagogy:

- formation of certain knowledge, skills and qualifications in students;
- forming certain thoughts, worldviews and beliefs in them;
- to make students become educated, cultured, well-rounded people at a certain level;
- is to develop their skills related to a specific profession.

Valuable opinions have been expressed in many studies on the general educational purpose of the foreign language subject. There are two types of students who study English for general educational purposes -

(1) new knowledge and information about the language,

(2) absorb life and professional information obtained through language. The first type is aimed at acquiring language-related information, which includes rules and concepts for interpreting English language material (vocabulary, grammar and pronunciation). Units and new events used in the process of learning English are interesting for students and enrich their language experience.

The second type of information, life and professional information, is reflected in English texts. They are the surroundings of the student, our homeland Uzbekistan (Geographical position of Uzbekistan, Independence of Uzbekistan, History of Uzbekistan, Administrative subdivision of the Republic of Uzbekistan, etc.), the country(s) where the language is being studied (Great Britain, Political system of the USA, Parliament of Great Britain, Holidays of the USA and Great Britain, etc.) and we can observe that it is given in field texts in the college direction. Reading the above texts, firstly, enriches the general knowledge of the students with new information such as culture, art, history, literature, customs, traditions of these countries, and secondly, the specialized texts in English reading has a positive effect on enriching students' professional knowledge.

In English, the general educational goal is realized during the practical acquisition of the language. Practical knowledge is the main way to educate.

Education is a social phenomenon that appeared at the beginning of human society and serves the interests of mankind. At the same time, education is also a means of ensuring communication between generations. Each period had its own educational methods and tools.

In ancient times, education was viewed as one of the forms of mastering the experiences of the older generation. Education was carried out mainly in the processes of work (hunting, cattle breeding, farming, etc.) and by conducting ceremonies related to various traditions. At that time, it was planned to educate physically fit and strong people. The change and development of the social system and production relations also influenced the improvement of the educational process.

Education is a pedagogical process organized for the purposeful improvement of the personality, which provides an opportunity to regularly and systematically influence the student's personality.

The following principles of education have been recognized in research:

- that education is aimed at a specific goal;
- humanitarian and democratic principle of education;
- connection of education with life and work;
- priority of national-cultural and universal values in education;
- taking into account the age characteristics of students in education;
- consistency and systematicity of education;
- unity and continuity of educational effects, etc.

The main goal of education is to form a fully developed, intellectually and morally perfect person. Students of the non-philological higher educational institution in the process of mastering the basis of general and specialized subjects acquire skills such as specialized skills, in-depth general knowledge, broad outlook, professional training, computer literacy, and continuous improvement of their knowledge. Among these, it is also necessary to cultivate in students the feelings of discipline, responsibility for their work, and dedication to the development of the country.

The educational goal is expressed by the educational importance of the subject of English. As students acquire knowledge, skills and abilities in English, they develop love for work, respect for workers, pride of the Motherland, friendship, camaraderie, and at the same time, moral, aesthetic , provides international education.

A perfect person is a person who is patriotic, people-loving, spiritually rich, morally pure, tolerant, who has kindness, goodness, hard work, honesty, and Eastern thought in his heart, who knows and respects his history and national values. He is also a modern man who is aware of the most advanced scientific achievements in world civilization, armed with universal ideas of world culture.

English language plays an important role in raising such a person.

This goal is mainly realized in foreign language material in two ways. Firstly, the direct education of the language learner (student) is observed in the educational process (greeting, saying goodbye, reacting to the surroundings in the same language), and secondly, such an educational process in the content of listening, speaking, reading and writing English language material. there are aspects that lead the student to enlightenment, satisfy his spiritual need.

It is known that in the English language education of a higher educational institution, texts on socio-economic, artistic, political, cultural, educational and industry topics are given for reading, and the information obtained from them is used by the student. it is required to be directly relevant and useful for education.

In addition, in teaching English, the educational target language is realized by studying the speech culture, ethics, and lifestyle of the nation(s) being studied.

Educating students through English language education: a) in class; b) it is carried out in the course of extracurricular activities (by holding various events, parties).

There is another professional goal in the teaching methodology, which is implemented in specialized educational institutions. Today, this goal is interpreted differently by researchers. In our opinion, it seems necessary to explain the concepts of "specialization", "profession" and "professional orientation" first.

Specialization (expertise) means having special theoretical knowledge, skills and competence in a specific field, for example, in the field of English language specialization. As the concept of profession, it is meant to use the English language in practice in a specific activity. Foreign language specialists are trained only in higher educational institutions related to this field. In such educational institutions, students have to study certain theoretical and practical subjects of this language in order to acquire a specialization in English. In non-philological higher educational institutions, all general educational and professional (general professional and special) subjects in the curriculum add the appropriate share to acquire a certain specialty. Having students read specialized field texts in English enriches students' general knowledge, including having a positive effect on their thorough mastering of field terms related to the profession. So, the English language helps students to develop their skills in a specific professional field.

The essence of professional orientation of education is to form the professional qualities of a person, to create favorable conditions for the formation of future professional qualifications. This is definitely within the scope of a professional goal.

In the English language education of non-philological higher educational institutions, due attention is paid to the education of students, and by achieving the above goals, the

personality and professional skills of future junior specialists are formed, which means that the developmental goal is achieved.

The developmental goal is determined by the expansion of students' worldview in the process of learning English. Learning English increases students' logical thinking (thinking, understanding, analysis, generalization), develops independent work skills. The developmental goal is manifested in the development of the skills of analyzing language materials, summarizing, drawing conclusions, and independently understanding the meaning of words. Therefore, raising the level of students in English language teaching from the bottom to the top, intellectually developing, improving the content, and ensuring that they grow intellectually is the first task that is expected from the realization of this goal. The second task is to improve students' feelings in learning English, to improve their perception and understanding of external influences with the help of senses and analyzers. Thirdly, the development goal requires strengthening the internal drive (motivation) to work and study.

The developmental goal is realized through speech acts. Its difference from the general educational goal is that the practical application of the acquired information or information content and the skills of its acquisition are included in the scope of the developing goal. Education is the basis of intellectual development. The goals of English language teaching have their own characteristics in high school and non-philological higher education.

In the process of learning English, based on the goals and tasks set for the subject, the student's communicative competence (ability) is formed, that is, the skills of learning the language as a means of spoken communication are formed. Speech competence consists of linguistic (language knowledge), social and cultural knowledge (social and cultural knowledge), speech skills and skills.

In terms of communicative competence, students should have the following practical knowledge: use language material in a speech situation; being able to think in prepared and unprepared monologues and pairs; such as mastering the types of reading (acquaintance, study, observational reading), getting information by reading the original and adapted text.

The ideas presented in our study are related to the interdependence of educational goals. Unity of education and upbringing is one of the leading principles in foreign language education. In the process of education and training, the student's mind is formed, his feelings and emotions develop, and behavioral habits necessary for social life are formed.

Ensuring the unity of education and upbringing depends in many ways on the proper organization of this process, effective use of various teaching methods. Especially to ensure the unity of education and upbringing:

- the correct organization of the content of the presented educational materials from a scientific and ideological point of view;
- full use of available opportunities to reveal the educational and educational essence of the studied subject;
- thorough and solid assimilation of the taught knowledge;
- it is of particular importance to increase students' interest, activity and initiative in the educational process.

This chapter presents opinions on the current situation of foreign language (English) teaching in secondary general education schools and non-philological higher educational institutions, the interpretation of the concept of educational conditions, and the linguo-didactic analysis of teaching goals.

The term linguodidactic refers to the concepts of where, to whom and for how long English language is taught. When defined using linguo-didactic terms, the personality characteristics of the language learner (age, general level, language experience, number of students in the class (group), the type of educational institution and foreign language in the curriculum) allocated class hours are included in the analysis.

A goal is a general direction in education, a plan for solving a specific task. Practical (communicative), general educational, educational, developmental and professional goals are recognized in the methodology of foreign language teaching. These goals apply to all educational institutions. However, they were interpreted in a unique way for secondary schools and non-philological universities.

Students of this educational institution acquire the basic general education knowledge in order to become mature members of the society while learning English. characteristics are developed.

References:

1. . INNOVATIVE METHODS OF TEACHING ENGLISH; Kharatova Sh.Kh; "Экономика и социум" 3 (82) 2021 www.iupr.ru

2. “THE IMPORTANCE OF FOREIGN LANGUAGE TEACHING IN HIGHER EDUCATION INSTITUTIONS” KHARATOVA SHAKHLO KHAKIMOVA; “SCIENCE AND EDUCATION” IN VOLUME #2 ISSUE #5, MAY 2021;

3. “PROBLEMS OF FOREIGN LANGUAGE TEACHING AND ITS SOLUTION” Kharatova Shakhlo Khakimovna; «Актуальные научные исследования в современном мире» ISCIENCE.IN.UA Выпуск 4(72) ч. Стр 60; ISSN 2524-0986.

4. Харатова Ш.Х. ЭФФЕКТИВНЫЕ СПОСОБЫ ИЗУЧЕНИЯ АНГЛИЙСКОГО ЯЗЫКА; Academy 2 (53) «Олимп» 2020;

5. Shakhlo Khakimovna Kharatova; TENDENCIES OF DEVELOPMENT OF DISTANCE EDUCATION IN GLOBAL TRANSFORMATION; Oriental renaissance: Innovative, educational, natural and social sciences 10. 2021;

6. Kharatova Shakhlo “USE OF INNOVATIVE TECHNOLOGIES IN THE EDUCATIONAL PROCESS” Science and Education ISSUE 3, March 2022;

PSYCHOLOGICAL ASPECTS OF LEARNING A FOREIGN LANGUAGE

Mansurova Mokhinur Akmalovna

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Abstract: This scientific article examines the factors affecting the successful learning of a foreign language. The author shows their interdependence and influence on the process of learning a foreign language. The article discusses methodological and psychological aspects of learning a foreign language.

Key words: foreign language, factor, motivation, ability, obstacle, methodology, psychology, skill, technology.

INTRODUCTION

In modern conditions, the issues of learning English are becoming more and more important. This language is international, serves as a leading means of intercultural and interlinguistic communication, serves as a means of forming a global identity, and is the most studied foreign language in the world. In such conditions, it is not surprising that English is mandatory for studying at school, college, and university.

At the same time, it has been repeatedly pointed out that many people learn English, but only a few are good at it. Despite the fact that the importance of good language teaching in modern conditions is recognized by everyone, a person with a non-linguistic education who knows English well is not a very common phenomenon in our country.

At present, active methodical research is being carried out in linguodidactics for effective methods of mastering the English language. In addition, the concept of "effective way" includes the concept of "fast way", because the accelerating pace of life in the 21st century does not allow a person to study English methodically for several years, it is possible they believe in a non-existent result. in the future. Modern man needs immediate results, already on the way. On the road, the result is understood, of course, not fluency, but at least speaking in English on everyday topics in the simplest situations of social interaction. The same didactic methods and techniques can be effective in one situation and ineffective in another.

Considering all this, it seems that only a didactic understanding of the problem of learning English is not enough. It is necessary to pay more attention to the factors that affect this process, but are outside of linguodidactics. The most important of them is psychological, and in this article we will show their connection with purely methodological aspects.

Among the main psychological aspects of learning English, the following are the most important: motivation and interest in learning the language; language learning ability; the ratio of language and speech in learning; language barrier.

Motivation is the main factor in language learning. As in any activity, if a person does not want to do something or does it by force, he will not achieve a high result. The result in language learning can only bring motivation to achieve success. Motivation to avoid failure can be a one-off. For example, a student is afraid of failing an exam with a demanding English teacher. It will pass the test, maybe not badly, but such local success will have no long-term impact.

The point is that it is necessary to gradually form and develop foreign language skills, and then to maintain them throughout life, of course, this cannot be done by force. Demand in the labor market is an important motivation factor for people learning English.

Indeed, in the context of the globalization of the economy, there is an increase in trade and business relations between countries. This determines the rapid development of international firms throughout the world, including in Russia. They are actively developing their business, expanding, opening new departments and representative offices, thereby creating new jobs. Working in such firms, as a rule, is more promising for a specialist both financially and career-wise. At the same time, it imposes more requirements, among which, in addition to the basic qualifications, is the knowledge of the English language. Knowledge of the English language of employees is an important factor of the company's economic competitiveness, that is, it is a part of its intellectual capital.

In this regard, when learning the language, at first there should be an attitude that the English language itself works only as a means of receiving and transmitting this or that information. If a person is interested in the information they are working with (i.e., English language materials), they will also be interested in the process of learning English. Here, the psychological component is closely related to the most important methodological component, that is, the content of teaching English, which should be selected in accordance with the interests and age characteristics of students in order to maintain a high level of motivation.

Despite the obviousness of the above arguments, many people who start learning English well still do not follow through. Why do they lose motivation? The fact is that English, unlike, for example, mastering a computer system or learning to drive a car, requires constant and systematic practice, and most people are not ready for this. Often, some circumstances prevent it from doing so, and it becomes a convenient reason, an excuse. This requires certain voluntary actions that have not been taken into account. Another feature of English as a skill is that it seems unnecessary in everyday life. In fact, if all the information is in Russian, if you are in the environment of your native language and feel comfortable in it, it takes strong willpower to create an artificial foreign language environment for yourself. On the other hand, many people learned English without going to countries where it is the official language, and it cannot be said that they have some kind of superpowers.

Abilities are called characteristics of a person with psychological characteristics that determine the success of acquiring knowledge, skills and abilities, but they themselves are not reduced to their existence. When learning English, it is necessary to talk about linguistic knowledge and speech skills in four types of speech activity: speaking, listening, writing, reading.

Psychology denies that abilities are similar to knowledge, skills, and habits, and at the same time emphasizes their unity. Activity is necessary for the manifestation of abilities, which, in turn, cannot be carried out without abilities. In the process of learning English, it can be clear whether a person has abilities or not. English language skills, as well as other areas of human activity, are interrelated with interest and motivation. The better a person does something, the more interesting it becomes, because he learns more and more new things and feels the practical benefit of the acquired skills. In the modern world, practical benefit is one of the main factors of motivation, and motivation also grows due to the desire to achieve better and better results, a person understands that he is achieving a lot with relatively little effort.

On the other hand, if the motivation to learn English does not come primarily from the language itself, but depends on some other external factors, it can primarily develop language skills through regular and conscious practice. Often, teachers say that there are no people who do not know English in order to increase the motivation of students, because if a person speaks Russian, it means that everything is fine in the brain processes responsible for speech, so of course he can also speak English .

English proficiency is an objective advantage that must be developed through constant practice, otherwise it will level off. Constant practice is the key to success from a purely methodological point of view. In fact, all the rules of English grammar can be said in an hour. It is possible to learn a few thousand words in a very short time, if you clearly set such a task for yourself, but it is not only to learn the language material once, but also to never forget it, and this is the most difficult thing Even English majors will admit to feeling a little insecure after a month or two of not practicing, like an out-of-shape athlete. The principle "we only know what we remember" is more applicable to learning a foreign language than to any other field of human activity.

Lack of ability is often used as an excuse for not wanting to learn English. The objectively low level of complexity in the early stages of learning this language allows us to say that almost anyone can master it to one degree or another, in contrast to, for example, more complex Eastern languages.

The problem of interdependence of language and speech in connection with learning English can be formulated as follows: where to start and what to prioritize? All methods and approaches to teaching foreign languages can be divided into two large groups: from language to speech and from speech to language. However, it is wrong to say that speaking skills are not formed when learning from language to speech. It is formed passively and this process happens quite slowly. Therefore, in order to master the language in this way and learn to speak it well, you need to study it for a very long time, and the result is not immediately visible, it is permissible only in cases where a person has a unique personality. is interested in the language itself. As a rule, such people become professional linguists.

Learning from speech to language is called communicative. In it, the highest value is not the formal correctness of the spoken sentence, but not its linguistic content, but its content, the student's communicative motivation and speech act itself. With such learning, the language should not be an end in itself, but should act as a means of receiving and transmitting information. If the language is clearly taught as a means of speech, its main communicative function is much better.

Communicative education appeared in the 1970s and 1980s, when a clear pragmatic direction of scientific research was manifested both in the general conceptual position of science methodology and in the technology of teaching foreign languages. Methodical approaches have acquired a clear communicative character. A radical turn to natural communication in the process of learning this language led to the orientation of this process to the formation of communicative competence, which was then carried out taking into account the situational and personal factors that ensure the ability to communicate in the language being studied. to determine the specific features of speech behavior in a foreign language.

Strategic and discursive competencies. These components of communicative competence are closely related to issues of rhetoric. It answers questions such as how to work in an oral presentation, what is the structure of a speech, how to properly interact with the audience,

and more. It's no secret that even if we speak our native language, knowing words and their stylistic features is not difficult for us, it is far from always and not everyone is able to build a speech reliably and logically and thus achieve the intended goal. the effect of the word. This is largely due to the fact that students' oral statements in the classroom, both in a foreign language and in their native language, often express the speech only in form, not in substance.

Often, communicative learning is considered simplistically as a process in which a person simply speaks English and does not practice grammar, vocabulary, etc. at all. This concept is a misinterpretation of communicative technique. It has its place to work on all aspects of language, including grammar, but this happens on the basis of real situations of speech interaction caused by certain didactic forms, methods and techniques. Here, psychology is very closely connected with didactics.

Often, communicative learning is taken as a simplistic process that does not practice grammar, vocabulary and vocabulary when it is simply done in private English. This concept is a misinterpretation of communicative technique. He does all the actions of the language, to work on this grammar, but this happens on the basis of the real benefit of the influence of creating certain didactic forms, methods and methods. Here, psychology is very closely connected with didactics.

Nevertheless, in today's environment, when more and more of our citizens are interacting with native English speakers or fluent speakers of other languages, the importance of speaking practice is undeniable. There is no substitute for overcoming the so-called language or communication barrier, i.e. the psychological fear of speaking English. In modern pedagogical practice, foreign language teachers often face a situation where a person who has successfully learned a foreign language falls into a situation of social interaction in this language at home or in professional activities. At the same time, he copes well with being modeled by the teacher in the classroom. In real communication, the language barrier prevents him from realizing his linguistic knowledge, skills and abilities.

Educators and linguistic psychologists agree that language barriers often prevent adults from successfully acquiring a foreign language, and they can be internal or external.

External obstacles are objective and appear in front of a person regardless of his will. For example, he may not be able to choose a suitable teaching method that meets his goals or find a suitable teacher. Certain organizational actions are required to eliminate them. Internal obstacles are subjective, they are more difficult to overcome because they are created within us and their roots can be very deep in your subconscious.

RESULTS.

The psychology of language primarily deals with subjective, internal obstacles. The first and main obstacle to overcome when starting to learn a foreign language is overcoming the initial fear of this seemingly difficult task. As a rule, such obstacles appear in people who start learning a foreign language as adults. An adult should make his own decision.

This fear can be associated with, for example, the possibility of failure and loss of self-confidence. For many Russians, the main fear when speaking in a foreign language is still the fear of making grammatical mistakes. In this sense, it is still psychologically difficult for us to move away from the Soviet grammar-translation system, where formal correctness is the first priority, not the communicative value of the phrase. At the same time, we make grammatical mistakes quite calmly when speaking in our native language, sometimes we deliberately

break it for stylistic purposes, and this does not affect our communication in the language at all.

In the era of telecommunication technologies, it becomes clear that linguistic knowledge, which is nothing more than theoretical language information, is not enough for effective communication. Only having them and not having the ability to speak, we know the language in a "dead" form. This is the most common problem for people learning a foreign language using the traditional grammar-translation method.

To solve this problem, foreign language teaching in our country should have a communicative character and should be focused on real daily communication, which implies exchange of information not only through language, but also through emotions. In practice, this is very difficult to do, because such communication focuses on relaxation and enjoyment of the process itself. Our students and teachers in educational institutions are guided by standards and programs, which actually means focusing on a certain result, which is not always achieved.

In the process of learning a foreign language, didactic and pedagogical aspects are closely related to each other, because in this process we teach or learn speech, communication and master the system of its implementation. Communication training cannot be effective if it is considered within the framework of a "dry" methodology. Psychological aspects of language teaching determine not only the goals and objectives of teaching, motivation, student interest, etc., but also, apparently, specific learning styles and approaches, so the importance of language teaching is not neglected. can not be left. Psychological component in this educational process. Foreign language as an academic subject is very unique. It is not a science in itself, but all sciences and all areas of human knowledge are related to it, because there is no knowledge without language. That is why language learning has a great impact on the personal, general intellectual and general cultural development of a person, which once again emphasizes the important role of psychology in this process.

References:

1.Alyamkina E.A. The interdependence of ability, inclination and talent and their development in the university educational process / Alyamkina E.A.// Psychologist. – 2015. – No. 2. – S. 31-46.

2.Galskova N.D. Theory of teaching foreign languages. Lingvodidactics and methodology / N.D. Galskova. - M.: Academy, 2008. - 336 p.

3.Yershova O.V. The concepts of "motivation" and "interest" as a means of increasing the effectiveness of monitoring the educational activities of university students / O.V. Yershov // Vysshee obrazovanie segodnya. – 2013. – No. 8. – S. 79-81.

4.Jerlygina A.V. Differences in free verbal associations in native and foreign languages / A.V. Jerlygina // Psikhologiya i Psihotechnika. – 2010. – No. 9. – C. 75-79.

5.Shakhlo Khakimovna Kharatova “Use of innovative technologies in the educational process” Science and Education Issue 3, March 2022;

6.Bim I.L. On the issue of the methodology of teaching foreign languages. // IYaSh.-1974.- No. 2.- S.19-32.

IMPACT OF MIGRATION ON THE INCOME AND EMPLOYMENT RATE OF THE POPULATION IN UZBEKISTAN

Ibragimov Ulmas Raxmanovich
(Namangan Institute of Engineering and Technology),
E-mail: ulmas_ibragimov@mail.ru
(Tel: +99891 364 47 37)
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Abstract: The role of labor force and migration is important in increasing the employment of the population, due to the increase of the labor force and the effect of migration, the creation of new jobs after increasing the income of the population leads to a decrease in the number of unemployed.

Keywords: migration, unemployment, emigration, immigration, income, population employment, internal migration, external migration

INTRODUCTION

The word migration is derived from the Latin word "migratio" which means "to move". The movement (movement) of the population from one place to another in order to change the place of residence is population migration. In some literature, population migration is the movement of people (migrants) across the border of one or another region, permanently changing their place of residence, or arriving for a short or long period of time or permanently. The permanent or temporary change of the place of residence of the population for various purposes, i.e. to acquire new land, earn income, study, live, and from a political point of view is called "mechanical movement of the population". It should be noted that migration is the world has no effect on the total population, because it is always zero, that is, the number of immigrants is equal to the number of emigrants. Immigrants are those who left their place and went to another place. Emigrants are those who moved to this place (at the expense of the Republic). While migration has a direct effect on demographic processes, it can also indirectly affect the country's demographic development. For example, a baby born in a family of migrants who went to Russia to work is considered a citizen of the country and thus has an impact on its demographic development.

ANALYSIS OF LITERATURE ON THE TOPIC

In the conditions of modernization of the country's economy, the development of internal and external migration, the study of its negative and positive aspects to income can be considered to be effective in all aspects. Several studies have been conducted on internal and external migration, and a number of foreign and local scientists have been involved. Among them are Mumladze R.G, Matthews B Bögenhold D., Klinglmair R., Kandutsch F., Wiley-Blackwell, Nikolayeva I.P., Abdullayev Ye.V and others.

Research methodology

As a result of the conducted scientific research, increasing the income of the population through internal and external migration, the formation of new professions due to migration leads to a decrease in the number of unemployed. In order to reduce unemployment through the development of migration, to increase the potential of modern professionals, scientific

conclusions and proposals have been developed on the improvement of migration through labor exchanges.

ANALYSIS AND RESULTS

Employment is a two-party relationship, usually based on a wage contract, where one party is an employer, and the other is an employee. Employment is usually arranged on the basis of regulatory and legal documents in the field of labor.

According to official data, in 2019, the highest share of women in the total number of women in our Republic was in the cities of Tashkent (46.7%), Navoi (45.6%), Bukhara (45%) and Ferghana (44.2%), while the highest share of men was in Surkhandarya (65.1%, Kashkadarya (61.9%), Samarkand (61.2%), Jizzakh (60.4%) and Syrdarya (60.0%) provinces.

On the contrary, the largest number of cases was in Surkhandarya (34.9%), Kashkadarya (38.1%), Samarkand (38.8%) and Jizzakh (39.6%) provinces, while the lowest percentage of cases was in Tashkent city (53.3 %), Navoi (54.4%), Bukhara (55%), and Fergana (55.8%) provinces (Fig. 1).

Fig. 1

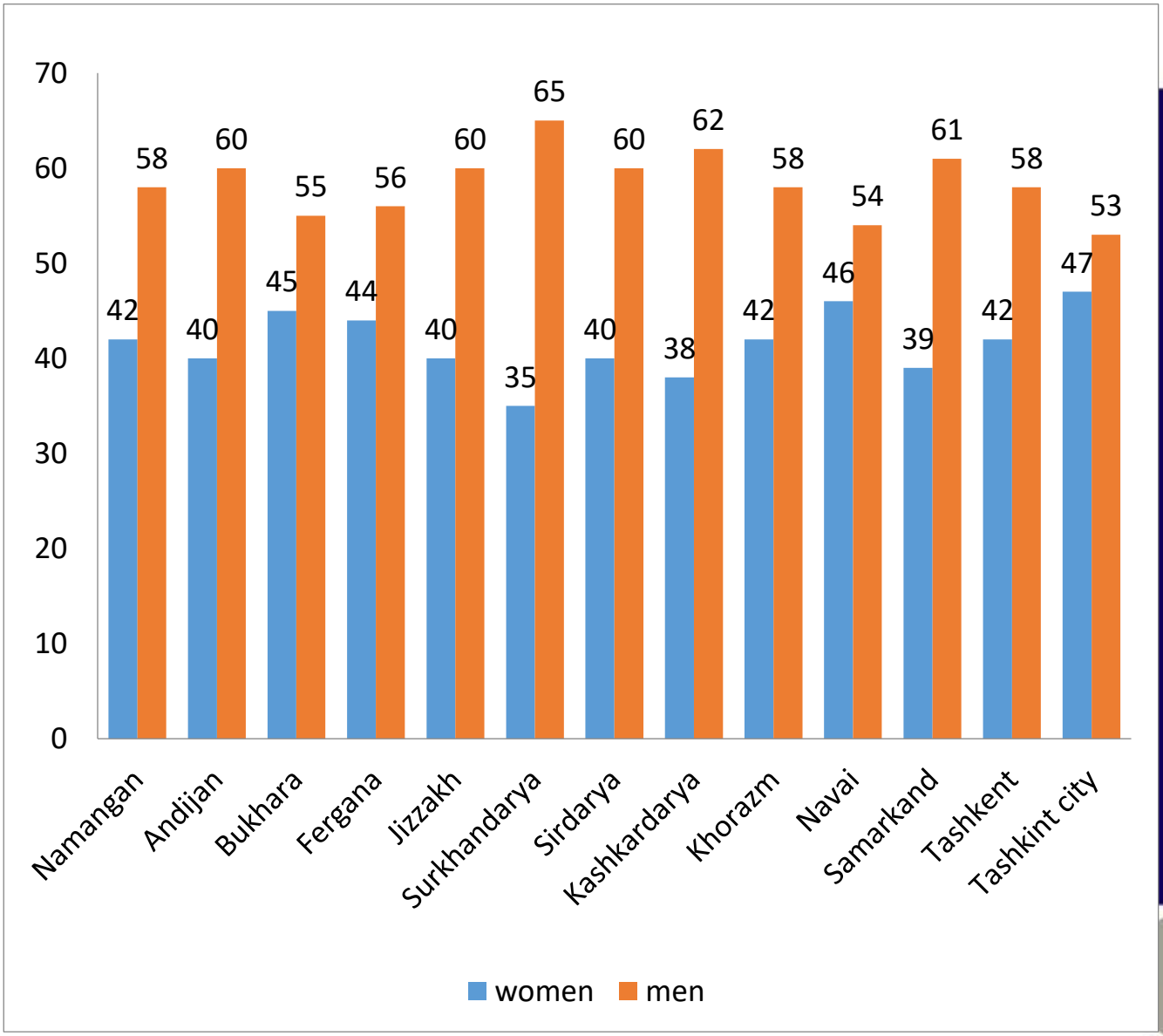

Figure 1. Distribution of employees by gender in the cross-section of regions

Table 1 shows that the number of people employed in the formal sector increased by 8.5% in 2020 compared to 2018 and by 8.2% compared to 2016. The number of people working in the informal sector decreased by 5.2% in 2020 compared to 2018. and increased by 0.6% compared to 2016. In 2020, the highest share of the population employed in the official sector in the total employment belongs to the regions of Tashkent city (81%), Navoi (67%), Tashkent (47.4%) and Bukhara (46.9%) came The highest rates of employment in the informal sector are in Namangan (68.1%), Surkhandarya (67.8%), Samarkand (66.8%) and Kashkadarya (64.4%) provinces.

Distribution of employment by formal and informal sectors across regions

Table 1

2016			*2018*		*2020*	
	officialy	**nonofficial**	**officialy**	**nonofficial**	**official**	**nonofficial**
Uzbekistan	**40,5**	**59,5**	**39,1**	**60,9**	**42,3**	**57,7**
Karakalpakstan	42,0	58,0	42,5	57,5	41,2	**58,8**
Andijan	33,2	66,8	31,2	68,8	36,3	**63,7**
Bukhara	38,9	61,1	41,3	58,7	46,9	**53,1**
Jizzakh	42,0	58,0	37,5	62,5	37,6	**62,4**
Kashkadarya	35,8	64,2	38,9	61,1	35,6	**64,4**
Navai	53,3	46,7	56,5	43,5	67,0	**33,0**
Namangan	32,9	67,1	29,7	70,3	31,9	**68,1**
Samarkand	34,4	65,6	32,2	67,8	33,2	**66,8**
Surkhandarya	40,6	59,4	32,2	67,8	32,2	**67,8**
Sirdarya	52,8	47,2	45,4	54,6	46,8	**53,2**
Tashkent	37,9	62,1	38,8	61,2	47,4	**52,6**
Fergana	39,0	61,0	34,4	65,6	35,9	**64,1**
Kharazm	38,3	61,7	34,4	65,6	37,2	**62,8**
Tashkent city	**64,9**	**35,1**	**69,2**	**30,8**	**81,0**	**19,0**

Forced migration is one of the modern manifestations of migration, which is the result of political reasons. In general, the following trends were observed in these displacements: firstly, the desire to move them as far as possible from their homelands, and secondly, a completely different natural climate shipping conditions. A citizen of any country who was forced to change his place of residence in one subject of the country and moved to another subject or was forced to leave his place of residence in the territory of a foreign country can also be recognized as a forced migrant. and may be a person who came to his country. They may include foreign citizens and stateless persons who are permanent residents of the territory of Uzbekistan and who have changed their place of residence within its borders. Persons who have committed crimes against peace, crimes against humanity or other serious intentional crimes are not recognized as forced migrants.

CONCLUSIONS AND SUGGESTIONS

In conclusion, we can say that the development of the digital economy, in addition to improving the quality of life in general, should bring the standard of living to a slightly higher level in developed and poor regions and regions. Residents of small towns and villages gain the opportunity to earn income by using the large commercial market of economic centers.

The formation of the employed population is related to the increase in the number of the population provided with a legal place of employment and labor income, and it reveals the problems related to labor issues and the ways to satisfy the supply and demand for labor.

Providing employment to the population is an activity that is related to satisfying the needs of citizens, does not contradict the laws and brings them wages (labor income), the state of employment, its most important features, about national welfare, in the field of economic development makes it possible to conclude that the chosen path is effective.

References:

1. Bögenhold D., Klinglmair R., Kandutsch F. Solo Self-Employment, Human Capital and Hybrid Labour in the Gig Economy. Foresight and STI Governance, 2017, vol. 11, no. 4, pp. 23-32
2. French L. Sharing Economy Shakes up Traditional Business Models. Manba: https://www.theneweconomy.com/ business/the-sharing-economy-shakes-up-traditionalbusiness-models. 2018y.
3. Botirjon o'g'li, M. B., & Hasanboy o'g'li, S. D. (2022). ORGANIZATION AND INCREASE OF ACTIVITY OF SMALL INDUSTRIAL ZONES./8
4. O'G'LI, M. B. B. (2021). ESTABLISHMENT AND ACTIVITY OF SMALL FREE ECONOMIC ZONES IN THE TERRITORY OF UZBEKISTAN. International Journal of Philosophical Studies and Social Sciences, 1(2), 156-159.1\
5. -1 O'zbekiston Respublikasi davlat statistika boshqarmasi www.stat.uz38
6. Abdullayevich, A. O., & Abdullajanovich, U. T. (2021, December). DEVELOPMENT OF SMALL BUSINESS AND PRIVATE ENTREPRENEURSHIP IN UZBEKISTAN. In Conference Zone (pp. 123-128).
7. Хакимов, Б., Талабоев, Х., & Холмирзаев, У. (2021). ВОПРОСЫ УЛУЧШЕНИЯ АНАЛИЗА ОБРАЩЕНИЯ ДОЛГОВОЙ ЗАДОЛЖЕННОСТИ В УСЛОВИЯХ НАПРАВЛЕНИЯ. Экономика и социум, (6-2), 441-446.
8. Abdullajanovich, U. T. (2022, March). THE ROLE OF INDUSTRIAL ENTERPRISES IN THE DEVELOPMENT OF THE NATIONAL ECONOMY. In Conference Zone (pp. 271-276).
9. Botirjon o'g'li, M. B., & Hasanboy o'g'li, S. D. (2022). ORGANIZATION AND INCREASE OF ACTIVITY OF SMALL INDUSTRIAL ZONES.
10. Shodiyeva, G., Tog'Ayeva, D. A., & Sultonov, B. A. (2022). KICHIK BIZNES VA XUSUSIY TADBIRKORLIKNI IQTISODIYOTDA TUTGAN O 'RNI. Academic research in educational sciences, 3(5), 610-613.

БЎЛАЖАК МУТАХАССИСЛАРНИ КАСБИЙ ИННОВАЦИОН ФАОЛИЯТИНИ ТАШКИЛ ЭТИШ – ИЖТИМОИЙ-ПЕДАГОГИК МУАММО СИФАТИДА

Азизова Маҳбуба Ҳилол қизи

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Аннотация. Мазкур мақолада бўлажак мутахассисларни касбий инновацион фаолиятга тайёрлашда таълим жараёнига педагогик ва касбий фанларнинг илғор ютуқларини кўллаш.

Калит сўзлар: Касбий инновацион фаолият, глобаллашув жараёни, таълим, малакали мутаҳассислар, интеллектуал маҳсулот.

Annotation. In this article, the application of the advanced achievements of pedagogical and professional sciences to the educational process in the preparation of future specialists for professional innovative activities.

Key words: Professional innovative activity, globalization process, education, qualified experts, intellectual product.

Бугунги кунда мамлакатимизнинг жаҳон ҳамжамияти рейтингида юқори ёки қуйи ўринларда туриши унинг сиёсий, ижтимоий ва иқтисодий жиҳатдан қайдаражада тараққий этганлиги билан бевосита боғлиқ эканлигини англаб етмоқдамиз. Ҳозирда тараққиёт эса, ривожланишга хизмат қилувчи янги ғоялар, яъни инновацияларнинг яратилиши ҳамда уларнинг ижтимой ҳаётимиздаги амалиёти натижасида юзага келади. Шу боис ҳам касбий инновацион фаолият масаласи энг долзарб мавзулардан бири ҳисобланади. Юксак даражада тараққий этишни мақсад қилган жамият учун бу табиий ҳол албатта ва шу жиҳати билан касбий инновацион фаолият мавзусини тадқиқ этиш илмий тадқиқот ишимизда долзарб аҳамият касб этади.

Касбий инновацион фаолият тушунчасига тўхталишдан аввал инновация сўзининг мазмун-моҳиятини кўриб чиқишимиз мақсадга мувофиқ. Инновация атамаси бугунги кунда жамиятнинг барча соҳаларида кенг тарзда қўлланилмоқда. “Инновация” атамаси лотинча “novatio”сўзидан олинган бўлиб, “янгиланиш” (ёки “ўзгариш”), “in”қўшимчаси эса лотинчадан “йўналишида” деб таржима қилинади, агар буни яхлит “innovatio” кўринишида таржима қилинса – “ўзгаришлар йуналишида” деб изоҳланади. Инновация тушунчаси биринчи бўлиб, XIX асрнинг иккинчи ярмида илмий тадқиқот ишларида пайдо бўлди.

Ўзбекистон миллий энциклопедиясида унга шундай таъриф берилган: Инновация инглизча касбий инновацион сўзидан олинган бўлиб, киритилган янгилик, ихтиро маъноларини англатиб, 1) техника ва технология авлодларини алмаштиришни таъминлаш учун иқтисодиётга сарфланган маблағлар; 2) илмий-техника ютуқлари ва илғор тажрибаларга асосланган техника, технология, бошқариш ва меҳнатни ташкил этиш каби соҳалардаги янгиликлар, шунингдек, уларнинг турли соҳалар ва фаолият доираларида қўлланилиши тушунилади. Ўзбек тилининг изоҳли луғатида эса, қуйидагича таъриф берилган: 1. Инновация инглизча innovation- киритилган янгилик, ихтиро. 2. Илғор техника ва технология, бошқариш ва бошқа соҳалардаги янгиликлар

ва уларнинг турли соҳаларда қўлланиши. Муайян тилда асосан, унинг морфология соҳасида энг сўнгги даврларда пайдо бўлган янги ҳодисалар (тил бирликлари).

Юқорида келтирилган таърифларга эътибор қаратадиган бўлсак, улар асосан, инновация тушунчасини технологик ва иқтисодий жиҳатдан изоҳлашга хизмат қилади. Бу эса, фанда инновация ҳамда касбий инновацион фаолият тушунчаларини ўрганишда бир томонлама ёндашувнинг юзага келишига олиб келади.

Инновация (янгиликлар киритиш) - янги маҳсулот турлари, технологияларни ишлаб чиқиш, яратиш ва тарқатишга, янги ташкилий шакллар жорий қилишга йўналтирилган ижодий фаолият натижасидир. Шунингдек, инновация-интеллектуал маҳсулот-ихтиро, ахборот, ноу-хау ёки ғоя иқтисодий мазмунга эга бўладиган жараёндир.

Мазкур ёндашувлар инновацияни иқтисодий ва технология соҳаларига асосланган. Бироқ, жамият ривожланиши учун иқтисодий соҳа билан бир қаторда ижтимой соҳа ҳам бирдек ривожланиши лозим. Инновация тушунчасига шу нуқтаи назардан ёндашар экан Д.М. Гвишиани шундай таъриф беради: “Инновация – янги ижтимоий эҳтиёж (ёки маълум бўлган эҳтиёжни яхшироқ қондириш) учун янги амалий восита (янгилик) яратиш, тарқатиш ва ундан фойдаланиш комплексли жараёни, шу билан бир пайтда бу – ушбу янгилик билан унинг ҳаётийлик даври якунланадиган ижтимоий ва буюм ҳолатидаги муҳитда боғлиқ бўлган ўзгаришлар жараёни”. Олим бу ерда инновация тушунчасини жамиятни ривожлантиришга хизмат қилувчи янгилик сифатида баҳолайди. Бошқа бир тадқиқотчи Л.В. Канторович ўз изланишлари натижасига кўра, инновацияни кашфиёт дея хулоса килади: “Инновация – амалиётда қўлланадиган ҳамда ижтимоий, иқтисодий ва сиёсий талабларни қониқтирадиган, мос келувчи соҳаларда самара берадиган илмий ихтиро ёки кашфиётлар”.

Бироқ мазкур тадқиқотлар натижаси ўлароқ, хулоса киладиган бўлсак, инновацияни кашфиёт ёки ихтиро деб бўлмайди. Бизнингча, инновацияни янгилик сифатида баҳолаш тўғри бўлади. Бироқ инновацияга ҳар қандай турдаги янгилик сифатида эмас, балки мавжуд тизимнинг самарадорлигини жиддий равишда оширадиган омил сифатида қарашимиз лозим. Кенг тарқалган фикрларга қарамасдан инновациялар кашфиёт ва ихтиролардан фарқ қилади. Яъни, ихтиро - бу янги концепцияни яратиш демакдир, инновация эса, бу ихтиронинг амалий аҳамиятини ажратиб кўрсатиш ва унинг муваффақиятини таъминловчи янгиликдир. Аниқроқ айтадиган бўлсак, маълум бир мақсадга эришиш учун янги-янги йўлларнинг топилишидир. Демак, инновациялар бевосита амалиёт билан чамбарчас боғлиқ ва фаолият натижасида намоён бўлади. Яъни, инновациялар - касбий инновацион фаолият натижасида ижтимоий ҳаётда ўз самарасини беради.

Касбий инновацион фаолият тушунчаси кундалик ҳаётда тобора кўпроқ жарангламокда. Бунинг сабаби жаҳон миқёсида ривожланишнинг янги босқичига ўтиш йўлидаги муаммоларга ечим сифатида касбий инновацион фаолият кўрсатилаётганидир.

Биз касбий инновацион фаолият тушунчасининг жамият ҳаёти ва тараққиётида тутган ўрни тўғрисида фикр юритар эканмиз, шу ўринда буни ижтимоий жиҳатдан изоҳлашга ҳаракат қиламиз. Чунки, касбий инновацион фаолият тушунчасига иқтисодий ҳамда технологик ёндашувлар етарлича. Унинг ижтимоий соҳада қўлланилиши борасида эса, бугунги кунда эътибор етарлича эмас. Касбий инновацион

фаолиятнинг ижтимоий соҳада қўлланилиши фанда ижтимоий инновация дея номланади. Таҳлилларимиз шуни кўрсатадики, ижтимоий инновация тушунчасига Ўзбекистон Республикасининг миллий энциклопедияси, фалсафий қомусий луғат ва бошқа изоҳли луғатларда ҳам таъриф берилмаган. Одатда, ижтимоий инновациялар деганда, бизнингча, ижтимоий эҳтиёжларни кондиришга йўналтирилган инновациялар тушунилади: меҳнат шароитларини яхшилаш, таълим, соғлиқни сақлаш ва маданиятни ривожлантириш кабилар.

Мамлакатимизда ижтимоий иннновацияни жамият ҳаётида қўлланилиши ёки янги ижтимоий инновацияларни яратишга қаратилган илмий тадқиқотлар жуда кам. Бироқ, ижтимоий инновацияни амалиёти билан бевосита боғлиқ ислоҳотлар кўплаб амалга оширилмоқда. Ўзбекистон Республикасининг Президенти Ш.М.Мирзиёев томонидан 2018 йилни “Фаол тадбиркорлик, касбий инновацион ғоялар ва технологияларни қўллаб-қувватлаш йили” деб эълон қилиниши шу жумладандир. “Бугун биз давлат ва жамият ҳаётининг барча соҳаларини тубдан янгилашга қаратилган касбий инновацион ривожланиш йўлига ўтмоқдамиз. Бу бежиз эмас, албатта. Чунки замон шиддат билан ривожланиб бораётган ҳозирги даврда ким ютади? Янги фикр, янги ғояга инновацияга таянган давлат ютади. Инновация – бу келажак дегани. Биз буюк келажагимизни барпо этишни бугундан бошлайдиган бўлсак, уни айнан касбий инновацион ғоялар, касбий инновацион ёндашув асосида бошлашимиз керак”.

Жаҳонда бўлаётган глобаллашув ва таълим интеграциялашуви жараёнларида бўлажак мутахассисларнинг касбий-ижтимоий тайёргарлигини ривожлантиришга бўлган эҳтиёж янада кучайди. Хусусан, малакали мутахассиснинг касбий компетентлигини белгиловчи муҳим мезон сифатида касбга йўналтирилган вазифалар билан боғлиқ сифатларни белгилаш, битирувчининг касбий компетентлик сифатларини муҳим сифатлар қаторидаги учликка киритиш, бўлажак мутахассисларни касбий фаолиятга тайёрлаш ҳолатини ўрганиш, уларнинг ихтисослик соҳалари бўйича касбий компетентлигини тадқиқ этиш, педагогик ташхислашнинг касбий инновацион методларини излаб топиш ва улардан унумли, самарали фойдаланиш ҳамда амалиётга жорий этиш бўйича илмий тадқиқотлар олиб бориш алоҳида аҳамият касб этади.

Ўзбекистон Республикасини ривожлантиришнинг бешта устувор йўналиши буйича Ҳаракатлар стратегиясида таълим, маданият, илм-фан, адабиёт, санъат ва спорт соҳаларини ривожлантириш устувор вазифалардан бири сифатида белгиланган.

Бугунги кунда таълим жараёнини ислоҳ этиш ва меҳнат бозорида талаб қилинадиган юқори малакали, рақобатбардош кадрлар тайёрлашда таълим муассасалари муҳим ўринни эгаллайди. Шу боис, олий таълим муассасаларини иқтисодиётнинг реал секторидаги талаб ва эҳтиёждан келиб чиқиб ривожлантириш талаб этилади.

Шунинг учун ҳам ҳозирги шароитда таълимдаги стратегик йўналишлардан бири – таълим муассасаларининг касбий инновацион фаолияти асосий омил сифатида белгилаб берилаяпти. Бугунги кунда ҳар бир бўлажак мутахассис таълим тизимини ислоҳ қилишнинг зарурлигини тушуниб етиши ва уни амалиётда таълим муассасаларининг касбий инновацион жараёнларига қўшилишидаги аҳамиятини англаб етиши ҳамда яратиш имкони мавжуд бўлган касбий инновацион майдонда ўзини кўриш ва энг муҳими, янгиликларни ўзлаштиришдан иборат.

Мамлакатимизда глобаллашув шароитида олий таълим муассасалари таълим соҳасидаги амалга оширилаётган янгиликлар талабаларни мустақил фаоллигини оширишни, ўқув машғулотларида ноанъанавийликка асосланилган усулларга кўпроқ ёндашишни тақоза этади. Талаба шахси камолотида берилаётган мустақил ўқув топшириқлари, муаммоли ечимга қаратилган мунозарали дарс шакллари ва аудиовизуал воситаларга асосланилган ўқув материаллари кучли ижтимоийлаштирувчи таъсир аҳамиятига эга. Айнан мана шундай ўқитиш усуллари воситасида бўлажак мутахассисларни олий таълимдаги ўқув фаолиятига тайёрлаш, мантиқий ва танқидий тафаккурини шакллантириш, мавжуд қобилиятларини юзага чиқаришга имкон яратилади. Бу эса ўз-ўзидан педагог-талаба ҳамкорлигини талаб этадиган педагогик фаолиятдан иборат бўлади. Педагог одатда ўқитиш давомида талабалар ўқув маълумотларини қанчалик ўзлаштирганликлари, аниқ билимларга эга бўлганликларидан хабардор бўлсагина, талабани янги билимлар билан қуроллантира олади.

Иқтисодий фанларни ўқитишда касбий инновацион педагогик технологияларни қўллаш орқали узлуксиз таълим самарадорлигини оширишга алоҳида эътибор берилаяпти. Педагогик технологиялар – таълим бериш ва замонавий ахборот технологияларини қўллаш ёрдамида талабаларнинг шахсий сифатларини ривожлантириш ва такомиллаштириш имкониятини берувчи ўқув воситалари бўлиб, у ўзига хос дидактик ва услубий асосга эга. Шунингдек, замонавий педагогик технологиянинг энг асосий негизи – бу педагог ва талабанинг белгиланган мақсаддан кафолатланган натижага ҳамкорликда эришишлари учун танланган технологияларига боғлиқдир.

Олий таълим муассасаларида иқтисодий фанларнинг ўқитилиш сифати ва самарадорлигини ошириш мақсадида, педагогик технологияларни замонавий ахборот технологиялар имкониятлари асосида уч турдаги ўқув машғулотларига, яъни маъруза, амалий ва лаборатория машғулотларининг ўзига хос хусусиятларини ҳисобга олган ҳолда комплекс ҳолда қўллаш тавсия этилади.

Умуман олганда, иқтисодиёт олий таълим муассасаларида касбий инновацион технологияларни ўқитиш жараёнида юқори малакали кадрларни тайёрлаш, уларнинг касбий омилкорликларини шакллантириш, методик маҳоратини кўтариш, уларни замонавий технологиялар билан қуроллантириш омили бўлиб қолмоқда.